American Indian/Alaska Native Adolescent Suicide: Risk Factors, Protective Factors, and Prevention Opportunities in Education Settings

An Annotated Bibliography

October 2015

West Comprehensive Center at WestEd

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Contents

Introduction

Suicide is the second leading cause of death among youth under the age of 25 in the United States (Drapeau & McIntosh, 2015). Across all ages, American Indian/Alaska Native (AI/AN) populations experience particularly high risk for suicide, with an overall suicide rate of 11.7 individuals per 100,000. This rate is greater than that for all other subgroups except white males, who have a suicide rate of 23.4 individuals per 100,000 (Drapeau & McIntosh, 2015). In 2013, among AI/AN youth, suicide accounted for 34.4 percent of deaths in males and 25.0 percent in females aged 16–19 (Centers for Disease Control [CDC], 2013a, 2013b).

Recent theories about AI/AN suicide incorporate risk and protective factors unique to these populations (Goldston, Molock, Whitbeck, Murakami, Zayas, & Hall, 2008). For example, the transactional-ecological model (Alcántara & Gone, 2007; Mackin, Perkins, & Furrer, 2012) suggests that unique contextual factors and individual experiences work together to place AI/AN youth on a path toward or away from suicidal behavior. The interpersonal theory of suicide suggests that AI/AN youth are at particular risk for feeling alienated from their social group and for perceiving themselves as a burden to those around them. These qualities may lead to lowered hope and optimism, which explains greater risk for suicidal behavior (O'Keefe & Wingate, 2013; O'Keefe et al., 2014).

Chronic health disparities among AI/AN populations, including those that are associated with suicide, are catalyzed by unique risk factors: historical trauma related to the genocide of Indigenous populations and intergenerational trauma. Intergenerational trauma may stem from prior generations' forcible placement in boarding schools with extremely harsh conditions. This traumatic experience is passed on to youth in tribal populations through behaviors and attitudes (Warne & Lajimodiere, 2015). Several researchers found that individuals' thoughts about historical loss (commonly referred to in the field as *historical loss thinking*) (Tucker, Wingate, O'Keefe, Hollingsworth, & Cole, 2015) and the correlates of historical loss (Brockie, Dana-Sacco, Wallen, Wilcox, & Campbell, 2015) are related to suicide and suicidal behavior. These unique elements are important; however, the tremendous variation among individual tribes with respect to risk factors for suicidal behavior among youth is also important. For example, when tribes experience cultural division, suicide rates are higher (Berman, 2014). Risk and protective factors can be foundational for informing suicide prevention and intervention programs for AI/AN youth.

Systematic reviews find few rigorous studies of suicide prevention efforts targeted toward AI/AN youth (Harder, Rash, Holyk, Jovel, & Harder, 2012; Middlebrook, LeMaster, Beals, Novins, & Manson, 2001). Even fewer studies examine prevention and intervention efforts

in education settings, even though strategies that take into account risk and protective factors at multiple levels (community, school, family, and individual) may be most effective for these populations (Taylor, Anderson, & Bruguier Zimmerman, 2014). This document provides abstracts from a sample of studies that examine risk and/or protective factors or suicide prevention programs for AI/AN youth.

Methods

The literature search for this bibliography used the PsycINFO database with the keywords "suicide" and ("Native American" or "American Indian" or "Alaska Native") and ("risk" or "intergenerational trauma" or "historical trauma") for studies published between 2005 and 2015.[1] A general search on Google and Google Scholar was used to find important resources that may have been missed in the PsycINFO database search. The reference sections of key articles were scanned for additional relevant studies. The author contacted experts in the field to obtain relevant resources. An article was included if it met the following criteria:

- has a sample size over $N = 60$;[2]
- was published between 2005 and 2015;
- includes the topics of suicide, suicide prevention, or suicide risk in youth and young adult AI/AN populations; and
- is peer reviewed.

Thirty-one articles meet the final review criteria, and their abstracts are included in this document. Articles are clustered into the following categories:

- **Reviews of Suicide and Suicide Behavior Rates, Risk and Protective Factors, and Prevention Programs.** Because there are few rigorous studies that examine intervention and prevention programs for AI/AN populations, several reviews are selected to provide background information about the context of the field. These summaries may be useful in developing research strategies and for identifying trends for practitioners.
- **Risk and Protective Factors.** The majority of original empirical studies found in the literature search for this bibliography examine risk and protective factors for adolescent and young adult suicide in AI/AN populations. Risk and protective factors should be considered in designing and implementing suicide prevention strategies.
- **Prevention and Intervention Programs: Community Health.** Prevention and intervention programs from community and community health settings are summarized in this section. They may be adapted to other contexts.
- **Prevention and Intervention Programs: Emergency and Medical Centers.** Prevention and intervention programs from emergency department and primary care settings are summarized in this section. They may be adapted to other contexts.
- **Prevention and Intervention Programs: Education Settings.**[3]

1 Parentheses were used to group words in the search.

2 *N* is the total number in a sample; *n* is the number in a subsample.

3 This bibliography is not intended to endorse any program or approach.

> Few studies exist that examine the impact of suicide prevention or intervention programs in schools. One example is provided.

If an article represents multiple categories, it is placed in the cluster that is most closely aligned with the article's topic. The abstracts in this document highlight the components of the article that are relevant to suicide among AI/AN youth and young adults.

Prior to the individual literature summaries, this document includes a section called "From the Literature: Overview of Risk and Protective Factors." The exhibits in this section list risk and protective factors found at the individual, family, and community levels and the associated articles summarized in this annotated bibliography.

Note: Within the field, how Indigenous people and groups are referred to varies. With a few exceptions, each annotated article in this bibliography uses the terminology of its author(s). The term *Native* is often used to refer to American Indian (or Native American) and Alaska Native peoples. Non-Native appears in some instances to refer to non-Indigenous peoples.

This document concludes with a list of resources for practitioners.

From the Literature: Overview of Risk and Protective Factors

Across articles in all categories, a number of risk and protective factors are identified. Risk and protective factors are defined at the individual, family, and community levels. A summary of primary risk and protective factors found within the current literature search is provided in exhibits 1–4.[4]

Exhibit 1. Individual Risk Factors

Individual Risk Factors	Citing Studies
Alcohol use, abuse, and dependence	Balis and Postolache (2008) Berman (2014); Bolton et al. (2013) Manzo, Tiesman, Stewart, Hobbs, and Knox (2015) Olson and Wahab (2006) Cwik et al. (2015)
Low levels of education	Bolton et al. (2013) Kaplan et al. (2013)
Sadness/hopelessness	Manzo et al. (2015)
Unhealthy weight control/poor health	Balis and Postolache (2008) Manzo et al. (2015)
Age (younger)	Kaplan et al. (2013) Manzo et al. (2015)
Tobacco/marijuana use	Cwik et al. (2015) Manzo et al. (2015) Pavkov, Travis, Fox, King, and Cross (2010) Yoder, Whitbeck, Hoyt, and LaFromboise (2006)
Weapon carrying/access	Manzo et al. (2015)
Violent methods of attempted suicide	Kaplan et al. (2013) Olson and Wahab (2006)
Physical/sexual abuse	Balis and Postolache (2008) Brockie et al. (2015) Olson and Wahab (2006) Pavkov et al. (2010)

4 Gender is also associated with suicide, though it is not considered a risk or protective factor. Some studies suggest females have higher rates of suicide and suicidal behavior (Balis & Postolache, 2008; Bolton et al., 2013; Cwik et al., 2015; Yoder, Whitbeck, Hoyt, & LaFromboise, 2006). However, Mullany et al. (2009) reported that more males complete suicide, but females and males have similar risk and exhibit similar rates of suicide attempts. In contrast, Olson and Wahab (2006) reported young males were at particular risk for suicidal behavior.

Individual Risk Factors	Citing Studies
Thinking about historical loss and rumination	Tucker et al. (2015)
Mental health problems (e.g., depression)	Balis and Postolache (2008) Wong, Sugimoto-Matsuda, Chang, and Hishinuma (2012)
Perceived burdensomeness	O'Keefe and Wingate (2013) O'Keefe et al. (2014)
Risky sexual behavior	Ballard et al. (2015)
Violent behavior	Pettingell et al. (2008)
Perceived discrimination	Brockie et al. (2015)

Note. These factors are a sample of commonly found risk factors. They were identified by scanning major findings of articles summarized in the current document. They may not represent all possible risk factors included in studies on this topic.

Exhibit 2. Family Risk Factors

Family Risk Factors	Citing Studies
History of suicide and suicidal behavior	Balis and Postolache (2008) Ballard et al. (2015) Cwik et al. (2015)
Family adversity	Balis and Postolache (2008)
Poverty	Balis and Postolache (2008)
Caregiver substance abuse	Cwik et al. (2015)
Witness of intimate partner violence	Brockie et al. (2015) Mullany et al. (2009)

Note. These factors are a sample of commonly found risk factors. They were identified by scanning major findings of articles summarized in the current document. They may not represent all possible risk factors included in studies on this topic.

Exhibit 3. Community Risk Factors

Community Risk Factors	Citing Studies
History of suicide and suicidal behavior	Balis and Postolache (2008) Ballard et al. (2015) Cwik et al. (2015)
Rural settings	Berman (2014) Goldston et al. (2008) Kaplan et al. (2013)
Particular tribal environments (e.g., cultural divisions)	Balis and Postolache (2008) Berman (2014) Olson and Wahab (2006)
Tribes experiencing rapid economic/social change	Olson and Wahab (2006)
Mental health service barriers	Olson and Wahab (2006)
Acculturation	Olson and Wahab (2006)
Suicide clustering	Balis and Postolache (2008)
Correlates of historical loss	Brockie et al. (2015)

Note. These factors are a sample of commonly found risk factors. They were identified by scanning major findings of articles summarized in the current document. They may not represent all possible risk factors included in studies on this topic.

Exhibit 4. Protective Factors

Protective Factors	Citing Studies
Individual (self-mastery, family-mastery, friend-mastery)	Allen et al. (2014)
Peer discouragement and disapproval of suicidal behavior	Allen et al. (2014)
Family cohesion, expressiveness, and low conflict	Allen et al. (2014)
Community opportunities and support	Allen et al. (2014)
Tribal commitments	Scheel, Prieto, and Biermann (2011)
School experience (positive)	Balis and Postolache (2008)
Caring families	Balis and Postolache (2008)
Supportive tribal leaders	Balis and Postolache (2008)
Positive mood	Pettingell et al. (2008)
Parent prosocial behavior	Pettingell et al. (2008)
Hope and optimism	O'Keefe and Wingate (2013)

Note. These factors are a sample of commonly found risk factors. They were identified by scanning major findings of articles summarized in the current document. They may not represent all possible risk factors included in studies on this topic.

Reviews of Suicide and Suicide Behavior Rates, Risk and Protective Factors, and Prevention Programs

Reviewing Suicide in Native American Communities: Situating Risk and Protective Factors Within a Transactional-Ecological Framework

Alcántara, C., & Gone, J. P. (2007). Reviewing suicide in Native American communities: Situating risk and protective factors within a transactional-ecological framework. *Death Studies, 31*(5), 457–477.

The authors sought to identify points of intervention for suicidal behaviors using a transactional-ecological perspective. They highlight the need that practitioners have for more accurate prediction of suicidal tendencies (suicidal behavior, thinking about suicide, and suicide attempts). In contrast to a disease model framework, the transactional-ecological model states that the individual is inseparable from the environment, and prevention programs should target the interaction between the individual and the environment. For example, the family and the community environments influence a youth's development; the youth also influences family behavior and community characteristics by being a part of the system. This model allows for multiple risk factors, such as school failure, teenage pregnancy, and substance abuse, to interact to predict suicide. After reviewing risk factors for suicide in AI/AN populations, the authors suggest youth at high risk for suicide have experienced risk factors in their environments that place them on a path toward negative outcomes, such as suicidal behavior. Thus, treatment and prevention efforts should target interactions between individuals and their environments and consider the multiple risk factors that influence youths' pathways of development.

Available for purchase at: http://www.ncbi.nlm.nih.gov/pubmed/17554839

Ethnic Differences in Adolescent Suicide in the United States

Balis, T., & Postolache, T. T. (2008). Ethnic differences in adolescent suicide in the United States. *International Journal of Child Health and Human Development*, *1*(3), 281–296.

This article summarizes 87 studies published between 1975 and 2007 that examined rates of suicide and suicidal ideation (thinking about suicide); risk for and protective factors of suicide; service barriers; and treatment programs with an emphasis on five ethnic minority groups (African American, Latino, Asian American, Native American/Alaska Native, and Hawaiian American). Across studies, Caucasian youth appear to be at greatest risk for suicidal behavior. However, Native American and Alaska Native youth, among other ethnic groups, have expressed

suicidal behavior at growing rates over the past 20 years. Among Native American/Alaska Native adolescents, unique risk factors include suicide clustering and suicide contagion, particularly on reservations. Other risk factors include being female; having a history of problems with mental health; alcohol use and abuse (specifically, weekly hard-liquor use); family or peer history of suicide attempts; physical and sexual abuse; community/family alienation; and low self-reported health. A variety of family factors (e.g., family adversity, poverty) were found to be risk factors for suicidal behavior as well. The authors note that some risk may vary by tribe. For example, among Pueblo youth, a depressed mood, having friends who attempt suicide, and lower social support are most closely associated with suicidal thoughts and behaviors. The peer relationships and emphasis on social support may be related to the strong sense of community found among Pueblo tribes. In contrast, Northern Plains tribes tend to be more individualistic; among Northern Plains youth, low self-esteem, and depression are the risk factors most closely associated with suicide, rather than social or peer factors. Protective factors for Native Americans/Alaska Natives may include school experience, caring families, and supportive leaders of the tribe. Treatment for Native American/Alaska Native adolescents primarily targets the reduction of risk factors, including substance abuse, poor mental health, and access to firearms, among others, and is most effective when employed by culturally competent practitioners.

Available at: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2845977/

Cultural Considerations in Adolescent Suicide Prevention and Psychosocial Treatment

Goldston, D. B., Molock, S. D., Whitbeck, L. B., Murakami, J. L., Zayas, L. H., & Hall, G. C. N. (2008). Cultural considerations in adolescent suicide prevention and psychosocial treatment. *American Psychologist, 63*(1), 14–31.

Goldston and colleagues identify differences in suicide rates, risk and protective factors for suicide and suicidal behaviors, and cultural norms and perceptions of suicide and suicidal behavior. This literature summary discusses unique and shared factors among adolescents from a variety of ethnic backgrounds: African American, AI/AN, Asian American and Pacific Islander, and Latino. The article includes frameworks for the discussion of ethnic considerations for suicide and suicide prevention. The authors suggest identifying culture-specific patterns of suicidal behavior; cultural contexts of risk and protective factors; the characteristics of suicidal behavior; and the way that individuals view and react to suicide and suicidal behavior. Among AI/AN adolescents, risk factors include rural locale; alcohol abuse and dependence; suicide clustering; intergenerational trauma stemming from forced boarding school attendance and suppressed traditions; and enculturation (low identification with cultural norms).[5] Seeking help appears to be mixed between visiting traditional healers and specialized professionals. Stigma associated with

5 Enculturation is the process by which cultural components such as knowledge, behavior, attitudes, and values are embedded within a cultural group.

mental health issues is considered a barrier to youths seeking treatment. The authors report that initial suicide prevention programs were successful, though there are limited studies on this topic. In addition, due to the variation among AI/AN tribal communities (e.g., cultural cohesion, individuality, attitudes toward death and risky behavior), it is important to consider prevention and intervention programs that target unique contexts within each community.

Available at: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2662358/

Indigenous Youth Suicide: A Systematic Review of the Literature

Harder, H. G., Rash, J., Holyk, T., Jovel, E., & Harder, K. (2012). Indigenous youth suicide: A systematic review of the literature. *Pimatisiwin: A Journal of Aboriginal and Indigenous Community Health, 10*(1), 125–142.

The authors conducted a systematic literature review on the topic of suicide in Indigenous youth. This review examines methodological rigor of the studies and identifies common risk and protective factors for Indigenous youth suicide. Twenty-three studies met the authors' screening criteria, and one examines the impact of an intervention. Risk and protective factors considered include age; gender; depression; mental health problems; alcohol and substance abuse; conduct disorder; family and friend history of suicidal behavior; social and family support; physical and sexual abuse; self-esteem; locus of control; comfort in one's own culture; and other cultural factors. The authors conclude that there is a gap in the literature and more rigorous research is needed to be able to draw conclusions from findings with greater confidence.

Available at: http://www.pimatisiwin.com/online/wp-content/uploads/2012/07/10HarderNew.pdf

American Indians and Suicide: A Neglected Area of Research

Olson, L. M., & Wahab, S. (2006). American Indians and suicide: A neglected area of research. *Trauma, Violence, & Abuse*, *7*(1), 19–33.

The authors provide a summary of suicide epidemiology and risk factors in AI/AN communities. The incidence of suicide in American Indian populations is 1.5 times greater than that for the U.S. general populations, with particular risk among young males (ages 15–24).[6] Suicide among American Indian tribes is more likely to occur for males, those involved in violence, and those with high frequency of alcohol use. In addition, tribes that emphasize individuality rather than community have higher suicide rates, and tribes experiencing rapid social or economic change accompanied by acculturation stress experience higher rates of suicide. Specific risk factors for suicide among AI/AN populations include socioeconomic characteristics, substance abuse, physical or sexual abuse, mental health service barriers, and acculturation. Barriers to prevention of suicide in this population include challenges with recognition and funding for the magnitude of the problem; lack of research; and funding and accessibility for mental health services. Suicide prevention programs

6 Because this section is summarizing articles, there may be some discrepancies between exact suicide rates. This discrepancy may be due to different populations or different years of data collection. Generally, AI/AN suicide rates are much higher than that for other youth.

typically include broad interventions for all young people, targeted strategies for at-risk individuals, or prevention following suicidal ideation or attempts. The authors identify a need for cultural relevance and community involvement in program development and implementation. Most substance use programs focus on alcohol abuse prevention, rather than other drug problems. While mental health services have begun to target treatment in tribal communities, there is still a need for prevention efforts. The authors conclude with implications and recommendations for researchers and practitioners based on these findings.

Available for purchase at: http://www.ncbi.nlm.nih.gov/pubmed/16332979

Suicide Prevention in Rural, Tribal Communities: The Intersection of Challenge and Possibility

Taylor, M. A., Anderson, E. M., & Bruguier Zimmerman, M. J. (2014). Suicide prevention in rural, tribal communities: The intersection of challenge and possibility. *Journal of Rural Mental Health*, *38*(2), 87–97.

The authors examined a variety of risk factors and suicide prevention efforts in order to identify opportunities for suicide prevention in rural tribal communities. They recommend a paradigm shift that acknowledges historical trauma as a primary risk factor for suicide and that incorporates culturally sensitive approaches to treating suicide. For example, prevention programs that focus on etiology,[7] symptoms occurring consistently within populations, and collective responsibility may be more attuned to the needs of individuals and communities. Individuals, communities, schools, and primary care or emergency departments are all considered important targets for suicide prevention efforts. The authors conclude with a list of recommendations for how to overcome current challenges by incorporating specific evidence-based and promising services for intervention. The recommendations for schools include embracing interactions with tribal elders; using curriculum to conduct continuous suicide prevention efforts; developing emergency management plans to respond to traumatic events; celebrating youth resiliency consistently within school programs; promoting wellness plans and self-care; partnering with tribes and communities to support family members in the community; encouraging bullying prevention programs; and training staff members in suicide prevention efforts.

Available for purchase at: http://psycnet.apa.org/psycinfo/2014-36491-001/

American Indian Health Disparities: Psychosocial Influences

Warne, D., & Lajimodiere, D. (2015). American Indian health disparities: Psychosocial influences. *Social and Personality Psychology Compass, 9*(10), 567–579.

This theoretical paper describes psychosocial influences on American Indian (AI) health challenges. AIs face higher death rates from issues such as suicide, cancer, and diabetes. These high death rates may be attributable to historical trauma transmitted

7 Etiology is defined as the cause or pathway to causation and is often used in the discussion of the origin of medical issues such as mental illness.

intergenerationally. That is, AIs have faced traumatic experiences related to genocide, adverse boarding school systems, poverty, substance use and abuse issues, and poor nutrition across multiple generations. Adverse childhood experiences related to these traumas, in turn, are reflected in adulthood parenting styles and perpetuate suffering throughout generations. The proposed model, Inter-Generational Basis for Chronic Disease Disparities Among American Indians and Alaska Natives, suggests "a long history of genocide and the American Indian boarding school experience has led to pervasive and unresolved historical trauma and its associated poor mental health outcomes" (p. 569). The authors highlight the need for additional research to understand psychosocial influences on health outcomes among AI populations.

Available at: https://www.ndsu.edu/fileadmin/publichealth/files/Warne_Lajiomodiere_SPPC_Final.pdf

Suicide Prevention in American Indian and Alaska Native Communities: A Critical Review of Programs

Middlebrook, D. L., LeMaster, P. L., Beals, J., Novins, D. K., & Manson, S. M. (2001). Suicide prevention in American Indian and Alaska Native Communities: A critical review of programs. *Suicide and Life-Threatening Behavior, 31,* 132–149.

The authors review suicide prevention and intervention programs targeted on AI/AN individuals. The article describes the predictors, rates, and outcomes of AI/AN suicide and acknowledges the great variation in suicides and suicidal behavior found across different tribes. Nine programs are summarized targeting all ages from preschool through adulthood. The programs summarized address various risk and protective factors and can be implemented in schools, health-based organizations, or residential treatment facilities. The authors acknowledge the lack of research around impact and implementation of these programs. Specific recommendations are provided in areas of developing data; youth suicide risk factors, youth suicide intervention evaluation; suicide prevention; public education; and additional broad approaches to prevent suicide among AI/AN youths. The conclusion emphasizes the importance of cultural relevance and community involvement in developing and implementing suicide prevention and treatment.

Available for purchase at http://onlinelibrary.wiley.com/doi/10.1111/sltb.2001.31.issue-s1/issuetoc

Risk and Protective Factors

Latent Class Analysis of Substance Use and Aggressive Behavior in Reservation-Based American Indian Youth Who Attempted Suicide

Ballard, E. D., Musci, R. J., Tingey, L., Goklish, N., Larzelere-Hinton, F., Barlow, A., & Cwik, M. (2015). Latent class analysis of substance use and aggressive behavior in reservation-based American Indian youth who attempted suicide. *American Indian and Alaska Native Mental Health Research: The Journal of the National Center, 22*(1), 77–94.

This article addresses variations in characteristics of American Indian adolescents from the White Mountain Apache Tribe who attempted suicide within 90 days of recruitment into the study. Latent class analysis is used to identify subgroups of participants based on levels of substance use and aggression as self-reported by adolescents on the Youth Risk Behavior Survey. Analyses reveal three subgroups identified primarily by level of substance use and aggressive behavior (low-risk behavior [22 percent], moderate-risk behavior [58 percent], and high-risk behavior [20 percent]). Other correlates of suicidal behavior are considered in group membership: age, gender, multiple attempts, risky sexual behavior, and recent exposure to suicidal behavior in community or family members. In the low-risk behavior subgroup, participants also were recently exposed to suicide behavior. In the high-risk behavior subgroup, participants also reported high levels of risky sexual behavior. The authors conclude interventions should be tailored to meet the needs of individual youth because adolescents' risky behavior is not homogeneous, but, instead, falls on a continuum.

Available at: http://www.ucdenver.edu/academics/colleges/PublicHealth/research/centers/CAIANH/journal/Documents/Volume%2022/22%281%29_Ballard_Latent_class_analysis_77-94.pdf

Suicide Among Young Alaska Native Men: Community Risk Factors and Alcohol Control

Berman, M. (2014). Suicide among young Alaska Native men: Community risk factors and alcohol control. *American Journal of Public Health*, *104*(S3), S329–S335.

The author examined risk factors in the community that predicted suicide among a sample of males aged 15–34 in 178 rural Alaska communities. Data are compiled from suicide, alcohol, and community-level datasets for this study. Poisson regression analyses suggest variation in suicide rates is related to community laws around alcohol, but this relationship may be due to community characteristics. Suicide risk was higher in communities that are more remote, have fewer non-Natives, and are characterized by cultural division. The author suggests that alcohol prevention programs alone are insufficient to prevent suicide among young Alaska Native men, and communities need resources in order to

target community-level characteristics that contribute to suicide rates.

Available at: http://ajph.aphapublications.org/doi/abs/10.2105/AJPH.2013.301503

A Comparison of the Prevalence and Risk Factors of Suicidal Ideation and Suicide Attempts in Two American Indian and a General Population Sample

Bolton, S. L., Elias, B., Enns, M. W., Sareen, J., Beals, J., Novins, D. K., Swampy Creek Suicide Prevention Team, & AI-SUPERPFP Team. (2013). A comparison of the prevalence and risk factors of suicidal ideation and suicide attempts in two American Indian and a general population sample. *Transcultural Psychiatry*, *0*(0), 1–20.

A sample of American Indians from the Northern Plains and Southwest tribes reported on suicide ideation, suicide attempts, sociodemographic risk factors, psychiatric disorders, and trauma experience in fully structured in-person interviews for the American Indian Service Utilization, Psychiatric Epidemiology, Risk and Protective Factors Project (AI-SUPERPFP). This interview corresponds directly with the National Co-morbidity Survey, providing prevalence of U.S. mental disorders and their correlates for a nationally representative sample of 8,098 individuals aged 15–54. American Indian tribes did not differ on suicidal ideation prevalence. Participants in the Northern Plains tribe reported more suicide attempts than the Southwest tribes and the general U.S. population. The U.S. population reported more suicide ideation than both the Northern Plains and Southwest tribes. Being female, being aged 25–34, and having lower levels of education were related to increased suicide attempts, particularly for American Indian populations. Few differences in the American Indian population and the general U.S. population are noted pertaining to psychiatric disorder and traumatic events.

Available for purchase at: http://www.ncbi.nlm.nih.gov/pubmed/24065607

The Relationship of Adverse Childhood Experiences to PTSD, Depression, Poly-Drug Use and Suicide Attempt in Reservation-Based Native American Adolescents and Young Adults

Brockie, T. N., Dana-Sacco, G., Wallen, G. R., Wilcox, H. C., & Campbell, J. C. (2015). The relationship of adverse childhood experiences to PTSD, depression, poly-drug use and suicide attempt in reservation-based Native American adolescents and young adults. *American Journal of Community Psychology*, *55*(3–4), 411–421.

This study was designed to describe how exposure to adverse childhood experiences relates to depression, drug use, and suicide attempts among young adults and adolescents from reservation-based Native Americans. Participants (N = 288) completed online surveys in this cross-sectional study. Adverse childhood experiences included in this study are emotional abuse, physical abuse, sexual abuse, physical/emotional neglect, witness of intimate partner violence, correlates of historical loss (such as thinking about historical loss), and perceived discrimination. Risk behaviors and mental health outcomes are also documented. The majority of the sample (78 percent) reported experiencing at least one adverse event

during childhood, and nearly half (40 percent) reported two or more adverse events. Analyses demonstrated each additional event contributed to a 37-percent increase in odds of attempting suicide, and increased the likelihood that participants reported depression symptoms, post-traumatic stress disorder symptoms, or poly-drug use.

Exploring Risk and Protective Factors With a Community Sample of American Indian Adolescents Who Attempted Suicide

Cwik, M., Barlow, A., Tingey, L., Goklish, N., Larzelere-Hinton, F., Craig, M., & Walkup, J. T. (2015). Exploring risk and protective factors with a community sample of American Indian adolescents who attempted suicide. *Archives of Suicide Research*, *19*(2), 172–189.

The authors recruited a sample of 71 White Mountain Apache Tribe adolescents who made suicide attempts (mean age = 16) for a cross-sectional descriptive study. Overall, in this sample of youth who attempted suicide, 68 percent reported suicidal behavior among family and friends, 62 percent reported that their caregivers had substance abuse problems, 91 percent reported alcohol use, and 88 percent reported using marijuana. Results are further disaggregated by gender (65 percent of the sample is female) and number of attempts (69 percent of the sample had attempted suicide multiple times). The authors recommend that interventions include multiple tiers of systems involving individual, family, and community.

Acute Alcohol Intoxication and Suicide: A Gender-Stratified Analysis of the National Violent Death Reporting System

Kaplan, M. S., McFarland, B. H., Huguet, N., Conner, K., Caetano, R., Giesbrecht, N., & Nolte, K. B. (2013). Acute alcohol intoxication and suicide: A gender-stratified analysis of the National Violent Death Reporting System. *Injury Prevention*, *19*(1), 38–43.

The purpose of this study was to use epidemiological data available for 57,813 suicide decedents collected from 2003 to 2009 in 16 states in order to comprehensively describe their acute alcohol levels and related socio-demographic factors. The authors report on results stratified by race/ethnicity and gender. AI/AN females and males had the highest prevalence of acute intoxication (blood alcohol content $\geq$ .08 g/dl[8]). Correlates of high blood alcohol content for males included being younger, AI/AN, Hispanic, veterans, having lower education levels, rural residence, and firearm/hanging/suffocation methods of suicide. For female decedents, correlates of high blood alcohol content included being younger, AI/AN, and firearm use/hanging/suffocation/falling/drowning methods of suicide. The authors recommend targeting acute alcohol use in prevention programs for violent suicides among young adults and middle-aged adults.

Available at: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3760342/

8 Grams per decaliter is a common measurement for blood alcohol content.

The Power of Protection: A Population-Based Comparison of Native and Non-Native Youth Suicide Attempters

Mackin, J., Perkins, T., & Furrer, C. (2012). The power of protection: A population-based comparison of Native and non-Native youth suicide attempters. *American Indian and Alaska Native Mental Health Research (Online), 19*(2), 20–54.

The authors incorporate 24 risk factors based on prior research to calculate risk and protection thresholds; they seek to identify actionable steps to meet once youth accumulate multiple risk factors. This study used data from the Oregon Health Teens (OHT) Survey, which provides information on 11,154 AI/AN youth and non-AI/AN youth in grades 8–12. The cumulative risk model works similarly for both AI/AN and non-AI/AN youth. However, AI/AN youth experienced a greater number of risk factors before attempting suicide. Interaction effects reveal that youth who experienced both risk and protective factors were less likely to exhibit suicidal behavior, particularly if they were at higher risk.

Available at: http://www.ucdenver.edu/academics/colleges/PublicHealth/research/centers/CAIANH/journal/Documents/Volume%2019/19(2)_Perkins_Protection_Against_Suicide_Attempts_20-54.pdf

A Comparison of Risk Factors Associated with Suicide Ideation/Attempts in American Indian and White Youth in Montana

Manzo, K., Tiesman, H., Stewart, J., Hobbs, G. R., & Knox, S. S. (2015). A comparison of risk factors associated with suicide ideation/attempts in American Indian and White youth in Montana. *Archives of Suicide Research*, *19*(1), 89–102.

The aim of this study was to identify associations among risky behavior, victimization, sadness/hopelessness, and suicide ideation and suicide attempts for youth in Montana. Subgroup analyses examined differences between American Indian and White youth, and between males and females. Data from the Youth Risk Behavior Survey (YRBS) collected across seven years (N = 21,610) was utilized. American Indian youth reported significantly more suicide ideation and attempts and fewer psychological and behavioral risk factors. Sadness/hopelessness strongly predicted suicide ideation and attempts for both males and females, and both American Indian and White youth. Unhealthier weight control and younger age predicted more suicide ideation and suicide attempts in all groups except the American Indian boys. American Indian boys' suicide ideation and attempts were predicted by sadness/hopelessness, alcohol/tobacco/marijuana use, and carrying weapons. The authors suggest that some risk factors, such as discrimination, should also be included in future studies.

Available for purchase at: http://www.tandfonline.com/doi/full/10.1080/13811118.2013.840254

Toward Understanding Suicide Among Youths: Results From the White Mountain Apache Tribally Mandated Suicide Surveillance System, 2001–2006

Mullany, B., Barlow, A., Goklish, N., Larzelere-Hinton, F., Cwik, M., Craig, M., & Walkup, J. T. (2009). Toward understanding suicide

among youths: Results from the White Mountain Apache tribally mandated suicide surveillance system, 2001–2006. *American Journal of Public Health*, *99*(10), 1840–1848.

The White Mountain Apache Tribe mandated a suicide surveillance system to examine suicide risk factors and behavior among community members. This study examined data from the surveillance system for Apache youth under the age of 25 using a community-based participatory research process that includes tribal leaders, Apache case managers, and researchers. Descriptive results demonstrate that more males than females died from suicide, which is comparable to other AI/AN communities. However, males and females had similar rates of suicide attempts over the course of five years, which is a different pattern than that found in other U.S. and AI/AN populations. Other findings show that 61 percent of all suicides in the Apache tribe were among youth under the age of 25. Individuals aged 15–24 had a suicide rate (128.5 per 100,000) that was 13 times higher than the general U.S. population and 7 times higher than the rate for all AI/AN populations. Youth ages 10–14 had a suicide incidence rate (17.1 per 100,000) about 15 times as high as the overall U.S. population, and 7 times higher than the rate for all AI/AN populations. Hanging was most commonly reported as a method of suicide. Family and intimate partner violence most commonly precipitated suicide attempts.

Available at: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2741522/

The Role of Hope and Optimism in Suicide Risk for American Indians/Alaska Natives

O'Keefe, V. M., & Wingate, L. R. (2013). The role of hope and optimism in suicide risk for American Indians/Alaska Natives. *Suicide and Life-Threatening Behavior*, *43*(6), 621–633.

This study sought to examine suicidal behavior in AI/AN communities through the lens of the interpersonal theory of suicide. In this cross-sectional study, 168 AI/AN college students representing 27 different tribes completed online surveys. A series of regression analyses revealed that greater hope and optimism predicted lower suicidal ideation, thwarted belongingness, and perceived burdensomeness (i.e., feeling burdensome to family, peers, and the community based on existence) when controlling for socio-demographic factors.

Interpersonal Suicide Risk for American Indians: Investigating Thwarted Belongingness and Perceived Burdensomeness

O'Keefe, V. M., Wingate, L. R., Tucker, R. P., Rhoades-Kerswill, S., Slish, M. L., & Davidson, C. L. (2014). Interpersonal suicide risk for American Indians: Investigating thwarted belongingness and perceived burdensomeness. *Cultural Diversity and Ethnic Minority Psychology*, *20*(1), 61–67.

The authors examined suicide among American Indians as predicted by thwarted belongingness (i.e., social disconnection) and perceived burdensomeness (i.e., feeling burdensome to family, peers, and the community based on existence). This study recruited 171 American Indian participants

from 27 different tribes to complete an online survey. Using hierarchical regression models, the authors found that suicidal ideation was predicted by participants' perceived burdensomeness beyond the effect of depression and socio-demographic correlates of suicide; however, suicidal ideation was not predicted by thwarted belongingness. Furthermore, thwarted belongingness and perceived burdensomeness interacted to predict suicidal ideation.

Available for purchase at: http://psycnet.apa.org/psycinfo/2013-32690-001/

Tribal Youth Victimization and Delinquency: Analysis of Youth Risk Behavior Surveillance Survey Data

Pavkov, T. W., Travis, L., Fox, K. A., King, C. B., & Cross, T. L. (2010). Tribal youth victimization and delinquency: Analysis of Youth Risk Behavior Surveillance Survey data. *Cultural Diversity and Ethnic Minority Psychology*, *16*(2), 123–134.

The purpose of this study was to describe ethnic disparities among AI/AN youth and other ethnic groups (White, African American, Hispanic/Latino) using information gathered from the nationally representative Youth Risk Behavior Surveillance Survey. Five risk factors were examined: violence/delinquency, substance use, risky sexual behaviors, victimization, and suicide-related behaviors. Data from a sample of 43,172 youth in grades 9–12 were collected in 2003, 2005, and 2007 and collapsed into a single cross-sectional study. Chi-square tests were used to identify differences between each ethnic group in each of these five risk factors related to suicidality. Overall, a disproportional number of AI/AN youth relative to White youth experienced risks in these domains; AI/AN youth also report some higher experience of risk relative to African American and Hispanic/Latino youth, with higher experience of victimization, drug use, and suicidal behaviors.

Available at: http://tloa.ncai.org/documentlibrary/2010/09/Tribal%20Youth%20Victimization.pdf

Protecting Urban American Indian Young People From Suicide

Pettingell, S. L., Bearinger, L. H., Skay, C. L., Resnick, M. D., Potthoff, S. J., & Eichorn, J. (2008). Protecting urban American Indian young people from suicide. *American Journal of Health Behavior*, *32*(5), 465–476.

The purpose of this study was to determine risk and protective factors that predicted suicide attempt among American Indian adolescents (aged 9–15) in an urban setting. This descriptive study utilized survey data from 569 American Indian youth in urban schools. Using logistic regression, the authors determined the extent to which risk and protective factors predicted suicide attempts and violence. Risk and protective factors examined included connectedness to others, family caring, parental prosocial behavior norms, perceived self-image, positive mood, school connectedness, substance use, and violence perpetration. Girls and boys had unique risk profiles. For females, substance use and positive mood predicted past suicide attempts. Boys who perpetrated violence in the past, reported lower parent prosocial behavior, and/or reported lower positive mood scores were more likely to have attempted suicide in the past. The authors

recommend incorporating these risk and protective factors into suicide prevention programming efforts.

American Indian College Student Suicide: Risk, Beliefs, and Help-Seeking Preferences

Scheel, K. R., Prieto, L. R., & Biermann, J. (2011). American Indian college student suicide: Risk, beliefs, and help-seeking preferences. *Counseling Psychology Quarterly*, *24*(4), 277–289.

This study explored suicidality, tribal beliefs about suicide, and help-seeking behavior among 275 American Indian college students aged 18–55 years old. Participants represented 41 tribes, with the highest proportion of participants identifying as Cherokee (28.2 percent) or Choctaw (21.6 percent). Suicide-related beliefs are described for participants who self-identified as tribally committed, biculturally committed, Anglo committed, and not committed, with items on a cultural commitment and demographic questionnaire. Suicidal ideation rates among this sample of American Indian students were comparable to the general population. Students who were tribally committed were more likely than Anglo committed respondents to seek help from a mental health professional on or off campus who was American Indian. Tribally committed and biculturally committed participants were more likely to seek an American Indian staff member than respondents who were not committed to either culture.

Available for purchase at: http://www.tandfonline.com/doi/abs/10.1080/09515070.2011.638444

An Examination of Historical Loss Thinking Frequency and Rumination on Suicide Ideation in American Indian Young Adults

Tucker, R. P., Wingate, L. R., O'Keefe, V. M., Hollingsworth, D. W., & Cole, A. B. (2015). An examination of historical loss thinking frequency and rumination on suicide ideation in American Indian young adults. *Suicide and Life-Threatening Behavior, 46*(2), 213–222.

The authors examined the impact of historical loss thinking on suicide ideation and its correlates in a sample of 140 American Indian college students. Twenty-five tribes were represented. Mediation analyses demonstrated a small effect suggesting American Indians who think more about historical loss (i.e., transmitting culture-related trauma across generations within American Indian or Alaska Native individuals) are more likely to engage in rumination (brooding and reflection), which contributes to suicide ideation. The authors call for continued research examining these relationships and suggest practitioners consider historical loss, rumination, and brooding in the implementation of culturally sensitive treatments.

Available for purchase at: http://onlinelibrary.wiley.com/doi/10.1111/sltb.12185/full

Ethnic Differences in Risk Factors for Suicide Among American High School Students, 2009: The Vulnerability of Multiracial and Pacific Islander Adolescents

Wong, S. S., Sugimoto-Matsuda, J. J., Chang, J. Y., & Hishinuma, E. S. (2012). Ethnic differences in risk factors for suicide among

American high school students, 2009: The vulnerability of multiracial and Pacific Islander adolescents. *Archives of Suicide Research*, *16*(2), 159–173.

The purpose of this study was to compare suicide-related behaviors among eight ethnic groups as self-reported by adolescents in the Youth Risk Behavior Surveys (1999–2009). The suicide-related behaviors examined include depression, suicidal ideation, planning suicide, attempting suicide, and suicide attempts that required medical attention. Survey respondents numbered 88,532 adolescents (mean age = 16.2), of which 1,053 were American Indian. Groups with the highest prevalence of suicide-related behaviors included AI/AN, Native Hawaiian/Pacific Islander, and multiracial adolescents, compared to Asian, Black, Hispanic, and White counterparts. Among American Indian adolescents, 32.7 percent reported experiencing depression, 23.3 percent reported suicidal ideation, 19.6 percent reported having a suicide plan, 16.2 percent made a suicide attempt (of those, 39.0 percent were severe[9] cases), and 5.9 percent overall made a severe attempt.

Suicidal Ideation Among American Indian Youths

Yoder, K. A., Whitbeck, L. B., Hoyt, D. R., & LaFromboise, T. (2006). Suicidal ideation among American Indian youths. *Archives of Suicide Research*, *10*(2), 177–190.

This study identified factors that correlated with suicidal ideation among American Indian youth. The cross-sectional study recruited 212 American Indian youth from three reservations in the upper Midwest of the United States. Among these youth (mean age = 12 years), 9.5 percent had thoughts currently about committing suicide, and the rate for females was twice that of males. Suicide ideation was related to being female, having lower enculturation levels, and more drug use. Of these risk factors, drug use was most strongly related to thinking about suicide.

Available for purchase from: http://www.tandfonline.com/doi/abs/10.1080/13811110600558240

9–The authors define severe attempts as those that resulted in injury, poisoning, or overdose that required medical treatment.

Prevention and Intervention Programs: Community Health

People Awakening: Collaborative Research to Develop Cultural Strategies for Prevention in Community Intervention

Allen, J., Mohatt, G. V., Beehler, S., & Rowe, H. L. (2014). People awakening: Collaborative research to develop cultural strategies for prevention in community intervention. *American Journal of Community Psychology*, *54*(1–2), 100–111.

This review summarizes the literature and process through which a community and university-based researchers teamed together to conduct research on promising interventions for alcohol use disorder and suicide for the Alaska Native Yup'ik community. The intervention, developed over 15 years, is strengths- and community-based and targets multiple levels of protective factors, including those at the individual level, and within families and communities. The model suggests that key factors for the prevention of alcohol abuse and suicidal behaviors include community, family, and community characteristics, in addition to positive features of social environments, reflective processes, and reasons for life.

A Protective Factors Model for Alcohol Abuse and Suicide Prevention Among Alaska Native Youth

Allen, J., Mohatt, G. V., Fok, C. C. T., Henry, D., Burkett, R., & Team, P. A. (2014)). A protective factors model for alcohol abuse and suicide prevention among Alaska Native youth. *American Journal of Community Psychology*, *54*(1–2), 125–139.

This study examined the impact of an alcohol, drug, and suicide prevention program among Alaska Native youth. Alaska Native youth (N = 413) between 12 and 18 years of age participated in the study. Protective factors at multiple levels contributed to participant reflective processes and reasons for life, important components of preventing alcohol abuse. Specifically, individual factors (self-, family-, and friend-mastery), peer factors (discouragement, disapproval), family factors (cohesion, expressiveness, conflict), and community factors (opportunities, support) appeared to predict participant outcomes.

Available for purchase from: http://onlinelibrary.wiley.com/doi/10.1007/s10464-014-9661-3/full

Outcome Evaluation of a Public Health Approach to Suicide Prevention in an American Indian Tribal Nation

May, P. A., Serna, P., Hurt, L., & DeBruyn, L. M. (2005). Outcome evaluation of a public health approach to suicide prevention in an American Indian Tribal Nation. *American Journal of Public Health, 95(7)*, 1238–1244.

This study evaluated the impact of a public health approach aimed at reducing suicidal behavior among youths in an Athabaskan Tribal Nation in New Mexico. The five primary program goals included unique suicide

risk factor identification, identification of at-risk families and youth, implementation of prevention activities to target high-risk groups and individuals, provision of direct mental health services, and implementation of community systems to improve community awareness and knowledge. Program data were collected as a baseline for two years prior to program initiation, and 13 years of data were collected annually throughout the program. Results of analyses demonstrated that self-destructive acts were reduced by 73 percent over the course of the program, and suicide attempts decreased significantly. Effects were most evident among youth aged 11–24. There was no significant change in suicide completion rates as a result of the public health approach.

Available at: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1380310/

Prevention and Intervention Programs: Emergency and Medical Centers

Emergency Department Utilization Among American Indian Adolescents Who Made a Suicide Attempt: A Screening Opportunity

Ballard, E. D., Tingey, L., Lee, A., Suttle, R., Barlow, A., & Cwik, M. (2014). Emergency department utilization among American Indian adolescents who made a suicide attempt: A screening opportunity. *Journal of Adolescent Health*, *54*(3), 357–359.

The authors examined patterns of emergency medical attention seeking prior to suicide attempts among a sample of 72 adolescents on the White Mountain Apache reservation using a cross-sectional approach. Researchers coded the number of lifetime complaints for the Indian Health Service Emergency Department prior to participants' indexed suicide attempt. One year prior to attempts, 82 percent of participants visited the emergency department for some reason (the most common being trauma, ear/nose/throat, and psychiatric issues). About 26 percent visited the emergency department for psychiatric reasons. There were no gender differences. The authors suggest reservation-based suicide prevention efforts would benefit from suicide screens for all patients who visit reservation-based emergency departments.

Available at: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3933824/

Adolescent Suicide Risk Screening: The Effect of Communication About Type of Follow-Up on Adolescents' Screening Responses

King, C. A., Hill, R. M., Wynne, H. A., & Cunningham, R. M. (2012). Adolescent suicide risk screening: The effect of communication about type of follow-up on adolescents' screening responses. *Journal of Clinical Child and Adolescent Psychology*, *41*(4), 508–515.

Emergency settings provide opportunities to screen for suicide risk. Most often, this screening is provided via a self-assessment; however, in-person follow-ups have shown self-assessment results to be slightly biased by student subgroups, such as gender, socioeconomic status, and race/ethnicity, and by how socially desirable an adolescent seeks to appear (i.e., an adolescent who is seeking to be socially desirable may underreport important suicide risk factors). This study sought to understand the effect on adolescents' self-reports about suicide risk factors when they were told there would be in-person follow-up. The hypothesis was that when adolescents are told that someone plans to follow up with them in-person after their self-report, the adolescents rate their suicide risk lower on a self-assessment, compared to adolescents who are told that they will not receive an in-person follow-up, and that this response would vary by subgroup. The adolescents

seeking emergency medical attention who participated in this study (*N* = 245; 80 percent White, 21.6 percent Black, 9.8 percent American Indian, 2.9 percent Asian) were randomly assigned to either receive or not receive in-person follow-up communication about the self-assessment screening responses, which were provided at their first visit. Outcomes measured were adolescents' self-reported suicidal ideation, depression, alcohol use, and aggressive or delinquent behaviors. Screening scores on all outcomes did not differ by condition (in-person follow-up vs. none). Participants whose families received public assistance were less likely to report both aggressive delinquent behavior and suicidal ideation when they were assigned to in-person follow-up compared to participants whose families did not receive public assistance. The article concludes by recommending an improvement in psychometric properties of suicide-risk screening for adolescents.

Available at: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3790145/

Prevention and Intervention Programs: Education Settings

A College Suicide Prevention Model for American Indian Students

Muehlenkamp, J. J., Marrone, S., Gray, J. S., & Brown, D. L. (2009). A college suicide prevention model for American Indian students. *Professional Psychology: Research and Practice*, *40*(2), 134–140.

This article explains the development and initiation of a model for suicide prevention among American Indian college students. The model draws from the medicine wheel framework, which includes spiritual, mental, emotional, and physical elements. The model presented utilizes communication between American Indian tribes and program staff, combined cultural and educational programs, and incorporated spiritual ceremonies, while collaborating with campus-wide mental health resources. During the preliminary rollout of the program, 90 American Indian students used at least one element of the program. A small subsample of students participated in trainings as a part of the program (n = 22); they demonstrated a slight increase in suicide knowledge as measured by a pre- and post-test survey (effect size = .359) after participation in trainings. A number of other successes are reported, including preliminary evidence for increased content/skill knowledge after workshop participation; increase in problem-solving knowledge; and high satisfaction and knowledge utility for participating students. Implementation barriers with potential solutions are also reported. Barriers included lack of research on this topic and limited administrator cultural knowledge. Suggested solutions are hiring expert personnel familiar with American Indian culture; integrating the university model and the suicide prevention model; and coordinating care across services in the university.

Available at: https://ruralhealth.und.edu/pdf/2008_aI_campus_suicide_model.pdf

Resources for Suicide Prevention

Resources were found by general Google searches, in addition to scans of specific states with high proportions of Native American/American Indian/Alaska Native populations: Alaska, Arizona, Missouri, Montana, New Mexico, North Carolina, North Dakota, Oklahoma, Oregon, South Dakota, Utah, Washington, and Wisconsin. Exhibit 5 lists resources for practitioners.

Exhibit 5. Resources

Name	Description	Web Link
Indian Health Service	The U.S. Department of Health and Human Services provides the Federal Health Program for American Indians and Alaska Natives through Indian Health Service. It offers a list of resources for health care and professionals to support the prevention and treatment of suicide behaviors and suicide.	http://www.ihs.gov/suicideprevention/providers/
New Mexico Suicide Prevention Coalition	The New Mexico Suicide Prevention Coalition provides a list of traditionally and culturally sensitive resources through websites, articles, and suicide prevention training.	http://www.nmsuicideprevention.org/native-americans/
American Indian Health	The United States National Library of Medicine contains a list of resources on suicide in American Indian populations.	http://americanindianhealth.nlm.nih.gov/suicide.html
Center for Native American Youth at the Aspen Institute	Resources provided through the Center for Native American Youth at the Aspen Institute include a list and description of suicide prevention organizations and suicide prevention publications.	http://www.cnay.org/ForYouth.html#Suicide_Prevention_Organizations
Culture and Community: Suicide Prevention Resources for Native Americans in California	The California Mental Health Services Authority and the Resource Center of Your Voice Counts released this document in 2014. This document introduces the *Know the Signs* campaign; discusses the use of social marketing and messaging to encourage suicide prevention; provides resources for suicide prevention programs in AI/AN communities; and provides informational materials.	http://calmhsa.org/wp-content/uploads/2014/04/Native-American-Suicide-Prevention-Resources.pdf

Name	Description	Web Link
Suicide Prevention Resource Center	This federally funded center provides resources for professionals, providers, grantees, and American Indian/Alaska Native populations. Links on this site include basic information, effective prevention, resources and programs, training and events, and news .	http://www.sprc.org/aian
Alaska Native Tribal Health Consortium	This organization started in 2007 and was formed to address suicide attempts and suicide among Alaska Native people. This site provides information about trainings, community models, and the efforts of the Alaska Native Tribal Health Consortium.	http://anthc.org/what-we-do/behavioral-health/suicide-prevention/
Missouri Suicide Prevention Plan: A Collaborative Effort 2012	This plan was developed in 2012 in order to inform suicide prevention in Missouri for all constituents. Racial/ethnic subgroups are discussed.	http://dmh.mo.gov/docs/mentalillness/suicideplan.pdf
Montana Strategic Suicide Prevention Plan 2015	This plan documents the strategic plan for Montana in order to inform suicide prevention in Montana for all constituents. Racial/ethnic subgroups are discussed.	http://leg.mt.gov/content/Publications/fiscal/interim/2014_financecmty_Dec/State%20Suicide%20Plan-2015-2.pdf
North Dakota Suicide Prevention Plan 2014–2016	This plan documents the strategic plan for North Dakota in order to inform suicide prevention in North Dakota for all constituents. Racial/ethnic subgroups are discussed.	http://www.sprc.org/sites/default/files/N%20Dakota%20Suicide_Report_2014_Final_web.pdf
2015 North Carolina Suicide Prevention Plan	This plan and list of resources documents the strategic plan for North Carolina in order to inform suicide prevention in North Carolina for all constituents. Racial/ethnic subgroups are discussed, in addition to youth suicide prevention.	http://injuryfreenc.ncdhhs.gov/preventionResources/Suicide.htm
Oklahoma Strategy for Suicide Prevention 2011	This plan documents the strategic plan for Oklahoma in order to inform suicide prevention in Oklahoma for all constituents. Racial/ethnic subgroups are discussed.	http://www.ok.gov/odmhsas/documents/SuicidePrevention.pdf
Oregon Health Authority: Youth Suicide Intervention and Prevention Plan 2016–2020	This plan documents the strategic plan for Oregon in order to inform suicide prevention in Oregon for all constituents. Racial/ethnic subgroups are discussed.	https://public.health.oregon.gov/PreventionWellness/SafeLiving/SuicidePrevention/Documents/5-year-youth-suicide-prevention-plan.pdf

Name	Description	Web Link
South Dakota Strategy for Suicide Prevention 2013	This plan documents the strategic plan for South Dakota in order to inform suicide prevention in South Dakota for all constituents. Racial/ethnic subgroups are discussed.	http://www.sprc.org/sites/default/files/S.Dakota%202013%20SDSSP-final.pdf
Utah State Suicide Prevention Programs FY 2015 Report	This document summarizes the suicide prevention program activities for Utah.	http://le.utah.gov/interim/2015/pdf/00004626.pdf
Washington State Suicide Prevention Plan	This plan documents the strategic plan for Washington in order to inform suicide prevention in Washington for all constituents. Racial/ethnic subgroups are discussed.	http://www.sprc.org/sites/default/files/Washington631-058-SuicidePrevPlan.pdf
Wisconsin Suicide Prevention Strategy 2015	This plan documents the strategic plan for Wisconsin in order to inform suicide prevention in Wisconsin for all constituents. Racial/ethnic subgroups are discussed.	https://www.dhs.wisconsin.gov/publications/p00968.pdf

Conclusion

The high rate of suicides and suicide attempts among AI/AN youth persists. This document identifies and provides abstracts of 31 studies that can inform decision-making for prevention and intervention efforts in education settings. Studies show common risk and protective factors at various levels: individual risk factors (e.g., alcohol and substance use and abuse, low education levels, mental health issues, violent behavior); family risk factors (e.g., history of suicide and suicidal behavior, family adversity, poverty); community risk factors (e.g., rural settings, mental health service barriers, acculturation); and protective factors (e.g., peer discouragement and disapproval of suicide, positive school experience, hope and optimism). Risk and protective factors identified in the studies may be considered in locating points of intervention. Studies examining the effects of intervention programs on youth outcome are documented as well. This bibliography concludes with a list of resources from states on AI/AN suicide prevention and intervention efforts for practitioners, including recent state suicide prevention plans. It provides a starting place for considering the risk and protective factors to target for intervention in education settings. Further rigorous research is needed on the topic of suicide prevention for AI/AN youth in education settings.

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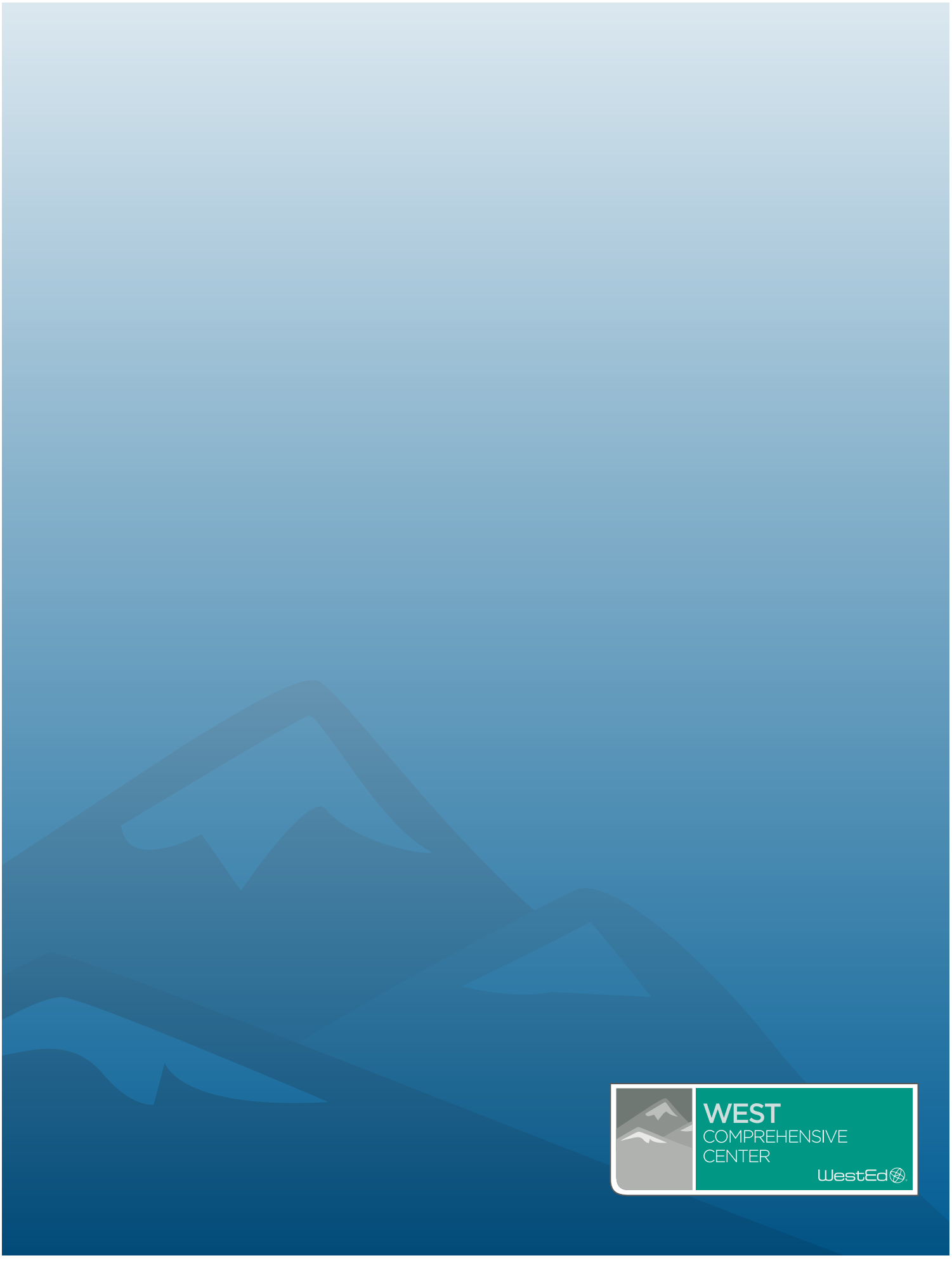
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