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## Suicide in Native American Communities

### *A Transactional-Ecological Formulation of the Problem*

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There is nothing more significant going on in your community than this [suicide] crisis. Defending treaty rights, fighting for sovereignty—none of that matters if we're not dealing with these problems, and I tell you these problems are not just here on Standing Rock.

—Kevin Gover, Assistant Secretary for Indian Affairs  
(Olson, 1998)

For the residents of the Standing Rock Sioux reservation along the North Dakota–South Dakota border, the winter months in 1997 and 1998 were plagued with disbelief, anger, and fear stemming from a suicide epidemic that culminated in 37 attempts among adolescent youth and 5 completed suicides by adolescent males. At the height of this epidemic, an estimated 150 at-risk adolescents were monitored by mental health professionals, relatives, and other tribal members. Additional risks stemming from the unknown influence of suicide pacts and contagion effects were also difficult to manage. In the aftermath of these teen suicides, the Standing Rock Sioux community—along with tribal leaders and federal officials—conferred to strategize suicide prevention measures, including but not limited to the opening of youth recreation centers and the tailoring of mental health services for depression and substance use, as well as a more general rebuilding of reservation life.

The suicide crisis and subsequent prevention efforts at Standing Rock are but one example of many similar instances throughout "Indian Country." This situation, along with the recent international conference entitled Indigenous Suicide Prevention Research and Programs in Canada and the U.S.: Setting a Collaborative Agenda held in Albuquerque, New Mexico (February 2006), illustrate the growing concern regarding the alarming prevalence of suicidal behaviors among American Indian and Alaska Native (AI/AN) communities in the U.S., Canada, and the U.S. territories. Great efforts are being made to summarize the current state of knowledge about suicide in indigenous communities and to set a collaborative agenda between researchers, providers, policy-makers, and tribal members. The resounding desire for action is evident.

Suicide is also a serious public health concern in the U.S. more broadly, with current statistics indicating that it is the eighth leading cause of death in American society (U.S. Public Health Service, 2001). Given the significant personal and societal toll of death by suicide, the 21st century has already witnessed a considerable rise in national attention aimed toward the prevention of suicide. Federal efforts such as the U.S. Surgeon General's Call to Action and the National Strategy for Suicide Prevention served as catalysts for the mobilization of suicide prevention programs nation-wide (U.S. Department of Health and Human Services, 1999, 2001). Suicide is no longer being perceived as the concern of just individuals and their families, but also of the public at large, with increasing prioritization of suicide research and prevention programming. Nonetheless, this newfound emphasis on suicide prevention efforts has been slow to reach the Native American communities at highest risk, and hopeful outcomes, though anticipated, are not ensured. Echoing the statement at the outset of this chapter by former head of the Bureau of Indian Affairs and esteemed Native judiciary figure and law professor Kevin Gover, it is time that suicidality in Indian Country is addressed by research, prevention programming, treatment, and outcome evaluation. To move beyond the specter of untimely death toward more inclusive healing, Native American suicide can no longer remain a neglected phenomenon.

## Predicting Suicide: Implications for Treatment

The expectation that trained mental health professionals can predict an individual suicide is a common but erroneous perception that has endured among clinicians and clients alike. The probabilities for accurately predicting extremely low base-rate occurrences or statistically rare

phenomena such as suicide are remarkably low (Rudd, Joiner, & Rajab, 2000). Essentially, any discussion of suicide must occur in tandem with this more general understanding of low-probability incidents. As explicitly stated by Rudd et al.:

Low base-rate phenomena such as suicide are impossible to predict with any reliability in the individual case, simply by nature of the statistical problem presented. Actually, we would be correct more often than not simply to predict that a patient *would not* commit suicide, regardless of the clinical presentation. (p. 127)

In sum, appreciation of a statistical approach to suicide highlights the limited ability of clinicians to accurately predict suicide. This limitation underscores the importance of intervention efforts that include reliable risk assessments. These types of assessment strategies identify salient risk factors that place individuals or communities within "suicide zones" (as coined by Litman, 1990, in Rudd et al.) or elevated periods of suicide risk, as well as corresponding theaters of intervention (clinical treatment, management, etc). According to Litman, the severity of the suicide risk zone is dependent on the presence or absence of psychiatric conditions, type and intent of suicidal behavior (ideation, plan, or gesture), risk factors, and identifiable protective factors, which converge to acutely raise the risk for suicide.

Paradoxically, any "treatment" for suicide must necessarily occur before the act itself. Postmortem intervention efforts are obviously impossible, since suicide cannot be prevented in the deceased. It is fundamental then to locate opportunities for prevention along developmental pathways that lead individuals to heightened suicide risk zones. In this light, identifying risk and protective factors within a biopsychosocial frame of reference is one way to determine points of preventive intervention and understand an individual's potential for suicide.

Drawing upon the most current empirical reports on suicidal behaviors and preventive interventions, this chapter offers a brief review of the epidemiological profile of suicide in AI/AN communities, while situating relevant biopsychosocial risk and protective factors within a transactional-ecological framework. Implications for future research and practice are also discussed.

## Epidemiology of Suicidal Behaviors among American Indians and Alaska Natives

The latest U.S. Census Bureau report estimates that 4.1 million AI/ANs live in the U.S., composing approximately 1.5% of the U.S. population (U.S.

Census Bureau, 2002). Furthermore, according to census reports, there are more than 561 federally recognized tribes speaking over 220 indigenous languages with various dialects. The marked heterogeneity within the AI/AN population contradicts common misperceptions of homogeneity across Native American communities and renders the making of generalizations problematic (Gone, 2003, 2004b). Thus, the cultural heterogeneity of AI/ANs should remain at the forefront of any consideration of suicide intervention programs targeting these populations (Gone, 2004a).

Although a detailed account of the epidemiology of suicide among indigenous persons in the U.S. is beyond the scope of this chapter (see Olson & Wahab, 2006, for a thorough synthesis of the epidemiological profile and relevant risk factors correlated with AI/AN suicide), a brief discussion of the demography of suicidality in Indian Country is presented to provide the necessary context. Current mortality statistics reveal that suicide is the second leading cause of death for AI/AN populations aged 15–24 years of age, the third leading cause of death for ages 5–14 and 25–44 years of age, and the eighth leading cause of death for decedents of all ages (Centers for Disease Control, 2003; Indian Health Service [IHS], 2000–2001a, 2000–2001b). Additionally, the age-adjusted suicide death rate for AI/ANs is 20.2 per 100,000, approximately twice as high as the U.S. all-races rate of 10.6 per 100,000, with males accounting for the majority of suicide decedents (IHS, 2000–2001a, 2000–2001b). Regional variations among the Indian Health Service administrative areas have also emerged. The highest suicide death rates (ranging 5 to 7 times higher than the overall U.S. rates) are documented in the Tucson, Aberdeen, and Alaska service areas. Contrastingly, the lowest suicide rates were found in the California, Nashville, and Oklahoma service areas (Centers for Disease Control, 2003; IHS, 2000–2001a, 2000–2001b). The leading method of suicide among the AI/AN youth was death by firearms, followed by hanging. Of interest, suicide death rates remained relatively unchanged during the 1989–1998 year period examined within the Centers for Disease Control Report (2003). Already apparent from this brief review of the epidemiological landscape of AI/AN suicide is the regional variation in suicide death rates for indigenous peoples in the U.S. Consequently, determining suicide risk zones and appropriate points of intervention is likely to change in relation to the specific suicidality profile of the region.

A detailed portrait of the epidemiology of suicidality in AI/AN communities also needs to take into account the entire spectrum of suicidal behaviors such as suicide ideation and suicidal attempts. Generally, the ratio of suicide ideation and attempts to suicide completion is overwhelmingly high, with far more cases of suicide ideation and attempts occurring in contrast to completed suicides. Although there are few authoritative population-based studies of the prevalence of suicide attempts and suicidal ideation for AI/AN communities (for a brief review of education

studies refer to LeMaster, Beals, Novins, Manson, and the AI-SUPER-PFP Team, 2004), a high prevalence of suicidal behaviors has been documented among AI/AN adolescents and young adults, with higher rates found among AI/AN females. Specifically, LeMaster and colleagues found that within a Northern Plains community-based AI reservation sample, females and younger respondents endorsed significantly higher prevalence of suicidal thoughts, plans, and attempts during their lifetime. However, no significant differences emerged between genders for past-year suicidal behaviors. Males reported utilizing violent methods of attempt such as hanging or shooting significantly more, whereas females were more likely to use nonviolent methods of attempt such as overdose. Of note, cutting and stabbing emerged as the common method endorsed across genders.

Moreover, results from LeMaster et al. (2004) also indicate that a greater percentage of the sample had attempted suicide in their lifetime than had engaged in suicidal ideation or planning. LeMaster and colleagues (in line with May, 1987) suggest that such paradoxical results provide evidence for conceptualizing suicide attempts as impulsive acts more so than previously theorized within the suicide risk continuum model (in which ideation is suggested as a preliminary behavior to a suicide attempt). In these cases, intent may vary drastically such that those attempting suicide may be trying to modify interpersonal relationships rather than merely achieving death. This implies that in attempts to restore or mitigate interpersonal conflict, full deliberation of the consequences of untimely death may not have occurred. In this study, AIs were also less likely to disclose their intent to commit suicide to others, with interesting age trends emerging in disclosure preferences. More specifically, those aged 25 and above were more likely to confide in a family member, in comparison to 15–24-year-olds, who were more likely to confide in their friends. Females were also more likely than males to report ever disclosing thoughts about committing suicide in their entire lifetime and within the past year. These results suggest that suicide preventive interventions may need to be tailored to accommodate for differences found between specific age cohorts.

The epidemiology of indigenous suicidality is additionally complicated when one considers that the majority of investigations of suicidal behaviors within AI/AN communities draw upon reservation- or near-reservation-based samples, thereby excluding urban populations. In one of the first empirical inquiries of its kind, Freedenthal and Stiffman (2004) examined the prevalence and correlates of suicidal behaviors for urban-reared versus reservation-reared AI adolescents from a Southwestern state. Results revealed that those having spent two thirds of their lives within an urban setting (urban-reared) endorsed significantly lower rates of suicidal ideation than those having spent two thirds of their lives on

a reservation (reservation-reared). Despite the difference in suicidal ideation, equal rates of lifetime-attempted suicide were found.

Notably, the impact of regional and tribal factors on rates of suicide and suicide ideation further convolute this discussion. For example, in a provocative study exploring factors correlated with suicide ideation among American Indian adolescents from three distinct tribes, Novins, Beals, Roberts, and Manson (1999) found that local culture does indeed matter. The authors suggest that the range of factors associated with suicide ideation is reflective of the cultural heterogeneity among the tribal groups. Although no significant differences in the prevalence of suicide ideation among the three tribal groups were found, the other results have important implications for thinking about tribal-specific risk factors. The findings and implications of this study will be examined in a subsequent section.

Several limitations to the demographic information are presented above. First, the data regarding prevalence of suicide completion and suicidal behaviors are overwhelmingly biased toward reservation-based samples, as few studies have investigated suicidality in AI/AN individuals living in urban settings. The samples studied are also predominantly drawn from school-based settings, thereby excluding the frequently absent and those having dropped out of school, presumably the populations most at risk. Second, a dearth of research concerning the prevalence of specific suicidal behaviors such as suicide attempts in AI/AN communities exists, and even fewer studies have been aimed at examining nuances in suicidality as related to tribal heterogeneity. Last, reports on the epidemiology of suicide in AI/ANs are typically limited by potential and frequent misclassification of race and ethnicity on death certificates. Instances of misclassification are estimated to range from 1% to 30% depending on IHS region (Indian Health Service, 1996 in Centers for Disease Control, 2003). Limitations aside, the prevalence of suicide and related behaviors in Indian Country seems overwhelmingly high and undeniably problematic. Although many more questions about the epidemiology of indigenous suicidality remain unanswered, the overarching need for concentrated efforts to prevent suicide is evident.

A review of the relevant biological, psychological, and social risk factors is essential for a comprehensive understanding of suicidality in indigenous communities. Therefore, offered below is a concise description of the relevant risk factors within a biopsychosocial frame of reference that have special importance for Native American communities (readers are encouraged to view Olson & Wahab, 2006, and Strickland, 1997, for more extensive reviews of identified risk factors for AI/AN communities).

## □ Risk Factors within a Biopsychosocial Frame of Reference

### At the Biological Level of Analysis

Serotonergic hypofunction has been implicated in suicide since the late 20th century. A surge of studies continue to examine the role of serotonin in anxiety and depressive disorders, with growing attention devoted to its role in antisocial and impulsive behaviors. In one study published by Zhou and colleagues (2005), the genetic linkages between tryptophan hydroxylase 2 (TPH2), an enzyme involved in the biosynthesis of serotonin within the brain, was examined in four diverse ethnic community samples: Finnish Whites, U.S. American Whites, African Americans, and Southwestern AIs respectively. Notably, results from this investigation point to significant differences among the ethnic group samples in the allele frequencies of specified markers. In particular, no individual single marker or TPH2 linkages associated with anxious/depressive or suicidal behaviors were found in the Southwestern AI samples (in contrast to the other three ethnic groups). Moreover, the yin haplotype was more prevalent in African Americans and Finnish Whites with a history of suicidality and impulsive behavior in comparison with controls free of psychopathology. Additionally, the yang haplotype (identified as a protective factor within the other samples) was absent in the Southwestern AI sample, but present in both White populations. Interestingly, the authors attribute some of the findings to the low rates of admixture in the Finnish White and Southwestern AI population. Overall, the work of Zhou and colleagues contributes further to burgeoning evidence on the role of TPH2 haplotype linkage to anxiety, depression, and suicidality, specifically in the Finish White and African American population.

Before interpretations of the intriguing findings by Zhou et al. (2005) can be made however, a cautionary note is in order. Given the nascent field of bioengineering, stating implications about the consequences of the presence or absence of particular genes or genetic linkages is premature. Above all, the findings of the aforementioned study highlight the need for further specialized research that examines the interplay among genetic predispositions, general antecedent conditions, and environmental contexts in ethnic group populations.

## At the Psychological Level of Analysis

Considerable research has been devoted to the study of psychological risk factors predisposing individuals to heightened suicide risk zones. The psychological risk factors for suicidality are generally similar across populations and broadly include comorbidity with psychiatric and substance use disorders, family and personal history of suicidality, history of abuse (sexual or physical abuse), general distress, and interpersonal conflict.

Numerous studies examining suicidality in AI/ANs highlight the associations between depression, hopelessness, post-traumatic stress disorder (PTSD), substance abuse/dependence, violent ideation/aggression and lifetime history of suicide attempt and suicide ideation, with suicide attempters reporting higher levels of depressive symptomatology and global distress (see Borowsky, Resnick, Ireland, & Blum, 1999; Dinges & Duong-Tran, 1994; Howard-Pitney, LaFromboise, Basil, September, & Johnson, 1992; LeMaster et al., 2004 for thorough reviews). History of attempted AI suicide has also been associated with higher endorsement of somatic symptoms such as headaches and stomach problems, generalized health concerns, history of sexual or physical abuse, familial history of suicide, and frequent alcohol or marijuana use (Bohn, 2003; Borowsky et al.). For adolescent AI youth, having attempted suicide has also been associated with greater reporting of unintentional injury and violence, sexually risky activities, tobacco, alcohol, and other drug use (Shaughnessy, Doshi, & Everett Jones, 2004). Borowsky et al. also found noteworthy differences in risk factors for psychiatric treatment were associated with past suicide attempts in males, whereas knowing where to access a firearm and attendance in special education classes were associated with suicide attempts in females. The strongest risk factor associated with a history of attempted suicide among both male and female respondents was having a friend or peer attempt or complete suicide.

Further differences have been found between genders in relation to alcohol use prior to completed suicides. May et al. (2002) found that alcohol-involved AI suicides were more prevalent in males, and overwhelmingly high blood alcohol content levels were found in all the AI tribal groups examined. Moreover, alcohol involvement in completed suicides did not distribute along any age or regional trends, and was not associated with any particular method of suicide or residential setting (living on or off reservation). Intimate-partner violence and interpersonal conflict are also important risk factors for AI women, particularly for young adult females (Olson et al., 1999). Interesting age trends within suicide attempter profiles have also been documented. Specifically, significant differences between AI adolescents and adults emerged in reported number of attempts, time of attempt, behavior at time of admission to hospital, types of stressors

prior to attempt, and rated motivation at time of attempt (Zitzow & Desjarlait, 1994).

Freedenthal and Stiffman (2004) found intriguing differences concerning psychological risk factors for urban- versus reservation-based samples of AI/ANs. History of physical abuse, a friend attempting or completing suicide, and family history of suicidality, were associated with history of attempted suicide in the urban-reared sample, whereas depression, conduct disorder, cigarette smoking, family history of substance abuse, and perceived discrimination were correlated with history of attempted suicide only within the reservation-reared sample. Urban-reared youth also had lower rates of psychosocial and environmental problems, such as conduct disorder, substance abuse or dependence, perceived discrimination, and gang involvement, in comparison with their reservation-reared youth counterparts. No significant differences emerged in levels of protective factors, abuse history, mental health and behavioral problems, and friends/family suicide history. Notably, higher levels of social support dramatically lessened the odds of suicide attempt only in urban-reared AI youth, whereas depression increased the odds for reservation youth only. Although few studies examined—with Freedenthal and Stiffman being one exception—perceived discrimination as it relates to suicidal behaviors, racism and general stress have been previously referenced as risk factors in suicidal behaviors for AI/ANs (Johnson, 1994).

A handful of researchers interested in the interplay between AI/AN identity and suicidality have found that heightened risk of suicidal behaviors in adolescence has also been attributed to failed attempts to make identity-preserving linkages between the past, present, and future. Thus, failure to identify instances of personal persistence or self-continuity by adolescents was associated with suicidality (Chandler & Lalonde, 1998; Chandler, Lalonde, Sokol, & Hallet, 2003). Chandler and colleagues also found that the ability to identify coherence through time within respondents' life stories served to discriminate suicidal and non-suicidal adolescent participants. However, a perceived sense of self-continuity is presumably one of many psychologically mediated factors that modulate suicidality. For instance, sexual minority status has also been suggested as yet another factor involved in elevated suicide risk zones (Conchran, 2001, in Balsam, Huang, Fieland, Simoni, & Walters, 2004). Results indicate that two-spirit people (those with varied sexual or gender identities) endorse higher rates of childhood physical abuse, historical trauma, anxiety, depression and PTSD symptoms (with reported greater severity) in comparison with their heterosexual Native counterparts (Balsam et al., 2004). These experiences have been previously identified as risk factors for elevated suicidality. It is thus unsurprising that two-spirit participants report significantly more suicide attempts and suicidal ideation (Barney, 2003).

## At the Social Level of Analysis

Biopsychosocial models also acknowledge broader sociological risk factors. Therefore, given the historical context of current-day post-colonial relations between AI/ANs and the federal government, recognizing the influence of historical context on contemporary conditions is essential to identifying social risk factors pertinent to AI/AN communities.

The legacy of colonization (referred to as historical trauma, soul wound, intergenerational trauma, historical legacy, American Indian holocaust, and historical unresolved grief) has been offered as a paradigm for understanding and explaining the alarming prevalence rates of mental disorders and social problems—with much attention devoted to its role in suicide—that have beleaguered AI/AN populations for generations both past and present (Brave Heart & DeBruyn 1998; Duran, Duran, & Brave Heart, 1998; Gone, in press c). The “clash between cultures” (also referred to as acculturative stress) or the psychological sequelae and global distress resulting from the acculturation process that has affected tribal structure, religious practices, and personal and community identity, to name but a few domains, has been suggested as a potent precursor to suicidality and psychiatric conditions in general (Alcántara & Gone, 2007; EchoHawk, 1997; Gone, 2006b, in press b; Kirmayer, Brass, & Tait, 2000; Lester, 1997; Strickland, Walsh, & Cooper, 2006). Moreover, the legacy of colonization has been thought to affect the AI/AN psyche through a “colonization of the life world” wherein colonizers impeded and disrupted the mechanisms facilitating the reproduction of Native cultural and social practices (Duran et al., 1998). This rupture or disintegration of AI/AN daily life-ways (conceptualized as cultural discontinuity) is key to transformations of individual and collective identity, and therefore proposed as a mediating mechanism in pathways to pathology (Gone, 1999, 2004a, 2007, 2006, 2006c, in press c; Kirmayer et al., 2000).

Considering the abundant tribal diversity characteristic of AI/ANs, the influence of tribal culture on suicidality must not be overlooked. In Novins et al. (1999) the heterogeneity of psychological risk factors associated with suicidal ideation was explored in each of a Southwest, Northern Plains, and Pueblo tribe. No single variable was significantly associated with suicide ideation across the three tribes, rather, distinct tribal variations emerged in relation to risk factors. For example, a friend attempting or completing suicide in the past 6 months, lower perceived social support, and depressive symptomatology were correlated with history of suicide ideation in the Pueblo tribe. Single-parent households, higher prevalence of reported life events within the past 6 months, and antisocial behavior were linked to suicidal ideation in the Southwest tribe. Finally, low self-esteem in addition to greater endorsement of depressive symptoms was associated with suicide ideation in the Northern Plains tribe.

Novins and colleagues (1999) reasoned that the cultural characteristics of each of the tribes can be used to understand the unique ways in which the factors correlated with suicide ideation varied by tribe. For example, the Pueblo tribe in question is characterized as a close community with a strong emphasis on social support networks, thus the lack of interpersonal support was associated with levels of suicide ideation. The Southwest tribe is characterized by a strong emphasis on the quality of interpersonal relationships (family, community, and peer associations), and therefore those reporting greater interpersonal distress and single-parent households were more likely to endorse suicide ideation. Novins and colleagues also argue that the strong cultural proscriptions against thinking about death in the Southwest tribe may underlie the associations between antisocial behavior and suicide ideation. Last, the Northern Plains tribe is characterized by its emphasis on individual achievement and a more individualistic conception of self. Consequently, negative perceptions of themselves and their own abilities played a significant role in the extent to which Northern Plains adolescents experienced suicide ideation. Interesting gender-by-culture interactions also emerged, such that for the matrilineal Southwest tribe, a more externalized locus of control was associated with suicide ideation in females but not males. For male adolescents from the Northern Plains tribe, reported life events within the past 6 months was associated with suicide ideation; however, this was not found for females. These findings highlight the role of tribal configurations and gender roles in the experience of suicidality.

On a more “macro” level of analysis, socioeconomic conditions such as unemployment and lack of social capital, as well as ecological conditions such as poverty have been proposed as predisposing risk factors for negative mental health outcomes. More recently, Tondo, Albert and Baldessarini (2006) found associations between indices of access to health care and suicide rates in the U.S. Correlated indices include federal aid for mental health services, number of uninsured persons, and availability of psychiatrists or physicians. These findings underscore the importance of ecological factors such as access to and use of appropriate mental health services in mitigating suicide risk. Settings characterized by lower socioeconomic status conditions and rural areas have also been found to be associated with suicidality in AI/ANs (Lester, 1995; Mignone & O’Neil, 2005). Moreover, mounting evidence has called into question the influence of regional and clustering trends on suicidal behaviors. Results indicate that research targeting suicide prevention in AI/AN communities should explore the local cultures of the specific tribal group in addition to the milieu shared with non-indigenous communities (Wissow, Walkup, Barlow, Reid, & Kane, 2001).

## Summary of Biopsychosocial Risk Factors

This review of the biological, psychological, and social risk factors for suicide in Native American communities demonstrates that the factors predisposing indigenous persons to heightened suicide risk zones are multifaceted and complex. Single risk factors for suicide are not operating in isolation, but are likely interacting with other risk factors at multiple levels of analysis, evident by the numerous studies that regularly find a combination of risk factors rather than just one associated with suicidal behaviors. It is this interactive network that culminates in pathways to pathological outcomes and increases the possibility for suicidal behaviors. As demonstrated above, genetic linkages, psychiatric conditions, Native identity, social support networks, attitudes toward education, cultural continuity, spirituality, and socioeconomic factors (to list a few) are correlated with suicidality in AI/ANs.

Until now, the discussion has centered on identifying relevant risk factors (biological, psychological, and social) as indicated or suggested in the literature, with practically no attention devoted to examining the protective factors that buffer AI/ANs from engaging in suicidal behaviors. Equally important to knowing the factors leading to heightened suicidality is the formulation of a deeper understanding of the agents as well as the intervention strategies that have aided in preventing suicide among Native peoples. To actively overcome suicide, interventions must establish and reinforce these protective factors.

## Protective Factors

Spirituality has been continually suggested as a potential buffer against suicidality for indigenous peoples. A recent study by Garoutte et al. (2003) indicates that a commitment to spirituality in the form of high endorsement of cultural spiritual orientations is associated with a decrease in the number of AI-reported suicide attempts. Alternatively, neither commitment to Christianity nor to cultural spirituality, in the form of high rating of importance of beliefs, was associated with suicide attempts. None of the associations between spiritual commitment and suicidality differed by sex. According to Garoutte and colleagues, these findings suggest that incorporation of indicators of cultural spiritual orientations may be of importance in studies of psychological well-being, because spiritual commitments may provide a means through which to make sense of and structure life. Although a protective association between suicidal behaviors and spirituality has been found, the results are inconclusive regarding the protective effect of indigenous identity (loosely construed) on

suicidality. Mixed results concerning the association between connection and engagement with indigenous cultural practices and suicidality have been documented (Dexheimer Pharris, Resnick, & Blum, 1997; Freedenthal & Stiffman, 2004; Howard-Pitney et al., 1992).

Perceived strong family connectedness, social support, and affective relationships with tribal leaders have also been demonstrated to have a protective effect in the reduction of suicidal behaviors (Borowsky et al., 1999; Dexheimer et al., 1997; Howard-Pitney et al., 1992). Interestingly, positive attitudes toward education, perceived interpersonal communication skills, as well as habitual discussion of problems with friends or family members, were also correlated with fewer reporting of suicidal behaviors in the aforementioned studies. Notably, the presence of a nurse or clinic in the school setting also emerged as a correlate of decreased suicidal behaviors in adolescent females. The role of protective factors in the reduction of suicide attempts was highlighted by the findings of Borowsky and associates, wherein the addition of protective factors dramatically reduced suicide risk. In particular, the likelihood of engaging in a suicide attempt increased sharply (up to 14-fold) when all three risk factors were present (friend or family attempted or completed suicide, history of physical or sexual abuse, and weekly substance use). Increasing the number of protective factors generally proved more effective at reducing the likelihood of suicide attempts than reducing the quantity of risk factors. These quantitative findings are corroborated further by a recent qualitative study in which parents and elders expressed the need for suicide-preventive interventions that focus on bolstering protective factors through the strengthening of family, community, and cultural values (Strickland, Walsh, & Cooper, 2006). Thus, greater attention needs to be devoted to increasing the number and types of protective factors present in AI/AN communities.

Moving away from examining individual protective factors to community and societal factors, cultural continuity is emerging as a useful construct in understanding AI/AN youth suicide. The presence of cultural continuity was associated with reduced and in some cases nonexistent rates of suicide in certain AI/AN communities (Chandler & Lalonde, 1998; Chandler et al., 2003). In these studies, cultural continuity was measured by the existence of the following markers: land claims, self-government, police and fire protection services, health services, education, cultural facilities—in essence, these indicators reflect community effectiveness in the preservation and promotion of cultural integrity over time.

## □ A Transactional-Ecological Framework for Understanding Suicidality

From a biopsychosocial framework, an examination of risk and protective factors at the biological, psychological, and social levels of analysis becomes central to any prevention venture. Most suicide-risk assessments and interventions typically begin with the identification of relevant risk and protective factors from a biopsychosocial perspective. Configuring suicidality within a biopsychosocial model, however, harbors the potential (whether intentional or unintentional) to invoke the politics of "person blame" (Albee, 1981; Caplan & Nelson, 1973). If risk factors are identified within a framework that focuses on individual or group "characteristics" or dispositions, then the possibility of person blaming or group blaming for the existence of such characteristics is heightened. Needed instead is a framework that recognizes the interactions between levels of risk and their contexts but circumvents any possibility for engaging with the politics of person or victim blaming. The transactional-ecological framework is an advancement over a strictly biopsychosocial framework because it emphasizes systemic and transactional points of intervention; its political and ethical commitment to examining and targeting systemic factors mitigates against the "tendency to hold individuals responsible for their problems" (Caplan & Nelson, 1973, p. 199).

The transactional-ecological framework proposed by Felner and Felner (1989) is an approach to prevention that targets the interactions between individuals and their environments along developmental trajectories toward negative outcomes. That is, this approach to prevention explicitly disavows person-focused interventions as "blaming the victim" (Ryan, 1971) and instead targets problematic transactions between people and their environments. Moreover, this approach rejects a disease-prevention model of intervention in favor of efforts that target broad-based antecedent conditions that might lead to any number of undesirable outcomes (e.g., school failure, teenage pregnancy, substance abuse) over time without necessarily yielding any specific developmental outcome (e.g., suicide) in reliable ways.

Borrowing from the transactional-ecological framework formulated by Felner and Felner (1989) for prevention efforts in educational contexts, what follows is an elaboration of postulates that are useful when attempting to understand and contextualize suicidality and suicide prevention. The postulates are paraphrased from Felner and Felner (pp. 20–22):

1. Disorder results from deviations in normal developmental pathways and processes. The central objective of prevention programs is to hamper such deviations and reinstate more typical normative pathways.
2. Behavior of concern may be typical and adaptive responses to *disordered* circumstances. Important is the understanding of the contexts in which targeted behavior arose and is maintained. In this way, the target population is not pathologized but understood within disordered contexts.
3. Contextual effects are important. Understanding the contexts in which behavior occurs is essential to effective prevention. Hence, the interaction between children and their environments as well as the effect of settings are the focus of prevention programs.
4. Pathology often originates in factors or conditions outside the person. Appropriate points of intervention are the processes and contexts rather than the person himself or herself.
5. Intervention from a transactional-ecological framework emphasizes prevention of broad-based antecedent factors and processes rather than targeted disorders.

In this conceptual framework, elevated suicide-risk zones are one result of deviations in normative developmental trajectories that lead to negative outcomes. The aim of prevention programs is thus to restore the individual to normative and developmentally appropriate trajectories without "blaming the victim" in the process. As a result, only those biological, psychological, and social risk factors that can be addressed in transactional terms are targeted for preventive interventions. Keeping these postulates in mind, the role of developmental pathways and the interaction between individuals and their contexts is at the core of understanding suicidality. Within this transactional-ecological approach, identifying antecedent conditions that predispose individuals to generic distress and dysfunction is necessary before addressing the interactions between individuals and their contexts. Reinstating normative trajectories (rather than treating individual disorders) is then the first line of defense against dysfunction and pathology.

## □ Points of Intervention within a Transactional-Ecological Framework

In a transactional-ecological model, prevention programs vary regarding the designated points of intervention and the targeted risk factors. The points of intervention within this framework are determined by the



mechanisms and processes leading to impairment and resiliency, rather than end-states that are relatively unpredictable by nature. As a result, intervening in suicidality is conceptualized within a broad-based "antecedent conditions" prevention model, where in contrast to the specific disease model, the individual is understood and treated as inseparable from his or her environment. Transaction-focused programs are differentiated on account of their intentional and explicit focus on person-environment interactions that predispose individuals to increased risk for dysfunction (Felner & Felner, 1989). Specifically:

In these approaches, a set of characteristics of the person as well as a set of characteristics of the environment must be identified, such that *only when they combine* do they increase risk and distort normal developmental growth patterns. (p. 31)

Essentially, the source of risk is conceptualized as resulting from the combination of persons with specific characteristics developing in compromised contexts. It is important to highlight that the specific focus of prevention programs can be "on one or the other side of the transaction, or both [person and environmental conditions] simultaneously" (p. 23). In general, models of intervention might be crafted along a transactional continuum targeting either the individual (through "person-focused" interventions such as enhancing coping skills of youth with heightened genetic risk for clinical depression), the transaction of the individual and the environment (through "transaction-focused" interventions such as enhancing assertiveness skills for women entering a male-dominated profession), or the environment (through "environmentally focused" interventions such as eradicating impoverished living conditions) respectively. Strictly speaking, however, owing to ethical concerns and political commitments, the transactional-ecological approach to prevention avoids person-focused interventions altogether, emphasizing transaction-focused and even environmentally focused interventions.

## Healing: Moving Beyond Suicide

Two reviews of suicide programs in Native communities (May, Serna, Hurt, & DeBruyn, 2005; Middlebrook, LeMaster, Beals, Novins, & Manson, 2001) demonstrate the need for and effectiveness of using community-based models. Although suicide-prevention programs targeting AI/AN communities have frequently addressed broad antecedent conditions with an emphasis on the role of context on the individual, few studies have scrupulously reviewed and evaluated such intervention efforts (see Middlebrook et al., 2001 for a critical review of suicide interventions and recommendations).

According to Middlebrook and colleagues, in cases where outcome evaluations have been conducted, the analyses have been far from rigorous, with results described as "impressionistic" and limited, especially when assessing generalizability to other AI/AN communities. Therefore, information about the effectiveness of the implemented suicide-prevention strategies in designated communities remains largely unknown.

In one study, however, May et al. (2005) evaluated the outcome of prevention efforts within a small AI/AN community over a 15-year period. This prevention effort specifically targeted 10- to 19-year-olds, and incorporated re-education and awareness-raising activities for 20- to 24-year-olds. The prevention program sought to: (1) identify relevant suicide-risk factors for a Western Athabaskan Tribal Nation; (2) identify specific individuals and families at highest risk for suicide, psychopathology, and violent behaviors and implementation of prevention activities; (3) provide mental health services to individuals and families at highest risk; and (4) bolster community awareness through the involvement of tribal leaders, health care providers, parents, elders, youth, and clients. Initial program development and planning included interactive community focus groups centered on identifying problems, barriers, and potential solutions.

Notably, the members of the community identified problems leading to suicide, rather than suicide alone, as areas of concern and emphasized the importance of treating issues of alcoholism, domestic violence, child abuse, and unemployment, rather than just suicide. The results from these focus groups informed the creation of the Adolescent Suicide Prevention Project. Specific components included: surveillance, screening, provision of clinical interventions through outreach services at both health care facilities and popular settings for adolescents (community functions), provision of social services, integration of school-based prevention programs on life-skills development, and community education for adults and adolescents. Professional mental health staff also worked in conjunction with "natural helpers" or adolescent peers who were trained to refer clients to mental health services or to provide counseling to these individuals. May and associates (2005) found a dramatic downward trend in the number and frequency of suicidal attempts and suicidal gestures since the implementation of this community-based intervention model (the program accounted for approximately 60% of the variance), with rates in suicide completion remaining the same.

The study by May et al. (2005) highlights the importance of using community-based and community-run models of suicide interventions in Native American communities. For the New Mexico tribe in this study, the public-health/community-based approach to suicide intervention was effective, and likely remains effective. However, the study did not employ randomization or control techniques, and thus did not directly assess causal linkages; therefore, it remains possible that the reductions

in suicide rates can be attributed to other factors. Moreover, one of the objectives of the prevention program described above was to identify specific individuals and families at highest risk by identifying biopsychosocial risk factors. In this way, the prevention program, though community-based, was also person-centered. By locating risk within individuals or families, this approach is vulnerable to the allegations of person- or victim-blaming described earlier. A transactional ecological model would bypass risk identification at the individual or family level and instead target trajectories and transactions generally leading to negative outcomes or dysfunction, such as the general availability of alcohol to minors or the difficult transition of all community adolescents into high school.

Emphasis then needs to be placed on establishing research programs committed to developing interventions that examine and treat individuals *and* communities within a larger transactional-ecological context. In this light, pathology does not reside within the individual, but in the culminating interactions between individual and contexts (stressors, environment, sociocultural factors, etc). Individual acts such as suicide and suicidal behaviors are examined within the context of ecological influences. Moreover, community involvement throughout the program development (from the initial to final stages) is necessary. Similarly, if we are to translate these research findings to clinical practice, great efforts must be made toward the creation of culturally sensitive and culturally competent mental health services. Brief recommendations for future research and clinical practice follow.

## □ Recommendations for Future Research and Clinical Practice

### Research

In a recent review of suicide in Native American communities, Olson and Wahab (2006) made several recommendations for clinicians and researchers in the field of suicide. Some of the strategies offered for future research include the utilization of mixed methods (qualitative and quantitative methodologies) and community participatory methods to study suicide, serious consideration of tribal differences, exploration of urban versus reservation contextual influences, and the examination of acculturation effects. Furthermore, Olson and Wahab strongly encourage the incorporation of traditional healers and indigenous practices in research that seeks to learn about and treat suicide in Native American communities. Other recommendations include the exploration of intergenerational effects of

historical trauma on conceptualizations of suicide and suicidal behaviors, and the evaluation of suicide interventions. Notably, the recommendation to conduct in-depth studies within and across tribal communities along with the recommendation to incorporate traditional healing in suicide preventive interventions are particularly relevant in Indian Country and will be elaborated further below.

Examining tribal-specific experiences or local culture is an important avenue wherein to address the heterogeneity of American Indian populations. This type of approach can be thought of as *emic* in its design because such approaches emphasize the study of a specific culture's distinctive psychology, cultural practices, folk models, and ways of life as distinctive constructs rather than sources of comparison and generalization (Gone, 2004a, 2007, in press a; Shweder, 1990). As applied to suicide research, emic approaches allow researchers a nuanced lens for examining the meanings and subjective experiences of mental distress without the imposition of etic or universally accepted biomedical conditions or psychiatric disorders. For example, O'Neil's (1996) ethnographic field work about the meanings of depressive like affect among the Flathead provides valuable insight regarding the cultural meaning of loneliness and collective depression in this community. Loneliness was much more than an individual experience, rather, loneliness was inherently tied to an awareness of the self as interdependent. Expressions of loneliness through acts such as gift-giving, visiting, and proper manners were reflections of the connectedness of human life and the need for compassion. Furthermore, Flathead loneliness was a response to current and historical tribal losses, as well as relational and individual disruptions. Moreover, Grossman, Putsch, and Inui's (1993) study of the meaning of death among adolescents in a Salish American Indian community revealed that personal exposure to death, alcohol, and drugs, and Spirit Sickness (English translation of popular illness of distress among the Salish) emerged as key themes in the participant narratives. O'Neil's work coupled with Grossman, Putsch, and Inui's poignantly reflect the need for culturally circumscribed understandings of mental distress and in particular suicide, as a first step in the creation of suicide-prevention efforts.

The recent attention to indigenous or traditional healing approaches to suicide intervention in Native American communities marks a shift in the zeitgeist concerning the use of alternative or complementary approaches to helping people in distress. At a recent conference on indigenous suicide prevention, community representatives advocated the integration of traditional healing practices and tribal leaders in suicide prevention efforts (Gone & Alcántara, 2006). Incorporation of traditional healing practices was deemed central to the acceptance and use of any prevention venture. However, integration is not without consequence. Before any systematic efforts at integration are made, serious dialogue about the implications

of the integration of traditional healing practices must occur. Gone and Alcántara (2006) have begun such a dialogue by highlighting some of the challenges that may arise in any attempt to integrate traditional healing and contemporary health care practices. The unique challenges are centered on the description, translation, integration, and evaluation of traditional healing practices. Underlying these challenges are the cultural divergences in epistemology, discourse, and practice between indigenous healing traditions and contemporary health care (Gone, 2003, 2004b, in press a, in press c; Gone & Alcántara, in press). Traditional healers may oppose the articulation, surveillance, regulation, and evaluation of traditional healing practices. Fundamentally, integration of traditional healing practices and contemporary health care practices is not a simple endeavor, and further deliberation is in order.

## Clinical Practice

Although death by suicide is a statistically rare occurrence, knowledge of the relevant risk factors and protective factors can be crucial to determining treatment plans and treatment settings. Key to effective treatment planning is the estimation and management of suicide risk. The latest authoritative text on suicide, entitled *Textbook of Suicide Assessment and Management* (Simon & Hales, 2006), is a comprehensive clinical textbook for mental health practitioners. The main objective of the text is to aid clinicians in the clinical assessment and management of *all* patients in suicide-risk zones. Although limited research exists on suicide and suicide intervention in Native American communities, this chapter uses the guidelines provided in the aforementioned text as a springboard from which to make recommendations for clinical practice in AI/AN communities.

Based on the American Psychiatric Association executive committee's practice guidelines for the assessment and treatment of patients with suicidal behaviors, state-of-the-art psychiatric assessment must include an evaluation of current presentation of suicidality, psychiatric illnesses, medical and family history, psychosocial circumstances, and individual strengths and vulnerabilities (Jacobs et al., 2003). Readers are encouraged to review Jacobs and colleagues for a listing of questions that may be helpful in inquiring about specific aspects of suicidal thoughts, plans, and behaviors (pp. 583–585). Of note, "emergency department or crisis situation, intake evaluation, abrupt change in clinical presentation, lack of improvement or gradual worsening despite treatment, anticipation of experience of interpersonal loss or psychosocial stressor, and onset of physical illness" are listed as situations in which suicide assessment may be clinically indicated. The presence of suicidal ideation and behaviors, psychiatric conditions, physical illnesses, psychosocial circumstances such

as childhood trauma, family history, presence of impulsivity, aggression, hopelessness, cognitive features (dichotomous thinking, tunnel vision), demographic features like male sex, and access to firearms, to name a few, are discussed as factors generally associated with increased risk. A few of the protective factors listed include children in the home, religiosity, positive social support, and life satisfaction. Determining either the presence or absence of these factors, their severity, and interaction effects are of importance in determining which factors are modifiable. To decrease suicide risk, attention must be devoted to lessen or bolster those risk and protective factors that are modifiable (Jacobs et al.).

Aside from the estimation of suicide risk, its management and mitigation are continual goals in the treatment of patients at risk for suicide. Psychiatric management constitutes "determining a setting for treatment and supervision, attending to patient safety, and working to establish a cooperative and collaborative physician [clinician]–patient relationship" (Jacobs et al., 2003, p. 590). According to these authors, selection of treatment setting is dependent on the estimation of current suicide risk and potential for threat or harm to others, and other indices of a patient's current functioning, including comorbid medical and psychiatric conditions, access and extent of psychosocial support networks, demonstration of appropriate self-care, and cooperation with clinician and treatment. Suicide prevention contracts or "no-harm contracts" should also be used in the context of an established clinician–patient therapeutic relationship. Readers are again encouraged to peruse Jacobs and colleagues for a list of guidelines for the selection of treatment for patients at risk for suicidality (pp. 591–592).

The summary above represents the latest state-of-the-art practice guidelines for the assessment and treatment of patients with suicidal behaviors. However, a major limitation is clear: the guidelines are general and not specific to AI/AN communities. Calls to create culturally sensitive and culturally competent mental health services are common in Indian Country, and mere transposing of state-of-the-art guidelines undermines the unique cultural and historical context of Native communities. To this end, recommendations include the following: (1) increase the availability and access of indigenous interventions and practitioners as well as contemporary health care practices for Native peoples on and off the reservations; (2) recruit and train mental health providers (in particular Native clinicians) who work with Native communities; (3) increase number of psychiatrists specializing in children and adolescents; (4) implement cultural competence in suicide-risk assessment through the exploration of cultural meanings of suicide, help-seeking behavior, and culturally sanctioned versus pathological suicidality, along with the examination of the impact of degree of acculturation and religious views (Olson & Wahab, 2006; Wendler & Matthews, 2006). The fourth recommendation listed can

be conceptualized as an extension of an emic approach to suicide intervention. Remembering that emic approaches privilege a specific cultural community's distinctive psychology, folk models, and understandings—essentially its worldview—culturally competent clinical assessment is one venue where emic approaches to clinical practice can be incorporated (e.g., through the incorporation of the diagnostic practices of the community itself). Moreover, situating the individual within a cultural context while recognizing unique individual differences is central to establishing and maintaining a therapeutic alliance (Wendler & Matthews); a strong therapeutic alliance has been linked to better treatment outcomes.

Culturally competent clinical practice with Native clients at risk for suicide should take into account the relevant risk and protective factors on suicidality in Indian Country as documented in the literature. Furthermore, historical and regional factors, tribal differences, acculturation effects, setting effects (urban versus reservation), and gender effects, along with cultural meanings of suicide and suicidal behaviors should be explored in depth.

Of note, our review of the advantages of a transactional ecological framework for conceptualizing suicidality and corresponding forms of intervention underscores the importance of transactional and systemic influences. A transactional-ecological framework excludes person-focused clinical approaches, most of which by design (or in practice) target the individual as the source of difficulty and remediation. Instead, this framework advocates for interventions that focus on “broad-based antecedent conditions” and community-based prevention efforts. Although considerations for person-focused clinical practice were presented above because most mental health services are delivered within the context of a therapeutic dyad, these recommendations deviate from the transactional-ecological framework. Needed are community-based and transaction-focused prevention alternatives. Ultimately, a transactional-ecological framework for conducting research and clinical practice reminds us that the individual must be understood within a specific context in which individual factors combine and interact with the environment.

## □ Conclusion

At the outset of this chapter, Kevin Gover was quoted as urging us to remember that general healing will commence once the issue of suicidality in American Indian and Alaska Native populations is addressed by both indigenous and non-indigenous peoples. Recent outcome evaluations confirm that suicide-intervention programs (especially in AI/AN communities) accounting for the transactional-ecological contexts in which suicide

prevention occurs are indeed effective. Hence, situating biopsychosocial risk and protective factors according to Felner and Felner's (1989) transactional-ecological framework is imperative for developing interventions that actually reduce suicide-risk zones. A transactional-ecological framework reminds us that risk and protective factors are operating within an interactive network or transactional system, where an individual's potential for suicide is not independently determined by the presence or absence of particular intrapersonal factors (i.e., within a disease model framework), but is instead dependent on the aggregate interactions among broad-based antecedent conditions and individual variables that unfold within specific contexts over time.

Lessons from both research and clinical practice teach us that upholding an emic approach to both research and practice is a means to ensuring that suicidality in Native communities is studied and treated within an approach that situates individual conceptions, understandings, and experiences of suicide within a cultural context. Cultural competence in suicide intervention research and practice is a consequence of adopting an emic approach. The studies summarized in this chapter indicate that the profile of suicidality is influenced by cultural and regional variability. This proscribes the mere transposing of conventional clinical wisdom into AI/AN communities. Instead, clinical practitioners working with AI/ANs should question the extent to which conventional clinical wisdom (as presented in Simon & Hales, 2006) should be appropriated, tailored, or discarded when working with these communities. Moreover, the added effects of bolstering protective factors versus reducing risk factors is a key research finding that should be accounted for in determining appropriate points of intervention. The current state of affairs indicates that monumental strides are being taken so that suicide in American Indian/Alaska Native communities is no longer a neglected phenomenon. The recent collaborations and dialogues across indigenous and non-indigenous communities, researchers, and clinicians are stepping stones toward Kevin Gover's suggested path to healing.

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# Suicide

## Among Racial and Ethnic Minority Groups

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