Nonsuicidal Self-Injury in an American Indian Reservation Community: Results From the White Mountain Apache Surveillance System, 2007–2008

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Objective: To describe characteristics and correlates of nonsuicidal self-injury (NSSI) among the White Mountain Apache Tribe. NSSI has not been studied before in American Indian samples despite associated risks for suicide, which disproportionately affect American Indian youth. **Method:** Apache case managers collected data through a tribally mandated surveillance system. Data from 2007 and 2008 (N = 182) were examined for rates, methods, precipitants, functions, past history of self-injury and service use, by age and gender. **Results:** The rate of NSSI among all ages was 600 in 100,000, with individuals 10 to 14 years old disproportionately affected at a rate of 3,000 in 100,000. More females (65%) reported NSSI, and cutting was the preferred method (98%) for both genders combined. Most frequently reported precipitants were peer pressure/copying, conflict with boy/girlfriend and "depression." A substantial proportion (22%) was intoxicated/high at the time. More reported the function of NSSI was to "effect internal state" (45%) than "effect circumstances" (15%). More than one-third (39%) received ED treatment and referrals for aftercare (36%). Of those referred, only 30% followed up with services. Most (79%) reported past NSSI; 30% reported past suicidal ideation and 25% attempts. **Conclusions:** NSSI is a significant, largely unaddressed mental health problem among the White Mountain Apache Tribe and likely other reservation communities, especially as NSSI could serve as a precursor to suicide in this population. Interestingly, another self-destructive behavior, severe substance use, was reported to the surveillance system by Apaches and described in terms similar to NSSI, an important preliminary finding worth further exploration. J. Am. Acad. Child Adolesc. Psychiatry, 2011;50(9):860–869. **Key Words:** nonsuicidal self-injury, self-destructive behavior, alcohol use, drug use, American Indian

Nonsuicidal self-injury (NSSI)—the deliberate alteration or destruction of one's own body tissue of a socially unacceptable nature without expressed intent to die[1,2]—is a serious and poorly understood mental health issue. The seriousness of NSSI is heightened by its association with suicide and other high risk behaviors (Walsh and Frost, unpublished data, 2005),[3,4] potential cost to emergency departments and other urgent care facilities, and a paucity of evidence-based treatments.[5] NSSI is an emerging public health problem as well; research suggests that rates of NSSI are increasing among individuals of all ages,[6,7] with current prevalence for more severe forms of NSSI estimated at 14% for youth and young adults and 1% for adults.[3,8-11] What is known today about NSSI has primarily been found through studies with Caucasian middle and upper class populations, using a range of sampling techniques (e.g., surveys in psychiatric, forensic, and school samples).[1] The most common method is skin cutting, followed by hitting and burning.[8,12] NSSI begins early; the majority of persons report onset between ages 12 and 14 with a notable proportion (25%) beginning earlier.[10,13] Some individuals self-injure once or a few times, whereas others self-injure repeatedly over time.[11] Females report more NSSI


An interview with the authors is available by podcast at www.jaacap.org.

than males; however, the ratio depends on the population studied.[3,8-10]

To date, minority and socioeconomically disadvantaged groups have rarely been the focus of NSSI research. This fact is particularly concerning for American Indians, who have the highest youth and young adult suicide and substance abuse rates of any racial or ethnic group in the United States,[14] both of which are associated with NSSI (Walsh and Frost, unpublished data, 2005).[3,4] Youth with past NSSI more often report a history of suicidal ideation (83% versus 29%), suicide plan (40% versus 3%), and repeated suicide attempts (26% versus 6%) than youth without past NSSI.[3] Very few adolescents who engage in NSSI (0%–5%) report being under the influence of alcohol or drugs when they self-injure[15]; however, a greater number of adolescents who have engaged in more severe versus less severe forms of NSSI were using substances during the incident (26.5% versus 3.4%).[16] In addition, adolescents with both NSSI and suicidal behavior report higher substance abuse rates than adolescents with one or the other (Walsh and Frost, unpublished data, 2005).[18]

Behavioral scientists are increasingly attempting to understand the functions of NSSI to inform intervention strategies. A number of different functions have been identified[1,2] and it appears that NSSI serves multiple functions simultaneously.[16,18] Nock and Prinstein[19] have conceptualized four main functions of NSSI along two dichotomous dimensions: 1) internally versus externally motivated, and 2) negative reinforcement versus positive reinforcement.[19] NSSI that serves internal functions includes using NSSI to reduce overwhelming internal experiences, to reduce urges to attempt suicide, to reconnect with feelings, and to feel autonomous.[1,17,20] NSSI that serves external functions includes engaging in NSSI to reduce criticism or rejection by others, to provide interpersonal distance, to enhance one's peer group status, and to strengthen relationships with friends who self-injure.[1,17,20]

The purpose of this article is to present the first descriptive data regarding NSSI within an American Indian (AI) sample, the White Mountain Apache Tribe (WMAT). There are approximately 15,500 enrolled White Mountain Apache (Apache) tribal members who reside on the 1.6-million-acre Fort Apache Reservation in East-Central Arizona. Nearly one-half (54%) of the population is less than 20 years old compared with approximately 35% of the US all-races population.[21] The WMAT has had a productive relationship to address health disparities for the past three decades with the Johns Hopkins Center for American Indian Health (JHU). This partnership's most recent achievement has been the establishment of a tribal surveillance system that mandates reporting by all local service agency providers and community members of any suicidal ideation, attempts, and deaths, as well as NSSI and severe use of alcohol or drugs on the reservation. Originally designed to track upward trends in youth suicidal behavior, the surveillance system recently helped describe high tribally specific suicide and suicide attempt rates. The annual suicide rate is highest for youth 20 to 24 years old at 151.9 in 100,000, which is approximately 13 times the U.S. and eight times all Al/AN youth rates.[22] The average annual suicide attempt incidence rate—3.5%[22]—is highest among youth 15 to 19 years of age and is 17 times the rate in methodologically similar studies.[23,24] These data have generated important local resources for developing and evaluating prevention and intervention efforts against youth suicide.

This article reports on patterns of NSSI for Apache youth and adults during the period from January 1, 2007, to December 31, 2008. We used surveillance system data to answer the following questions in comparison to the literature: 1) What are the rates of NSSI among Apaches, including what age group is most at risk? 2) What are the demographic characteristics of Apaches who self-injure? 3) What are the characteristics of NSSI among Apaches, including the role of substance use? 4) What are possible precipitants and functions? 4) What services are used by Apaches who engage in self-injury? and, finally, 5) What is their past history of mental health problems, specifically nonsuicidal and suicidal self-injury?

METHOD

Study Design

The study design used Community Based Participatory Research methodology incorporating traditional and scientific expertise. The tribal surveillance system is led by community stakeholders and man-