The Behavioral Health of American Indian/Alaska Native Populations: Risk and Resiliency

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Introduction

American Indian and Alaska Native (AI/AN) populations include people who maintain tribal affiliation or community attachment with the original populations of North America, South America, and Central America. In the United States (USA), there are 567 AI/AN tribes that are federally recognized, more than 100 tribes that are state recognized, and some tribes that are neither state nor federally recognized (Office of Minority Health, 2018). As of 2012, there were an estimated 5.2 million people, or 2% of the total US population, classified as AI/AN alone or AI/AN in combination with one or more other races. Approximately 25% of AI/AN live on reservations or other trust lands. Of the approximately 75% of the AI/AN who live outside of tribal areas, 60% live in metropolitan areas (Office of Minority Health, 2018). Each of these tribal communities has unique cultural teachings, traditions, and languages.

Rates of diseases and other adverse health outcomes are higher in AI/AN than in other communities in the USA. Heart disease, cancer, and unintentional injuries are the leading causes of death among AI/AN (Centers for Disease Control & Prevention [CDC], 2012, 2013). Compared to Whites, American Indians/Alaska Natives have higher rates of emphysema, chronic bronchitis, and asthma (Barnes, Adams, & Powell-Griner, 2010). Furthermore, AI/AN men and women are twice as likely to be diagnosed with chronic liver disease than Whites (Office of Minority Health, 2013), and rates of unintentional injuries and deaths are 60% higher in AI/AN compared to Whites (West & Naumann, 2011). The literature also demonstrates major health issues for AI/AN with regard to several behavioral health conditions: substance abuse, post-traumatic stress, violence, and suicide (Gone & Trimble, 2012; Myhra

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& Wieling, 2014a, 2014b; Office of Minority Health, 2018; Spillane, Greenfield, Venner, & Kahler, 2015; Yuan, Duran, Walters, Pearson, & Evans-Campbell, 2014).

The American Indian Service Utilization, Psychiatric Epidemiology, Risk and Protective Factors Project found the prevalence of DSM-IV disorders was 35.7% for women to nearly 50% for men (Beals et al., 2005). The most common disorder for women was post-traumatic stress disorder and for men, alcohol abuse and dependence. Significant levels of comorbidity were found among those with depressive and/or anxiety and substance use disorders (Beals et al., 2005).

To fully understand the behavioral health disparities experienced by AI/AN, it is critical to examine the context in which they occur. High prevalence of behavioral disorders in AI/AN communities is believed to be linked to a number of historical and environmental factors, such as historical trauma and contemporary discrimination, as well as current-day unemployment, academic failure, high-risk occupations, and lack of health insurance (Andrews, Guerrero, Wooten, & Lengnick-Hall, 2015; Centers for Disease Control & Prevention, 2013; Moghaddam, Momper, & Fong, 2013; Stanley, Harness, Swaim, & Beauvais, 2014).

Currently, one in four AI/AN live in poverty (Macartney, Bishaw, & Fontenot, 2013, February). Although AI/AN health-care services are supposed to be provided by the Indian Health Service (HIS) and some tribal health offices, these services are not adequate to cover the health needs. Over one-third of AI/AN have no health insurance coverage (Office of Clinical and Preventive Services, 2011). AI/AN are also underrepresented in the Medicaid expansion population (Andrews et al., 2015), which affects access to and utilization of health and behavioral health services.

Studies of both urban and rural AI/AN populations have documented poor health, limited health-care options, and limited services utilization (Adekoya, Truman, & Landen, 2015; Brave Heart et al., 2016; Castor et al., 2006; Genovesi, Hastings, Edgerton, & Olson, 2014; Gone & Trimble, 2012; Liao et al., 2011; Murphy et al., 2014; Reilley et al., 2014; Siordia, Bell, & Haileselassie, 2017; Towne Jr., Probst, Mitchell, & Chen, 2015). Barriers to services and utilization include distance to a care facility, transportation, stigma, lack of cultural sensitivity among health-care professionals, relocation, difficulty navigating health-care delivery systems, lack of awareness of available health resources, long waiting times for health care, difficulty adhering to medication, preference for traditional healers, and poor incentives in health promotion (Kim, Bryant, Goins, Worley, & Chiriboga, 2012; Moghaddam et al., 2013; Shah et al., 2014). Other factors also affect services delivery, including gaps in state-tribal collaborations (Croff, Rieckmann, & Spence, 2014; Gone & Trimble, 2012).

Despite these challenges, AI/AN people have demonstrated resiliency and self-determination over the centuries. In this chapter, we describe the current state of behavioral health for AI/AN and the contributing factors to these disparities. We feature some of the successes AI/AN communities have in addressing these issues.

This chapter is organized by first presenting the epidemiology of behavioral disorders in AI/AN, including mental disorders, alcohol/drug disorders, disabilities, and co-occurring disorders. We emphasize both risk and protective factors. We then highlight some of the successful behavioral health prevention and treatment

strategies. We conclude by discussing implications for behavioral health for AI/AN including future directions for research, services, programs, and policy.

Mental Health and Psychological Distress

AI/AN populations are at a high risk for poor mental health outcomes. Among those 18 years of age and older, AI/AN are more likely to experience serious psychological distress in the past 30 days (5.4%) than their White or Black/African American counterparts (3.4% and 3.5%, respectively) (National Center for Health Statistics [NCHS], 2016, May). AI/AN populations are also 50% more likely to report hopelessness, worthlessness, and feelings of nervousness or restlessness all or most of the time compared to non-Hispanic whites and 80% more likely to report frequent sadness (NCHS, 2016). Some researchers claim that accurate data on depression among AI/AN elders is challenging because most AI/AN do not seek treatment for depression and are, therefore, "hidden" conditions (Garrett, Baldridge, Benson, Crowder, & Aldrich, 2015). Using extrapolations from other minority data, Garrett et al. (2015) project that AI/AN in 2050 will experience four times the rate of depression in those over 65 years of age and approximately four-and-a-half times the rate of dementia as they experienced in 2010.

In an analysis of gender and ethnic differences in the National Epidemiologic Survey on Alcohol and Related Conditions, Brave Heart et al. (2016) reported that most AI/AN men (70%) and women (63%) experienced at least one lifetime mental disorder and were more likely to have experienced mental disorders (substance use and mood and personality disorders) than their non-Hispanic White counterparts (Brave Heart et al., 2016). The authors argue that historical trauma (e.g., boarding school experience but more broadly genocide, ethnocide, and attempts to assimilate into majority culture) likely contributed to unresolved grief that led to depression and substance abuse (Brave Heart, 2003; Brave Heart et al., 2016).

Historical genocide and the boarding school system have contributed to contemporary traumatic experiences and "multi-generational distress" in AI/AN (Warne & Lajimodiere, 2015). For example, Myhra and Wieling (2014b) examined the impact of trauma on the psychological well-being across two generations of AI/AN. Participants of both generations reported trauma from childhood, including substance abuse and neglect, sexual or physical abuse, family violence, loss, and death. Both generations reported past and current discrimination and racism, and attributed their elders' difficulties (such as substance abuse) to boarding school experiences. Soto, Baezconde-Garbanati, Schwartz, and Unger (2015) found that historical trauma was a risk factor for commercial tobacco use, both directly and through several mediating factors, such as cultural activities and ethnic identity. The impact of substance abuse complicates the effects of historical trauma, often amplifying negative impacts and putting users at increased risk of experiencing or inflicting trauma (Ehlers, Gizer, Gilder, Ellingson, & Yehuda, 2013).

In interviews with AI/AN elders, Grayshield, Rutherford, Salazar, Mihecoby, and Luna (2015) explored the effects of historical trauma. The elders described historical trauma in both individual and community levels: the disrespect and destruction of the land and its people, boarding school abuses, and internalization of oppression (low self-worth and negative messages about self). They believed that the current impact of this history included alcoholism, substance abuse, food abuse (Western foods lead to Western diseases), and a negative impact of technology. They also reported a loss of culture and language, community discord and violence, anger, and depression (Grayshield et al., 2015).

Other psychological stressors included poverty, poor housing, or homelessness; lack of opportunities on reservation (compared to urban environments); and neighborhood safety. Parents reported more difficulties with mental health than their adult children, which the authors suggest is attributable to parents' efforts to protect their children (Myhra & Wieling, 2014a).

Evans-Campbell, Walters, Pearson, and Campbell (2012) found that two-spirit individuals (gay, bisexual, or transgender) who had attended boarding schools reported higher rates of alcohol use, illicit drug use, and suicidal ideations or attempts than those who had not attended boarding schools. Further, people with a parent or caregiver who attended boarding school were significantly more likely to experience suicidal ideations, generalized anxiety disorders, or post-traumatic stress disorders than others, suggesting that boarding school attendance impacts intergenerational health (Evans-Campbell et al., 2012). In other research with AI/AN individuals, even having a grandparent who attended boarding school was associated with increased risk of suicide (20.4% compared to 13.1%) (Bombay, Matheson, & Anisman, 2014).

Youth

American Indian/Alaska Native children experience high rates of victimization, poverty, mental disorders, and gang involvement that impact mental well-being. Conditions of poverty, loss of culture, and discrimination lead many AI/AN youth to be attracted to gang activity (Hautala, Sittner Hartshorn, & Whitbeck, 2016), which is linked to higher rates of substance abuse and violence (Whitbeck, Hoyt, Chen, & Stubben, 2002). High rates of alcohol use among AI/AN youth are often linked to historical trauma and the consequences of cultural loss at many levels (Brown, Dickerson, & D'Amico, 2016). Among AI/AN youth in substance abuse treatment, high rates of comorbid PTSD and alcoholism, as well as a history of trauma, are common (Ehlers et al., 2013). Further, substance use is one of the leading factors contributing to unintentional injuries and disabilities among AI youth (Centers for Disease Control & Prevention, 2003).

Social problems among AI/AN adolescents resulting from perceived discrimination and weak social ties, particularly in urban public school settings, can contribute to extreme alcohol and other drug consumption (Rees, Freng, & Winfree Jr., 2014;

Whitbeck, Hoyt, McMorris, Chen, & Stubben, 2001). Binge alcohol use among AI/AN adolescents is often linked to family problems and aggressive behavior, suicide, non-suicidal self-injury, and persistent problems in later life (Tingey et al., 2016). Children who witness or experience household dysfunction (domestic violence, substance abuse, criminal activity, and mental illness in the home), for example, are more likely to report poor mental health outcomes (Dickerson & Johnson, 2012; Warne & Lajimodiere, 2015). A higher risk for depression has been linked to how adolescents describe life events. Negative narratives about adverse life events (e.g., attribution of negative events to individual stupidity vs. bad luck) vs. positive (protective) narratives are styles developed as early as 8th grade and underscore the need for early intervention (Mileviciute, Trujillo, Gray, & Scott, 2013). Youth receiving mental health services in one urban clinic most frequently reported mood disorders (41.5%), adjustment disorder (35.4%), and PTSD or acute stress (23.1%). Researchers suggest these are linked to the pervasive effects of abuse, injustice, historical trauma, and the loss of cultural identity (Brave Heart, 2003; Dickerson & Johnson, 2012).

Multiple risk factors put AI/AN youth at risk for suicidal ideation. In a study of youths in the Midwestern USA, 9.5% reported suicidal thoughts (Yoder, Whitbeck, Hoyt, & LaFromboise, 2006). Substance use was most strongly correlated with suicidal thoughts, but other factors included being female, perceived discrimination, and negative life events such as family, economic, and school-related stressors (Yoder et al., 2006). Depression and poor family social support were also associated with suicidal thoughts (Manson, Beals, Dick, & Duclos, 1989). Zamora-Kapoor et al. (2016) found that social isolation, exposure to the suicide of a friend or family member, and being overweight were associated with suicidal ideation in both AI/AN and non-Hispanic whites. Barlow et al. (2012) found that 64% of youth from a Southwest tribe, particularly males, were intoxicated at the time of suicide and 75% of those who had attempted suicide were intoxicated at the time. Alcohol was the most commonly reported source of intoxication in suicidal acts, and peer pressure was also cited as a contributing factor.

Deviant peers appear to influence delinquency and substance use behaviors among AI/AN youth (Rees et al., 2014). AI/AN youth experience more disability-based harassment and gender-based harassment compared to youth from other racial or ethnic groups (Bucchianeri, Gower, McMorris, & Eisenberg, 2016). However, Tingey et al. (2016) report that strong ethnic identity, connection to cultural values, and positive family and peer influences are protective factors among AI/AN youth against substance use disorders (Mmari, Blum, & Teufel-Shone, 2010).

Gender, Sexual Orientation, and Violence

American Indian women are more likely to be victims of violent crime than women of other ethnicities (Walters & Simoni, 2002) and to develop psychiatric symptoms due to trauma and their sequelae. Sexual violence against AI/AN women is especially deleterious. Based on the National Intimate Partner and Sexual Violence

Survey, 2011, the lifetime prevalence of rape in AI/AN women is 27.5%, with another 55% reporting other forms of sexual violence (Breiding et al., 2014). In AI/AN women aged 15–35 living on or near a reservation, exposure to trauma was associated with symptoms of PTSD, substance use, and risky sexual behavior. Those with high trauma exposure who met the criteria for PTSD were at greater risk for binge drinking and risky sexual behaviors that increased their risk for HIV (Pearson et al., 2015).

There is evidence that AI/ANs who identify as gay, bisexual, or transgendered ("two-spirit" individuals) experience disproportionately higher rates of both anti-Native and anti-gay discrimination and violence, particularly sexual violence in urban settings (Fieland, Walters, & Simoni, 2007; Lehavot, Walters, & Simoni, 2009). Two-spirit AI/AN women are at particular risk for substance abuse and mental health challenges such as PTSD due to their "multiple minority oppressed status" (Elm, Lewis, Walters, & Self, 2016, p. 352). Among two-spirit AI/AN, consequences of emotional trauma were exacerbated by boarding school attendance (Evans-Campbell et al., 2012).

Both AI/AN females and males experience high rates of intimate partner violence, usually before the age of 25. Among Native women, 51.7% reported physical violence, and 63.8% reported psychological aggression in intimate relationships (Breiding et al., 2014).

In a study of 18- to 45-year-old women at an IHS hospital, intimate partner violence was strongly associated with subsequent mood disorder (Stockman, Hayashi, & Campbell, 2015). Although 43% of Native men reported physical violence in their relationships, reports of psychological aggression were less frequent than in most other ethnicities (Breiding et al., 2014).

Veterans

Both rural and urban AI/AN veterans experience poor mental health from combat experience, most commonly depression and mood and other anxiety disorders (Westermeyer & Canive, 2013), and more lifetime PTSD than their white counterparts (Beals et al., 2002; Westermeyer & Canive, 2013). Among AI/ANs who served in the military, almost half report some type of disability associated with their service and identified their substance use problems as resulting from military service (Harada, Villa, Reifel, & Bayhylle, 2005). In a nationally representative sample of US veterans, Smith, Goldstein, and Grant (2016) found a higher prevalence of lifetime PTSD in AI/ANs (24.1%) than among Blacks (11%) or Whites (5.97%). In addition, AI/ANs are overrepresented among veterans who are homeless (making up 1.6% of veterans but 19% of the homeless veteran population) and experience higher rates of hospitalization for alcohol dependence than any other veteran group (Kasprow & Rosenheck, 1998).

Difficulty navigating the complex system of the Veterans Administration exacerbates stress in veterans and their families (Kaufman et al., 2016). This is particularly

true on reservation lands that lack culturally competent care and transportation to access services (AlMasarweh & Ward, 2016).

Suicide

Suicide is one of the most serious outcomes of severe mental distress in AI/AN. In 2014, the second highest US rate of suicide was among AI/AN males (16.4 per 100,000) (NCHS, 2016). The highest rates of suicide in Native men occurred among those 15–24 years and 25–44 years (23.5 and 26.2 per 100,000, respectively). Native women completed suicide at lower rates than their male counter parts (5.5 per 100,000 overall), but those between 15 and 24 years of age were almost twice as likely to complete suicide as non-Hispanic whites of the same age (NCHS, 2016). Two-spirit women who attended boarding school were six times more likely to report suicidal thoughts than those who did not attend boarding school and almost nine times more likely to attempt suicide (Evans-Campbell et al., 2012).

Veteran suicide is increasing for all groups, especially for AI/AN. In addition to a lack of connectedness and sense of burden on family (if the veteran lived), Chiurliza, Michaels, and Joiner (2016) found higher rates of suicide risk in AI/AN compared to other ethnicities through consideration of an "acquired capability for suicide (i.e., a diminished fear of death and increased pain tolerance)" (p. 3), a quality that should be considered in suicide prevention at all levels of military service.

Substance Use in AI/AN Communities

AI/ANs have the highest rates of substance abuse of any racial/ethnic group in the USA, with rates of alcoholism and illicit drug use two to five times higher than the general population (Ehlers, Liang, & Gizer, 2012; Currie, Wild, Schopflocher, Laing, & Veugelers, 2013; Steen, 2015). Substance use is a principle causal factor in continued poor health outcomes in AI/AN communities. The IHS views the consequences of substance abuse as the root of the most urgent health problems in AI/AN communities (Ehlers et al., 2012).

AI/AN youth use tobacco, alcohol, and illicit substances at higher rates than adolescents of any other racial/ethnic group (Steen, 2015). Use is often initiated at younger ages compared to substance use debut in other groups (Brown et al., 2016; Whitesell et al., 2014). Stanley et al. (2014) found high prevalence rates for almost every substance, particularly marijuana, binge alcohol use, and OxyContin, among AI/AN as young as 8th grade. Dickerson and Johnson (2012) found that alcohol and marijuana were the most common substances used among a cohort of AI/AN youth. However, AI/AN youth also report relatively high rates of amphetamine/stimulant use, narcotic pain medication use, cocaine, tobacco, inhalants, hallucinogens, stim-

ulant prescription medications, and over-the-counter medications (Barlow et al., 2010; Dickerson & Johnson, 2012).

Gender differences in substance use among AI/ANs vary by region and urban versus rural location. There is some evidence that substance abuse, such as methamphetamine and opioid analgesic use, is more prevalent among AI/AN women than men (Forcehimes et al., 2011). One study conducted in Los Angeles County found more AI/AN women seeking treatment for methamphetamine use than men (Spear, Crevecoeur, Rawson, & Clark, 2007); however, other research has found methamphetamine use to be more common among men (Iritani, Hallfors, & Bauer, 2007). AI/AN men have some of the highest substance use rates of any racial or ethnic group (O'Connell, Novins, Beals, & Spicer, 2005; Whitesell, Beals, Crow, Mitchell, & Novins, 2012). High rates of alcohol use among AI/AN men lead to intergenerational issues such as difficulty establishing positive fatherhood roles (Neault et al., 2012).

AI/AN women have one of the highest rates of drug-related mortality of any racial/ethnic group (up to 44 per 100,000 in 45–54 age category) (Walters & Simoni, 2002). In a study of female students attending tribal colleges, Schultz (2016) found that most women (62%) had used drugs at least once during their lifetime. In an urban sample, two-spirit individuals (gay, bisexual, or transgendered) were more likely to report being victimized or engaging in high-risk behaviors as a result of substance use (Simoni, Walters, Balsam, & Meyers, 2006). Two-spirit individuals also reported higher rates of mental health service utilization, higher rates of alcohol use, and higher rates of illicit drug use than other participants (Balsam, Huang, Fieland, Simoni, & Walters, 2004).

Although substance abuse is a major problem facing many AI/AN communities, there are major regional differences in substance abuse and related disorders between, for example, Southwest and Great Plains communities (Etz, Arroyo, Crump, Rosa, & Scott, 2012; Volkow & Warren, 2012). To understand substance abuse in both current and historical context, nuances and contextual factors influencing substance use in varied AI/AN populations must be considered (Etz et al., 2012). Although many cultural, social, economic, and contextual factors contribute to high rates of substance use, many strengths and sources of resilience among AI/AN communities, such as strong cultural traditions, family support, and cultural pride, also contribute to abstinence and to mitigating the effects of substance abuse (LaFromboise, Hoyt, Oliver, & Whitbeck, 2006).

Alcohol Use

Alcohol use is extremely prevalent in AI/AN communities, with lifetime prevalence of 96% for men and 92% for women by the time they finish 12th grade (Walters & Simoni, 2002). AI/AN have the highest rates of admission for substance use disorders in general, and they are more likely to report alcohol as the primary substance used than any other racial or ethnic group (Greenfield & Venner, 2012). Mortality

resulting from alcohol use is much higher among AI/ANs than non-AI/ANs (Evans-Campbell et al., 2012), although mortality also varies considerably by region, with some of the highest rates in the Northern Plains and lowest in the Eastern USA (Landen, Roeber, Naimi, Nielsen, & Sewell, 2014). AI/AN people who use alcohol face an elevated risk of both mental and physical health consequences, including physical and sexual violence, accidents from intoxicated driving, and chronic health issues (Landen et al., 2014; Whitesell et al., 2012; Yuan et al., 2010).

Research suggests that AI/ANs display higher rates of abstinence from alcohol than the general population (Cunningham, Solomon, & Muramoto, 2016); however, adults who do engage in alcohol use often engage in heavier or binge use (O'Connell et al., 2005; Whitesell et al., 2012). Reservation-based populations exhibit greater abstinence than urban AI/AN populations, perhaps in part because many reservations prohibit the use and sale of alcohol within their borders (Landen et al., 2014; Walters, Simoni, & Evans-Campbell, 2002).

Considerable efforts to uncover genetic predispositions to alcoholism among AI/ANs have been unsuccessful, suggesting that social factors are largely responsible for elevated rates (Ehlers et al., 2012). Alcohol was not introduced into AI/AN communities until European colonization, and thus there are strong negative associations with its use. In qualitative interviews with AI/AN people, Spicer (2001) found that both drinkers and non-drinkers described alcohol use as incompatible with AI/AN worldviews and morality. AI/AN communities, however, report several dilemmas related to the embeddedness of alcohol use in many aspects of current social and cultural life (Yuan et al., 2010). Quintero (2001) argues that looking uncritically at AI/AN patterns of alcohol use without considering historical and contemporary contexts of discrimination and disadvantage faced by AI/AN peoples serves to reproduce colonialist images and perpetuates disadvantage among AI/AN people through the preservation of negative stereotypes.

Tobacco Use

According to the US Centers for Disease Control and Prevention (CDC), between 2005 and 2013, AI/AN people used tobacco at higher rates than all other US populations except individuals reporting multiple races (Jamal et al., 2014). Smoking is also more common among males and among people living in poverty (Jamal et al., 2014). AI/AN youth have the highest rates of commercial tobacco use in the USA (Unger, Soto, & Baezconde-Garbanati, 2006), and early tobacco use is often associated with stress or exposure to trauma and negative peer influences (Whitesell et al., 2014). AI/AN smokers are consistently more likely to drink heavily than non-smokers (Ryan, Cooke, & Leatherdale, 2016), and although tobacco use varies considerably by region, related health consequences tend to be disproportionately higher in AI/AN communities (Whitesell et al., 2012).

Illicit Drug Use

AI/AN communities have high rates of use for a range of illicit substances, including stimulants (Gilder, Gizer, Lau, & Ehlers, 2014), inhalants (Stockman et al., 2015), prescription medications (Katzman et al., 2016; Momper, Delva, Tauiliili, Mueller-Williams, & Goral, 2013; Wu, Pilowsky, & Patkar, 2008), and increasingly methamphetamines (Brown, 2010; Forcehimes et al., 2011).

Use of opioid analgesics for non-medical reasons is higher among AI/ANs than among Caucasians (6.2% and 5.6%, respectively) (Katzman et al., 2016). AI/AN people experience higher rates of accidental overdose as a result of opioid use (15.7% vs 14.7%) (Hirchak & Murphy, 2017). Among AI/AN adolescents, past year hospitalization or multiple arrests, as well as low family income and being treated for psychological problems, are associated with increased use of non-prescribed opioids (Wu et al., 2008).

Use of methamphetamines (MA) has been increasing in AI/AN communities (Forcehimes et al., 2011). Rural and reservation-dwelling AI/AN communities have experienced rates of stimulant dependence as high as 33%. Rural areas, including many American Indian reservations, are particularly attractive for MA production due to geographic isolation, poverty, and sparse law enforcement (Glover-Kerkvliet, 2009). Health disparities and vulnerability of AI/AN communities have been compounded by the MA crisis, with a broad range of health risks from dental and skin disorders to accidental poisoning of children, increases in crime, domestic violence, and child neglect/abuse (Glover-Kerkvliet, 2009; Spear et al., 2007).

Multi-Substance Use Disorders

Multi-substance use disorder impacts AI/AN communities disproportionately and those using multiple substances with alcohol experience symptoms of alcohol-related problems at higher rates than those who use alcohol alone (Gilder, Stouffer, Lau, & Ehlers, 2016). Use of multiple drugs in combination with alcohol use has been associated with increases in the rates of DSM-3R alcohol dependence disorders (Kunitz, 2008). In a study of Alaska Natives, the majority of alcohol users also used other substances, with the most common being marijuana, followed by cocaine and opiates (Malcolm, Hesselbrock, & Segal, 2006). Those who experience multi-substance use disorders often initiate drug and alcohol use at earlier ages and experience academic failure and other social difficulties (Gilder et al., 2016).

Disability and Substance Use

National estimates of disability status in 2014 found that 1 in 5 US adults have some type of disability. Among US adults, AI/ANs have the highest prevalence of experiencing any disability (35.5%) compared to all other racial and ethnic groups. AI/

ANs also have the highest prevalence of cognitive disability (19.4%), mobility disability (19.7%), vision disability (9%), self-care disability (6.3%), and independent living disability (12.3%) compared to all other racial/ethnic groups (Okoro, Hollis, Cyrus, & Griffin-Blake, 2018).

The prevalence of fetal alcohol syndrome is highest among AI/AN children as a result of higher alcohol use among AI/AN women (Fox et al., 2015). High rates of alcohol and tobacco use during pregnancy among AI/AN mothers (3 times and 1.5 times the national rate, respectively) also contribute to high rates of infant mortality in AI/AN populations (Walters et al., 2002).

Among AI/ANs with disabilities, drug use increases as disability severity increases (Grant et al., 2016). AI/AN males and females with disabilities have the highest prevalence of smoking as compared to other race/ethnic groups with disabilities. Lower education levels among AI/AN adults with disabilities contribute to increased nicotine use (Courtney-Long, Romano, Carroll, & Fox, 2017). Also, AI/AN males with disabilities are more likely to binge drink or engage in heavy drinking (Okoro et al., 2007). AI/ANs with traumatic brain injuries (TBI) are more likely to experience substance use disorders (Nelson, Rhoades, Noonan, & Manson, 2007).

Prevention, Intervention, and Treatment

Successful prevention, intervention, and treatment of behavioral health concerns in AI/AN populations are constrained by several barriers to services delivery. Difficulty of diagnosing mental health conditions, lack of access to treatment services, funding limitations, and stigma toward mental health impose barriers to appropriate treatment and care (Johnson & Cameron, 2001). One key barrier to designing and implementing effective treatment programs is that Western biomedical definitions of mental health and treatment are poorly aligned with AI/AN understandings of wellness and healing (Gone, 2008; Hartmann & Gone, 2012). Divergent models of health and illness pose barriers to providing adequate and culturally resonant treatment for mental health (Gone, 2016). Many AI/AN communities' understandings of mental health are incongruent with Western biomedical therapies (Office of the Surgeon General, 2001), and attempts to treat AI/AN patients from within biomedical paradigms are often perceived as colonialistic or even as "brainwashing" by AI/AN patients (Gone, 2016, p. 2).

Despite the reported prevalence of traumatic experience among AI/AN individuals, few seek treatment for trauma due to limited access to mental health services and fear of stigma and discrimination (United States Commission on Civil Rights, 2004). Gurley et al. (2001) found that although 75% of AI/AN veterans reported a mental health or substance abuse problem, PTSD, and alcohol abuse, fewer than 20% of these veterans sought mental health care and more commonly sought care for physical health concerns. Fears of stigma and discrimination when accessing mental health services present major barriers to improving behavioral health, particularly among AI/AN youth.

Research suggests that nearly half of AI/AN individuals diagnosed with mental illness seek treatment from traditional medical practitioners. Traditional medical services are often sought for the treatment of depression and anxiety. Walls, Johnson, Whitbeck, and Hoyt (2006) found that American Indian parents/caregivers strongly prefer traditional cultural services for mental health and substance abuse problems rather than formal behavioral health services and believe that these services are more effective. Increased anxiety, spiritual engagement, and past experiences with discrimination in health care were also associated with a preference for a traditional approach to care (Aronson, Johnson-Jennings, Kading, Smith, & Walls, 2016).

Other known barriers to care include geography, particularly access to services located in rural and remote locations, poverty, transportation, and an inadequate number of qualified treatment providers (Goodkind et al., 2010).

School-based prevention programs have become an increasingly popular means to enhance access to prevention services. These programs, which are located in tribal affiliated and public schools, have primarily focused on alcohol and drug prevention (Middlebrook, LeMaster, Beals, Novins, & Manson, 2001).

In order to assess whether existing prevention and treatment services are effectively meeting the mental health needs of individuals suffering from mental health conditions, there has been an increasing call for integrating evidence-based practices (EBPs) with these services. Behind the draw of EBP has been the desire to provide all individuals with quality care that has been scientifically validated to demonstrate effectiveness (Walker, Whitener, Trupin, & Migliarini, 2015). However, concerns have been raised that few studies have evaluated these programs using rigorous methods. Further, given the small size of the AI/AN population, AI/AN patients have been poorly represented in many studies. As a result, these studies fail to include large samples that would generate the reliability and validity characteristic of rigorous methods (Walker et al., 2015). Many AI/AN communities perceive EBP standards as incongruent with their values and a challenge to tribal sovereignty. Demonstrating the effectiveness of culturally adapted programs has been particularly challenging due to the limited representation of AI/AN communities in efficacy trials.

Ethnic Identity and Culturally Appropriate Approaches to Prevention and Healing

In recent years, scholars have turned to culturally adapted interventions to increase the effectiveness of prevention and treatment programs in diverse populations (Griner & Smith, 2006). Culturally adapted mental health interventions tailored to a specific ethnic population are up to four times more effective than traditional health interventions (Castro, Barrera, & Holleran Steiker, 2010). These interventions integrate key values, practices, and ideals within the community into intervention design and implementation. Griner and Smith (2006) found that interventions that use indigenous language are twice as effective as those conducted in English.

Often called culturally sensitive interventions (CSIs), these programs incorporate Native values, norms, beliefs, and practices into the design, implementation, and evaluation of the intervention. The underlying premise of CSIs is that intervention methods that align with the values, beliefs, practices, and norms of the target population increase access, promote engagement, and may be more effective (Jackson & Hodge, 2010). By defining health and wellness as balance within the individual and community, these interventions embrace a holistic perspective, integrating prevention and treatment strategies that promote both individual and community well-being. Many of these programs draw upon the knowledge and expertise of Native community members who play a key role in designing and administering the intervention (LaFromboise & Howard-Pitney, 1995).

Many substance abuse prevention programs foster participation in community service to reinforce key AI/AN values of family, service, respect, and spirituality. The National Indian Youth Leadership Project, deemed a model program by the Center for Substance Abuse Prevention, emphasizes community service while promoting skill development in the areas of problem-solving and wilderness education (Carter, Straits, & Hall, 2007).

To heal from the impact of historical trauma and increase mental well-being, AI/AN elders advocate for combatting negative narratives about self through increased awareness, education, and a return to culture and spiritual ways (Garrett et al., 2015). Elders also emphasize the importance of language, cultural identity, spirituality, tradition, and family support in building both individual and community resilience but call for changes in social, political, and economic resources to move communities forward (Reinschmidt, Attakai, Kahn, Whitewater, & Teufel-Shone, 2016). Families and communities that participate in the healing can regain strengths and positive qualities of being American Indian (Garrett et al., 2015).

Ethnic identity is especially significant for AI/AN youth and has had a positive influence on self-esteem and future optimism, which affects mental health. Higher self-esteem is associated with a decreased risk for depression, anxiety, and externalizing behaviors, such as fighting or breaking rules at school and home (Smokowski, Evans, Cotter, & Webber, 2014).

Participation in ceremonies and other traditional activities and supporting community cohesion, even in an urban environment, are critical to successful intervention (Hartmann & Gone, 2012). Programs that incorporate a balance of mind, body, spirit, and context (including community building and family support) have proved successful in helping adolescents overcome the impact of both historical and contemporary oppression in the urban setting and to make a successful transition to adulthood (Friesen et al., 2015).

Implications for Behavioral Health

Suggestions for future research to improve behavioral health among AI/AN include integrating prevention and treatment services, addressing the role of stress in mental health, embracing a holistic perspective for behavioral health, integrating Western

biomedical and traditional AI/AN healing approaches, and acknowledging the role of historical social and cultural inequities that contribute to poor behavioral health outcomes (Goodkind et al., 2010). While Western biomedical approaches measure the success of substance abuse prevention with outcomes such as sobriety, traditional healing focuses on outcomes rooted in spiritual beliefs and practices, such as an individual's notion of spiritual connection and sense of belonging within the community. Spiritual ties to traditional Native American beliefs have been found to be particularly protective against suicide attempts (Garroutte, Goldberg, Beals, Herrell, & Manson, 2003).

Therefore, research should be based from Indigenous worldviews and perspectives using community-engaged approaches. Community members should be involved in the research from its conception to implementation to dissemination of results (Baldwin, Johnson, & Benally, 2009). Tribal, cultural, and linguistic diversity needs to be considered throughout all phases of the research process. Culturally appropriate evaluation tools need to be validated and used to determine effectiveness of programs (Caldwell et al., 2005). Finally, we need to build capacity for community members to design and oversee research projects in their own communities. More funding should be directed to train Native students and community members in behavioral health services research.

Services

Many would argue that to see reductions in behavioral health disparities among AI/AN, there must be a "genuine transformation of systems of care" (Goodkind et al., 2010, p. 391). System factors might include finding ways to reimburse healers for care, supporting behavioral health systems to address historical trauma and contemporary stressors, and creating alternative licensing and credentialing for AI/AN service providers. An excellent example is provided by the Alaska Native Tribal Health Consortium that has developed and implemented a Behavioral Health Aide Program (Goodkind et al., 2010). The program trains and certifies behavioral health workers to address mental health and substance abuse in Alaska Native villages and has met with significant success. There is also a need for providers to be trained in behavioral health cultural competency to first understand their own culture and how it impacts their practice (Gone, 2007). Finally, LaFromboise et al. (2006) argue that Western therapeutic approaches are too individually focused and discredit the benefits of traditional Native healing.

Programs

Increasingly, AI/AN communities are seeking culturally appropriate strategies to address the high rates of substance dependence, trauma, and violence that they are facing (Hartmann & Gone, 2012). The diverse worldviews of AI/AN communities

often do not fit neatly into Western biomedical paradigms, leading to underutilization of biomedical treatment among AI/ANs even in urban areas (Hartmann & Gone, 2012). In a review of the use of AI/AN traditional healing in urban communities, Hartmann and Gone (2012) reported that participation in traditional healing activities led to stronger ethnocultural identity as well as community support, political empowerment, and resilience strategies for AI/AN communities. Walls, Whitbeck, and Armenta (2016) caution, however, that while indigenous spirituality was associated with poorer psychological outcomes, the effect was attenuated by controlling for moderating factors such as perceived discrimination and historical losses.

Emphasis on AI/AN culture and wellness ideals is a means of preventing substance abuse in AI/AN populations (Brown et al., 2016). Numerous treatment and prevention programs based on Native worldviews have demonstrated success, such as talking circles, family-based interventions, criminal sentences that incorporate traditional practices, and traditional ceremonies such as sweat lodge and drumming ceremonies (Greenfield & Venner, 2012; The National Congress of American Indians, 2006, November).

Strong cultural traditions, family and clan networks, and cultural beliefs surrounding abstinence in AI/AN communities serve as protective and resilience promoting factors (Barlow et al., 2012). Prevention and treatment programs should emphasize family values and tribal cohesion to reduce the sense of isolation and cultural disconnection reported by many AI/AN drinkers (Yuan et al., 2010). Also, research suggests that substance abuse prevention programs must target youth at early ages and account for the impacts of stress and exposure to traumatic events (Whitesell et al., 2014). Culturally relevant programs that incorporate mental health and substance abuse treatment can benefit both rural reservation-based and urban American Indian communities (Currie et al., 2013; Dickerson & Johnson, 2012).

Policy

Finally, it is important to discuss the policy implications associated with the behavioral health needs of AI/AN communities. Behavioral health services can be accessed through a variety of sources including private insurance, Medicaid, Indian Health Services, state and local funds, discretionary grants from state and federal resources, and Tribal funds (Office of Clinical and Preventive Services, 2011). Each of these funding options comes with its own policy implications, as each will be overseen by a variety of governmental groups including local, state, tribal, and federal governing bodies.

Tribal governments operate as sovereign nations and have power of authority over programs and services related to the health, safety, and welfare of their citizens similar to state governments (National Conference of State Legislatures, 2016). It is recommended that intergovernmental agreements including partnerships between

state and tribal governments occur when planning for resources (National Conference of State Legislatures, 2016). Ongoing collaboration between federal, tribal, and state programs with a focus on cultural practices, traditional approaches, and community-healing will support sustainable policy solutions and mutual respect between partners (National Association of State Mental Health Program Directors, 2015; Office of Clinical and Preventive Services, 2011).

Tribal representatives should be involved in developing policy in the early stages of policy conceptualization (Willging et al., 2012). Using a CBPR approach to facilitate discussions regarding policy changes can facilitate trust and also commitment to implement proposed policy reforms (Blanchard, Petherick, & Basara, 2015). Any policy-based initiatives to reform behavioral health services should include enough flexibility to provide culturally sound services. Policies supporting behavioral health services can also emerge from efforts to implement culturally relevant evidence-based programs (EBPs). For example, the Suquamish community adapted EBPs to establish a mental health program titled *Healthy and Whole*. Based on the successes of the *Healthy and Whole* program, the Suquamish Tribal Council developed policies to promote sustainability of the program (Kinsey & Reed, 2015).

At the federal level, the Substance Abuse and Mental Health Services Administration (2017, December 21) acknowledges the importance and necessity for tribal consultation in all of their efforts to support trust, respect, and shared responsibility. In 2007, they developed a SAMSHA-Specific Tribal Consultation Policy (TCP) which outlines their consultation processes. The Substance Abuse and Mental Health Services Administration also provides technical assistance resources for working with Tribal groups and has several funding opportunities focused on behavioral health issues specific to AI/AN groups (SAMHSA, 2017, December 21). The 2010 Patient Protection and Affordable Care Act (ACA) included the Indian Health Care Improvement Reauthorization and Extension Act (IHCIA) in which Title VII called for a comprehensive behavioral health service initiatives in Indian Country (Office of Clinical and Preventive Services, 2011). Policies supporting integration of primary care and behavioral health support a holistic approach to care which aligns with traditional tribal healing practices (Office of Clinical and Preventive Services, 2011).

At the local, state, and tribal levels, there are also opportunities to reform policies to support more culturally relevant care. Policy efforts supported by local tribal groups resulted in the Arizona Medicaid program received approval for their Section 1115 Waiver in which Medicaid will now reimburse for Tribal-based Traditional Healing Services (Arizona Health Care Cost Containment System, 2016). Local and tribal groups can also work with IHS to establish a community health representative (CHR) work force through their local IHS offices (Old Elk, 2016, October, 31). Community health representatives are members of local tribal communities who know the local culture, can serve as advocates, and can also provide needed culturally sound behavioral health services.

In conclusion, while the AI/AN communities experience higher rates of a variety of behavioral health conditions than other US populations, there are opportunities through culturally relevant and collaborative research, services, programs, and pol-

icy efforts to improve behavioral health outcomes among AI/AN communities. Promising approaches include a focus on Native world views, community assets, cultural identity, and resiliency.

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