Beliefs about causal factors for suicide in rural Alaska Native communities and recommendations for prevention

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Abstract

Rural Indigenous communities in Alaska suffer staggeringly high rates of suicide. In close-knit Alaska Native villages, each suicide leaves a trail of affected family and community members in its wake. This research aimed to understand community perceptions of what causes suicide in rural Alaska Native villages and generate recommendations for prevention strategies. In-depth interviews were conducted with 25 Alaska Native university students who moved from rural villages to an urban area to attend college. All had been profoundly affected by others' suicides and shared their beliefs about causal factors and recommendations for prevention efforts. Perceived causes included resistance to seeking help or discussing personal problems, loss of culture, traumatic experiences, geographical and social isolation, lack of opportunity, substance abuse, and exposure to others' suicides. Participants believed that suicide is preventable and recommended multi-level approaches to address suicide disparities. They provided recommendations for potentially effective and culturally appropriate prevention strategies, including increasing cultural and social connections, educating community members about mental health, and increasing accessibility of counseling services/reducing barriers to mental health services utilization.

Keywords
Alaska Native, qualitative, rural, suicide

Introduction

Suicide in remote Alaska Native (AN) villages is a formidable public health concern and priority for research. Not only is suicide a preventable cause of early death for individuals, it also represents a major source of distress affecting entire AN communities. The suicide rate in Alaska has historically been among the highest in the U.S., often reaching double the national rate, with even higher rates noted among Indigenous people in the state (Centers for Disease Control and Prevention [CDC], 2017; Suicide Prevention Council, 2019). Disparities in suicide rates have been documented among ANs since the sudden and marked increase of 500% observed between 1960 and 1989, which has been attributed in part to rapid cultural change in the region (Sullivan & Brems, 1997). Today, AN people continue to suffer from high rates of suicide, with suicide among AN males reported to be nearly four times the national rate (Leavitt et al., 2018; Wexler et al., 2015). Despite significant efforts to disseminate suicide prevention programs in Alaska (Clifford, Doran, & Tsey, 2013; Middlebrook, LeMaster, Beals, Novins, & Mason, 2001; Allen et al., 2018), the health disparities remain.

Effective, culturally resonant suicide prevention interventions for AN communities are sorely needed. Some researchers suggest that existing suicide prevention interventions may be inadequate for rural AN villages and that new interventions should be developed

from the ground up in order to meet the unique needs of these communities (Allen, Mohatt, Beehler, & Rowe, 2014; Okamoto, Kulis, Marsiglia, Steiker, & Dustman, 2014). For example, Wexler and colleagues (2015) summarized key challenges and outlined future research directions for intervention development in rural AN villages, noting that Western interventions ignore crucial factors such as cultural oppression and difficulties integrating with Western culture, and therefore have failed to address the unique sociocultural factors that contribute to suicide deaths among AN people. Moreover, the links between substance use disorders, trauma, and suicide among ANs have not been adequately addressed in suicide prevention efforts. Culturally appropriate interventions are needed to address these issues in AN communities.

Researchers have noted strong associations between suicidal behavior and substance use disorder (e.g., Wexler, Silveira, & Bertone-Johnson, 2012) and between substance abuse and trauma in Native communities (Boyd-Ball, Manson, Noonan, & Beals, 2006; Brave Heart & Debruyn, 1998; Evans-Campbell, 2008; Whitbeck, Chen, Hoyt, & Adams, 2004). Experiences of interpersonal trauma are common among ANs, and this is reflected in the high rates of domestic violence, sexual violence, and homicide in these communities (Rosay, 2016; Yuan, Koss, Polacca, & Goldman, 2006). In addition to current experiences of interpersonal trauma, AN populations have a history of cumulative and generational emotional, physical, and psychological harm that is associated with mass trauma exposure (Brave heart, Chase, Elkins, & Altschul, 2011; Brave Heart & DeBruyn, 1998, Evans-Campbell, 2008). These experiences of historical trauma are linked to colonization practices, including government genocidal polices and forced removal from traditional lands (Brave Heart, 2003; Brave Heart-Jordan & DeBruyn, 1995; Evans-Campbell, 2008). Compounded (childhood/interpersonal and historical) trauma warrants special consideration in suicide prevention because of the multidimensional and collective experiences of trauma among ANs. Specifically, researchers have suggested that community experiences of trauma and substance use likely contribute to suicide in rural AN villages, and suicide prevention efforts should target both substance abuse and trauma symptoms (Allen, Mohatt, Fok, et al., 2014; Allen, Beehler, & Gonzalez, 2016; Wexler et al., 2015).

Suicide prevention researchers working in rural AN villages offer a number of recommendations for intervention, including enhanced occupational and educational opportunities to alleviate poverty, greater access to mental health treatment services, and reconnection to traditional cultural practices (O'Keefe, Tucker, Cole, Hollingsworth, & Wingate, 2018; Wexler et al., 2015). Inadequate opportunities for socioeconomic advancement were seen as major contributors to suicide, especially among AN men (Wexler et al., 2012). Perceived lack of opportunity may foster feelings of hopelessness and helplessness, which can lead some people to consider suicide as the only option for changing their life circumstances. Along with the need for more avenues for escaping poverty, researchers also emphasize the need to connect AN people at risk for suicide with culturally grounded, community-based, and empirically-supported mental health interventions (Allen et al., 2018; O'Keefe et al., 2018; Rasmus, Trickett, Charles, John, & Allen, 2019).

There are many barriers to the use of mental health treatment in rural AN villages, including logistical barriers common in remote, rural areas, as well as cultural barriers. For example, many AN communities are off the road system and often lack local providers for counseling or psychiatry services, requiring community members to travel by airplane to a distant location in order to see a physician or counselor (Duran et al., 2005; Oetzel et al., 2006). Some AN communities have only itinerant mental health care providers who visit once a month at most (Duran et al., 2005; Oetzel et al., 2006). These barriers prevent people in crisis from receiving the help they need at the time they most need it.

While expanded access to mental health care such as psychotherapy and psychiatry is clearly needed in rural Alaska, it is also important to increase utilization of the services that do exist (Wexler et al., 2015). Lack of trust in the health care system serves as a formidable barrier to receiving professional help for psychiatric problems. There is evidence of profound distrust among AN people of government-funded mental health services, which is associated with a historical distrust of government aid and interference (Goodkind et al., 2010; Manson, 2000; Wexler et al., 2015). Overall, there is a great need to make quality, culturally appropriate mental health services more accessible in rural AN communities, and to build trust in these providers and services. To address this problem, it is essential that providers not only be equipped to address psychological issues, but also demonstrate a deeper understanding of the underlying cultural, historical, and social determinants of mental health problems affecting AN communities. Integrating traditional practices into treatment and enhancing AN ownership of the services offered may be one way to increase trust and utilization of mental health care treatment (Wexler et al., 2015).

Suicide prevention is a priority for both public health and for research in rural AN villages. Effective suicide prevention interventions have great potential to improve the health of the communities, beyond saving the lives of individual community members. In tight-knit, collectivist AN communities that

value interdependence, each suicide has far-reaching consequences that affect every member of the community. Rural villages have survived the harsh Alaskan climate through the millennia by working together and caring for all members of the community, and each person lost to suicide results in pain and mental distress for everyone. As a result of the close kinship-based relationships among community members in rural AN villages (e.g., Mohatt et al., 2004), as well as a profound sense of cultural loss that is triggered by suicide, communities are devasted each time a suicide occurs—every loss disrupts wellbeing for the entire community (Wexler, 2009; Strickland, Walsh, & Cooper, 2006). Furthermore, the overwhelming grief caused by repeated losses may lead to additional suicide attempts, especially when compounded by substance use and lack of access to treatment. Thus, every suicide leaves a wake of survivors who need care after such tragic events. These survivors are uniquely positioned to provide culturally relevant perspectives on suicide in these communities that may inform the development of future suicide prevention efforts.

The present study

In their call to action, Wexler et al. (2015) recommend using qualitative research methods to highlight contextually relevant information in order to identify causes of suicide in rural AN villages and to cultivate ideas for innovative prevention strategies. The present article reports findings from secondary analyses of qualitative data gathered from college students who moved to an urban university in Alaska from rural AN villages. The purpose of the study was to explore the needs of rural college students who had been affected by other people's suicides. Because rural AN students experience high rates of attrition from college and also suffer from high rates of anxiety and depression (Guillory, 2009; Lopez, 2018), the original study was designed to elicit students' concerns and to understand key experiences that may affect their wellbeing in college. Throughout the course of the interviews, it became apparent that participants had been profoundly affected by suicides in their home communities and had developed unique perspectives that likely resulted from their experiences as both insiders (when they resided in their home communities) and as outsiders (when they left home to attend university). The ability of these college students to "walk in two worlds" and understand both Western and Native cultural conceptualizations of mental health and suicide led our team to explore these perspectives in the present article. Here we report themes from the data regarding perceived causes of suicide in rural AN villages and recommendations for potentially effective prevention strategies. These findings extend those from previous research studies examining AN suicide (e.g., Allen, Mohatt, Fok, et al., 2014; Alcántara & Gone, 2007; Wexler et al., 2015) by centering the voices of students who understand suicide from both a cultural perspective and from a Western perspective by virtue of having relocated from rural villages to attend college. By interviewing people with both deep understanding of the village environment and also some distance from that environment, we hoped to identify new directions for suicide prevention that may emerge from their unique perspectives.

Methods

Participant recruitment and demographics

The study was conducted at a large, public university in Alaska that serves urban and rural students from throughout the state. A purposive sample of 25 college students was recruited using flyers that were placed around campus and by word of mouth. Inclusion criteria included self-identifying as being "from a rural Alaskan village," being aged 18 or older, and currently attending the university in Alaska that served as the site of the study. Recruitment materials specified that beliefs about suicide in rural AN villages would be the topic of investigation, and instructed potential participants to contact the research team to schedule an interview. All materials and methods were approved by the university Institutional Review Board (IRB).

Participants included females ($n = 18$) and males ($n = 7$) ranging in age from 18 to 37 years ($M = 23.64$, $SD = 4.61$). Although not required to join the study, all participants reported AN ethnicity. We recognize that "Alaska Native" is an ethnic gloss used to describe numerous diverse linguistic and cultural groups, and that it would be more informative to report specific linguistic groups and regions of the state. However, the university's IRB required that we collect only the most basic information about the participants' home communities in order to avoid stigmatizing certain communities and groups. Therefore, participants provided basic information about their home communities, which ranged in size from 70 to 6,500 people, and the majority ($n = 23$, 92%) reported that a traditional Native language was commonly spoken in their communities. All participants were fluent in English.

Interview protocol and procedure

A semi-structured interview guide was developed collaboratively by the researchers, consultants with expertise in AN cultural and rural worldviews, and

consultants with expertise in suicide prevention in rural communities. Consultants included the Director of Rural Student Services at the university, an AN woman who grew up in a remote village, as well as AN and non-Native students who were raised in rural AN villages. We also consulted with Native Elders who were advisors to the university's doctoral program in psychology with an emphasis on rural and Indigenous health matters. The interview guide underwent substantial revisions until the team reached consensus about the domains, phrasing, sensitivity, and cultural appropriateness of the questions. Questions focused on participants' personal exposure to suicide in their home communities (e.g., "In what ways has suicide affected your life?"), with follow-up probes inquiring about their beliefs regarding the causes of suicide in rural AN villages, and beliefs about suicide prevention strategies likely to be helpful in the village environment. The discussions ended with a positive frame, as participants were asked to describe their dreams for the future of their home communities. See DeCou, Skewes, Lopez, and Skanis (2012) and DeCou, Skewes, and Lopez (2013) for further description of the interview protocol and study findings.

Although some participants volunteered for the study after seeing the recruitment flyers on campus, many others learned of the study through word-of-mouth. Interviews took place after the participant contacted a research team member who explained the study and scheduled the participant to meet with a trained research assistant in a comfortable, private meeting area on campus. Interviewers were European American research assistants who were trained in community-based participatory research methods and ethics, and clinically relevant, culturally appropriate interviewing techniques (e.g., reflective listening using the spirit of motivational interviewing; Venner, Feldstein, & Tafoya, 2006). The lead interviewer was a male advanced undergraduate student in psychology who was applying for graduate training in clinical psychology, and who previously had worked in suicide prevention and with trauma survivors. The second interviewer was a female psychology post-baccalaureate who was applying to graduate programs in counseling. Participants were given the option to be interviewed by the male or the female research assistant. Most ($n = 19$) had no preference and were interviewed by the male graduate student; the remaining 6 requested and were interviewed by the female interviewer.

Before the interview began, participants gave informed consent and gave the interviewer permission to record the interviews using sensitive digital recorders. Interviews were conducted in English and lasted approximately one hour; participants were then debriefed and offered $50 in compensation for their contributions to the study. Although there was a safety plan in case of adverse reactions to talking about suicide, no participant became inordinately distressed and the safety plan did not need to be executed. Further details about the research methods can be found in DeCou et al. (2012, 2013).

Data management and analysis

Audio recordings were transcribed verbatim and de-identified (with identifying characteristics of participants and of their home communities redacted) prior to analysis. After the transcripts were checked for accuracy, the audio recordings were deleted. The research team approached the data with two broad, a priori codes based on the research objective—beliefs about what participants believe may cause suicide in rural AN communities and recommendations for prevention strategies—using the entirety of the data to identify emergent themes related to these two codes. The research team employed a thematic analysis approach (Braun & Clarke, 2006; Castleberry & Nolen, 2018) to explore themes that emerged from the data related to cause and prevention. In accordance with this analytic approach, we used multiple coders, openly and continuously discussed personal biases, reported direct quotations, and spent time becoming familiar with the data, before performing analyses.

Coders included the authors, which consist of the lead male interviewer and the faculty supervisor on the project, as well as European American female graduate students in psychology and public health who had studied AN and American Indian (AI) health disparities and identified as allies. Two additional coders were advanced psychology undergraduate research assistants, both European American females. All coders had been trained in AN/AI health disparities research and had studied the literature on suicide among AN/AI prior to data analysis. In addition, a male AN doctoral-level researcher studying Indigenous community health and a female AI Elder with expertise in suicide prevention reviewed the codes and provided feedback on our interpretation of the findings.

In the first round of coding, one coder focused on identifying "beliefs about causes" in the data, and one coder focused on identifying "recommendations for prevention." Two additional coders reviewed the transcripts and identified both beliefs about cause and recommendations for prevention. Each additional coder then coded the manuscripts again, this time specifically identifying key themes related to either perceived causes or prevention recommendations. Coding within each category (cause or prevention) was done using an inductive approach to elicit key themes related

to each topic. In a series of weekly research meetings taking place over one year, the coders discussed the themes that emerged to consensus in a process of constant comparison, an integral technique of grounded theory (Charmaz, 2006; Corbin & Strauss, 2015). In line with the thematic analysis approach, incorporating recognized, qualitative research methods, such as constant comparison, was carried out in an effort to promote the reliability of the results (Castleberry & Nolen, 2018). Themes were developed via team discussions of the relationships among coded segments within and across interviews, as well as the frequency and salience of the themes and supporting quotes. Next, we report the themes under the two overarching a priori codes—beliefs about cause and recommendations for prevention—that emerged from discussions about suicide in rural AN villages with college students who had lived in those communities and whose perspectives now had the benefit of distance.

Findings

Perceived causes of suicide

Participants identified seven key themes as causes of suicide in their communities: 1) cultural norms regarding help-seeking, 2) loss of culture, 3) isolation and "no way out," 4) lack of opportunity, 5) exposure to others' suicides, 6) trauma, and 7) substance abuse. Suicidal thoughts were seen as resulting from these factors, and substance intoxication was identified as a key causal factor amplifying ideation and driving suicide attempts. Perceived causes of suicide in rural AN communities are described below (see Table 1).

1. Cultural barriers to help-seeking. Participants described cultural factors affecting people's ability and willingness to seek help for mental health issues, such as depression or suicidal thoughts. For some people, expressing pain or reaching out for help was viewed as being in conflict with AN culture, leading to ambivalence and lack of self-efficacy with regard to seeking support for emotional pain:

> Being Native, you kind of don't show when you're really hurting . . . our people, they don't like to show they're in pain and that something is really affecting them until something really big . . . I think deep down they don't want to, they don't know how to ask for help. (P18)[1]

Others described a general reluctance to talk about suicide in rural AN communities as problematic:

> I guess they don't wanna tell that people know that they're suicidal, they don't wanna say anything to anybody, so they keep it to themselves. But then that's a problem, because if they keep it to themselves, that will just keep growing and growing inside of them until they decide to do something about it. (P22)

Participants also described lack of confidentiality as another formidable barrier to seeking help:

> Confidentiality is, it's blown a lot in that hospital, because we all know each other, so, um, somebody's gonna talk about it probably . . . people are so worried about what people think of them, or what they're gonna say about them, that they would let that interfere with them going to get help. (P12)

Participants emphasized the importance of addressing mental health problems, including depression and suicidal thoughts, despite concerns about stigma and embarrassment.

2. Loss of culture. Although participants identified some cultural beliefs that contribute to suicide, loss of AN culture was perceived by many to be a primary cause of suicide in rural villages. For example, one participant described the impact of Western colonialism as "the biggest problem for us" (P03). Rapid cultural changes following colonization introduced new domains of risk within a short period of time, leaving limited margins for adaptation: health care services

> Suddenly, a lot of things were introduced to our people, like houses, electricity, television, alcohol, weed, pills, cocaine . . . that's a lot to take in within like, 20 years. (P06)

The rapid introduction of new concepts and customs into AN culture was thought to create a gap between

Table 1. Perceived causes of suicide in rural Alaska Native villages and recommendations for prevention.

Perceived causal factors	Recommendations for prevention
1. Cultural barriers to help-seeking	1. Harness the strengths of cultural connection
2. Loss of culture	2. Enhance social connectedness
3. Isolation and "no way out"	3. Promote positive parent–child relationships
4. Lack of opportunity	4. Educate community members about suicide
5. Exposure to others' suicides	5. Increase accessibility of counseling and mental health care services
6. Trauma	
7. Substance abuse	

Elders and younger generations that disrupted the transmission of knowledge, language, and cultural traditions. One participant noted, "Some of the people that committed suicide, they don't spend a whole lot of time with the Elders" (P13), indicating the belief that a lack of connection to Native culture through community Elders may contribute to suicide attempts.

Participants perceived the breakdown in intergenerational transmission of cultural knowledge to result in an identity crisis that drives various current problems, including suicide:

> Our people were told you have to do this, you have to live this way, you have to be Christian or you're gonna get hurt, we're gonna hurt you, um, you can't speak your language, you can't dance, you can't eat certain foods that smell bad, and all these things were passed down . . . It still hurts, there's still a lot of pain and just—the Native people are having a hard time living in Western culture because we come from a different background and it's a different value system, just a lot of different spirituality that um, you know, I think that trying to live in two worlds is really difficult for people. (P12)

3. Isolation and "no way out.". Feeling isolated or trapped—whether geographically, psychologically, or by circumstances—was another perceived cause of suicide in rural Alaska. Some participants discussed how the geographic isolation of the villages, many of which are inaccessible by road, may lead to people feeling trapped by preventing temporary escapes in times of stress. Geographic isolation was seen as a barrier to helpful coping strategies, such as visiting another community or taking a long drive to clear one's mind:

> And in the community you don't have the road system where you can just go wherever you want and drive a hundred miles and come back, you know, and feel okay after a drive. (P25)

In addition to geographic isolation, participants also discussed a sense of thwarted belongingness as a perceived cause of suicide:

> I think it's because they have no way out, it's the easy way out, and they feel sad all the time . . . they feel like they're, like, shunned from the village. (P23)

Finally, participants discussed a sense of having no way out of a difficult situation as a perceived cause of suicide:

> Well I think it's, uh, it has to do with feeling useless, and like there's nothing you can do to get out of a particular situation where you've done something that's so horrendous that, um, there's just no way out, there's no other option. (P21)

> Usually it's a result of not seeing a way to get out of some situation, or not caring because you don't think you can get over some drug or alcohol addiction. (P12)

4. Lack of opportunity. According to the participants, the isolation of many rural AN communities also may contribute to a lack of recreational, educational, and occupational opportunities, which participants viewed as a risk for suicide:

> If you're not in sports or, like, participating in any type of school activity, you kind of have nothing to do . . . we don't really have anything to keep young people off the streets and out of trouble. (P15)

The lack of opportunity and resources in rural villages was perceived as increasing other risk factors for depression and suicide. Without sufficient access to higher education, occupational training, employment prospects, and recreational activities, some people may come to feel helpless, hopeless, and become depressed. In the context of a community with high mental health stigma and few opportunities for treatment, they may come to view suicide as a viable option to escape their problems:

> [Suicide] has to do with feeling useless, and uh, like there's nothing you can do to get out of a particular situation . . . there's just no way out, there's no other option. (P21)

5. Suicide exposure. The high rate of suicide in AN villages was one of the most important perceived causes of other suicides. Nearly constant grief from suicide losses was seen as a form of trauma that leads to depression and more suicide:

> [Suicide] happened so constantly in my village, it's, it seemed normal . . . I cannot tell you how many funerals I attended. Like, I cannot count. (P02)

Also, suicide exposure was perceived to increase the likelihood of further attempts by making it seem like a viable option for dealing with problems. Participants discussed the belief that suicides occur in clusters, noting how one suicide was often followed by others:

> Once suicide does happen it's a chain effect and there are others to follow, with the grief, and [if] someone

> knows that it's that easy, they're more likely to attempt. (P18)

6. Trauma. Participants perceived the pervasive impact of interpersonal violence and trauma as a common cause of substance abuse, which was believed to lead to suicide. They illustrated the cyclical nature of intergenerational trauma, noting how trauma is passed on through families:

> There was some bad shit happenin' in the household, there was molestation, there was murders, there was endless, endless crap that went on, and that filtered down into the kids. (P05)

Others identified substance abuse as a strategy for coping with trauma and interpersonal violence, and similarly described suicide as a result of adverse childhood experiences:

> That's the main cause, that if they're going through a lot of pain, killing yourself is the easy way out, feeling so hurt . . . When you see your parents drunk—like, incapable of supporting you or providing for you . . . it can get worse and worse . . . molestation, all kind of things like that. That kind of pain is what makes people want to commit suicide. (P16)

Another participant summarized the relationships among alcohol, trauma, and suicide by saying: "I think the [posttraumatic] stress leads to alcohol and then the alcohol leads to suicide, that's my experience with it" (P23). Pain from traumatic experiences was seen as a primary driver of both substance abuse and suicidality, which in turn gave rise to more trauma, loss, and grief.

7. Substance abuse. Substance abuse was a commonly cited cause of suicide attempts. Many participants described substance abuse as a catalyst that both causes and *exacerbates* depression and suicidal ideation by impairing rational thinking and promoting impulsive behavior:

> [Suicide is] hugely, hugely, like, *hugely* related to alcohol abuse . . . people just get crazy when they get drunk, and are like super emotional, and they think that, they think that suicide's the answer and they just go through with it. (P17)

Participants attributed the high suicide rates in rural Alaska to the high rates of alcohol use disorder in the villages. Despite a lack of evidence to support the notion that AN/AI people have a unique genetic susceptibility to alcohol problems (e.g., Ehlers & Gizer, 2013; Ehlers, Liang, & Gizer, 2012), participants reported that AN people and communities are particularly susceptible to alcohol problems due to a biological vulnerability and lack of experience with alcohol's effects:

> Lots of the people in the rural villages, lots of Native people all over, I just think that their body isn't structurally apt for handling liquor. (P20)

> Alcohol does play a big role in a lot of the younger suicides, because they don't know how to handle it, Alaska Natives as a whole, we're pretty new to alcohol, and we don't know how much it affects us. (P18)

Although many people spoke about the significant negative effects alcohol has had on their communities and on suicide rates, participants questioned the wisdom of the widely implemented prohibition of alcohol in AN villages. Some participants thought that alcohol was so heavily abused *because* it was illegal, and that the prohibition of alcohol in dry communities contributed to high rates of suicide:

> Because it's forbidden fruit more people are apt to abuse it . . . because it's illegal you end up doing things that you regret, and those different regrets lead to depression, and suicide. (P09)

In sum, participants discussed several factors that they believe may cause suicidal thoughts and suicide attempts, including resistance to seeking help or discussing personal problems, loss of culture, geographical and social isolation, lack of opportunity, exposure to suicide, trauma, and substance abuse. In addition to these risk factors, participants also recommended suicide prevention strategies they believed would be helpful in rural AN communities, which we discuss next.

Recommendations for prevention

Participants largely believed that suicide is preventable. When asked whether they believe suicide can be prevented, 16 said yes, 2 said no, and 7 said it depends on the person or situation. When asked to discuss ways to prevent suicide in rural AN villages, based on their experiences growing up in these communities, participants provided five main recommendations at the individual, community, and system levels. These strategies included: 1) increasing connection with culture, 2) enhancing social connectedness, 3) promoting positive parent–child relationships, 4) educating community members about mental health, and 5) increasing accessibility of counseling. Suggestions for prevention were

similar across participants and consisted of recommendations to counteract the perceived multifaceted causes of suicide described previously. The main recommendations are detailed as follows:

1. Harnessing the strengths of connection to culture. Connecting with traditional AN culture/spirituality was described as one of the most important ways of preventing suicide in rural communities. As cultural loss was seen as a cause of suicide, revival of cultural practices and traditions was suggested as a promising remedy that may provide a healthy means of coping, thereby preventing both substance abuse and suicide. For example, when asked about ways that suicide can be prevented, one participant responded:

> I think culture would be really helpful, um, in preventing suicide because—culture, you just have connections with people and you have something you're, like, you're a part of. And I think that would be a big help. (P07)

Participating in cultural activities and traditions—for example, subsistence activities, cultural dancing, and potlatches—may promote multiple overlapping experiences of interpersonal connection and contribute to a protective sense of belonging and positive cultural identity.

2. Enhancing social connectedness. In addition to connecting with AN culture, enhancing connectedness among community members was identified as an important suicide prevention strategy. This theme overlapped with the theme of cultural connectedness, but was expanded to include opportunities for connection with one's community in ways that may or may not be tied to cultural practices. Several participants recommended bringing the community together on occasion to celebrate and foster a sense of coherence between members. This type of connection would prevent suicide by reducing feelings of isolation and by increasing opportunities for social support:

> So again, the biggest factor, in my opinion, for preventing suicide is to get people out and about, instead of having them locked up in their houses, getting them out to do things with other people. (P09)

Additionally, Elders were described not only as a valuable resource for expanding social and community connectedness, but also as a source of traditional and cultural knowledge:

> Well, definitely being a part of the unity, like I said before. Having the Elders and the older generation, um, connect with the younger people, you know, to provide the experiences and the knowledge of being able to go out and perform some of these traditions. (P21)

As community connectedness and revitalization of culture were identified as ways to promote mental health, involving Elders may have significant, far-reaching benefits for suicide prevention.

3. Promoting positive parent–child relationships. Participants also emphasized the importance of positive relationships within nuclear families. In particular, increasing parent–child involvement was a recommended strategy for preventing suicide. Parent–child involvement and healthy family communication were viewed as protective, as one participant described:

> Definitely, if the parents talk more to their kids, if there's more openness within the family, if the kids feel like they can go to their parents if they have a problem and want to talk to somebody. (P11)

Participants recommended parenting training and family-focused interventions to nurture positive, open, trusting connections between parents and their children.

4. Educating community members about suicide. In addition to approaching suicide prevention from a cultural angle, participants recommended taking full advantage of Western approaches to prevention. For example, many participants suggested that educating communities about mental health should be a key component of suicide prevention. Specific recommendations included providing community-wide education and training, as well as implementing interventions at the community level. One participant described suicide prevention as the responsibility of the entire community:

> Havin' the whole community involved in suicide prevention would help get the word out there about it... like, just spreading the word and telling them that it's preventable. Getting more of the community involved in educating not only the kids, but educating the adults about it, and having, like, meetings, like at least once a month to talk about it, within the whole community. (P08)

Thus, helpful prevention efforts were perceived as those that include all community members, incorporate existing scientific knowledge concerning risk and protective factors, and clearly communicate that suicide is a preventable cause of death.

5. Increasing accessibility of counseling services. Virtually all participants indicated that increased access to counseling and psychotherapy services is crucially needed in rural AN communities. Participants agreed that more opportunities for confidential mental health care services would lead to a decrease in suicide deaths by increasing the likelihood that people would seek and receive help. One participant identified existing suicide hotline resources as one potentially effective option within the setting of a rural village, and recommended expanding services beyond existing itinerant providers:

> Well, the suicide hotline is always good, I've heard of that. I think they're going towards the right path, [but] there should be counseling centers in every community, I think. You know, on-call 24/7. Um, yeah, I think every community needs that, like, a counselor to be there all the time. And not just fly in for a day or so every month. (P06)

Some viewed Elders and lay community members as good resources for informal counseling and support: "Elders are a good source for counseling because they know a lot of stuff" (P14), whereas others felt that providers with professional training should be utilized: "Having a psychology background is important, having the education is why you don't just talk to someone from the community" (P04). In general, talking about suicide, mental health, and emotional pain were endorsed as methods of suicide prevention.

In sum, participants identified three key areas of need for suicide prevention interventions. On the individual level, participants suggested fostering healthy connections with cultural traditions, community members, and family. These connections could buffer against feelings of isolation and offer much needed social support. On the community level, participants emphasized the importance of educating community members to identity risk factors of suicide and support others experiencing suicidal thoughts. Finally, on the system level, participants stressed the need for more mental health services and support in their communities.

Discussion

Participants in this study were asked to discuss the problem of suicide in rural AN villages. With regard to perceived causes of suicide, participants discussed cultural norms regarding help-seeking, loss of culture, isolation, lack of opportunity, exposure to others' suicides, trauma, and substance abuse. Participants largely endorsed the idea that suicide is preventable, and recommended ways of increasing connection with culture, enhancing social connectedness, promoting positive parent–child relationships, educating community members about mental health, and increasing the accessibility of counseling as strategies for doing so. Although we did not directly assess the actual causal factors driving suicide health disparities in rural AN villages, nor did we examine the efficacy of the suggested prevention strategies, we contend that understanding the participants' perceptions of what may cause and prevent suicide yielded valuable knowledge that may inform future interventions.

Interestingly, many of the perceived causal factors identified by participants have been reported in the literature. For example, the link between substance abuse and suicide has been established (e.g., Esposito-Smythers & Spirito, 2004), and exposure to others' suicides is a known risk factor for cluster or contagion suicides (e.g., Crosby & Sacks, 2002). Other perceived causal factors, such as loss of cultural knowledge due to colonization, are more specific to the present population but also appear in the literature (e.g., Strickland et al., 2006). Moreover, some perceived causes of suicide may be universal, but are more prevalent in AN villages or have unique cultural considerations that must be addressed. For example, feeling trapped or isolated and thwarted belongingness may contribute to suicide across populations (e.g., Kidd, 2004), and social isolation is a major risk factor for suicide according to the interpersonal-psychological theory of suicidal behavior (Joiner, Brown, & Wingate, 2005). However, these feelings may be more common or difficult to manage when one is living in a geographically isolated location. For example, participants discussed taking a long drive or visiting another community as a helpful coping strategy that is often unavailable to those living in villages off the road system.

At the heart of suicide, participants explained, is emotional pain caused by traumatic experiences. These experiences commonly include adverse childhood experiences, interpersonal violence, and repeated losses of loved ones due to suicide and other causes. Historical trauma from colonization and the harmful effects of intergenerational trauma were emphasized by participants and have also been discussed in the literature (e.g., Bombay, Matheson, & Anisman, 2009; Brave Heart, 2003; Brave Heart-Jordan & DeBruyn, 1995; Brave Heart & DeBruyn, 1998). Experiences of trauma, violence, and abuse have been well established as predictors of suicidal thoughts and behavior in other populations (e.g., Joiner et al., 2007). However, this association has been relatively understudied among AN communities. Thus, it is important to consider how the sequelae of trauma may be particularly salient within rural AN communities, and may contribute to disparate rates of suicide.

Substance abuse was perceived as a key causal factor driving suicide attempts. In communities with limited access to mental health services, combined with cultural influences that may inhibit help-seeking, people may struggle to cope with psychological distress in adaptive ways and turn to alcohol and other drugs for relief (Duran et al., 2005; Johnson & Cameron, 2001; Manson, 2000). Our findings suggest that substance abuse may lead to additional trauma and grief through losses attributable to substance-related accidents, injuries, and interpersonal violence, and also may contribute to the sense of being trapped for those with substance use disorders. Suicide, in turn, is a traumatic event that affects the entire community, which may lead to increased use of substances to cope. Also, overcoming substance use disorders may be especially challenging in rural communities with inadequate access to treatment (Lambert, Gale, & Hartley, 2008; Young, Grant, & Tyler, 2015), and may contribute to one's sense of having "no way out" of the situation. Interestingly, some participants did mention believing that AN/AI people have a unique biological susceptibility to alcohol use disorders, although there is no scientific evidence that this is the case (e.g., Ehlers & Gizer, 2013; Ehlers, Liang, & Gizer, 2012). However, there is evidence that believing in such a biological vulnerability is associated with negative alcohol outcomes (Gonzalez, Bravo, Crouch, & Protective Strategies Study Team, 2019; Gonzalez & Skewes, 2016, 2018), and may represent a form of internalized oppression. Although there is no research on the association between belief in a biological vulnerability to alcohol problems and suicide, there is ample reason to debunk this myth.

Understanding the perceived causes of suicide within a cultural context is important for developing interventions that are likely to be accepted and used by the community. Collectively, the constellation of the perceived causal factors discussed previously, combined with inadequate access to effective mental health and substance use treatment, were seen as causing the suicide disparities in AN villages.

On a positive note, participants in this study largely believed that suicide is preventable. Participants shared their optimism and faith that the current situation is driven by modifiable behaviors and community characteristics. Many pointed to previous generations of AN people who, before colonization, lived healthy lives. During this time, suicide was uncommon (e.g., Sullivan & Brems, 1997). Participants also emphasized the resilience of AN people and communities, and identified a number of strengths that their communities may harness to prevent suicide, including cultural revitalization and a return to traditional ways of life (see DeCou et al., 2013).

As trauma was identified as the heart of suicide, connection was seen as the heart of protection. Recommendations for suicide prevention included enhancing connection with AN culture and tradition, connection between parents and children, connection between Elders and youth, connection between community members, and connection with professional help for those suffering from depression or addiction. These various types of connection were perceived as ways to interrupt the cycle of trauma, depression, substance abuse, and suicide. For example, connection to culture was identified as a way to instill a sense of identity, purpose, and belonging, which, in turn, were perceived as key to mental health and resilience. Connection to Elders, parents, and community members was thought to prevent suicide by increasing opportunities for social support and help during difficult times, and by increasing access to knowledge and resources that could promote health. A broad, supportive social network would serve as a safety net, increasing the likelihood that a person at risk would have access to help and support for a broad range of problems. Connection to quality professional services was also identified as a way to increase help-seeking, leading to greater health and wellbeing across a range of domains and disrupting the cycle that leads to suicide.

Several insightful recommendations for suicide prevention emerged from the data. Many participants emphasized the need for community-based approaches that align with collectivist cultural values, describing suicide as a community problem requiring community solutions. Community-wide gatherings, dinners, dances, sporting events, and celebrations were suggested as ways to improve connections between community members and expand opportunities for social support. In fact, many of these recommendations for prevention reflect unique strengths and opportunities for rural AN communities, and would not be possible in larger urban settings. In addition to implementing community-based interventions, participants endorsed the provision of individual treatment to people struggling with mental health concerns. Although they strongly supported using traditional cultural ways of promoting health, they were in favor of anything that works, including psychotherapy and counseling.

It is important to note that promising community-based, culturally congruent approaches to suicide prevention are being employed in Indigenous communities. For example, the *Qungasvik* project is a community-based, culturally-driven intervention to increase reasons for living among Yup'ik youth (Rasmus, Charles, & Mohatt, 2014). A nonrandomized comparison of communities with higher vs. lower utilization of the intervention showed significant effects of the intervention on reasons for living

(Allen et al., 2018). Other examples come from the White Mountain Apache Tribe, where researchers used a community-driven approach to adapt a brief intervention to reduce youth suicide, called New Hope, which is delivered by community mental health specialists during home visits (Cwik et al., 2016). White Mountain Apache community mental health specialists and Elders are collaborating to deliver the Elders' Resilience Curriculum, an upstream suicide prevention intervention (Cwik et al., 2019). Developed over a period of nearly five years and guided by an Elders' Council, this intervention delivers lessons about Apache culture, history, language, and ways of life to middle school students. Each month corresponds to a particular lesson, and topics include respect, relationships and the clan system, and self-esteem/self-worth. Initial implementation results support the importance and effectiveness of these culturally-driven, community-based approaches to suicide prevention (Allen et al., 2018; Cwik et al., 2019).

In addition to preventing suicide through enhanced connection, participants advocated incorporating best practices from Western psychology and medicine in suicide prevention and treatment programs. Participants strongly emphasized the need for effective substance abuse treatment in the villages as a top priority, and also identified the need for trained professionals to work alongside community members. One promising approach to expanding mental health care in Indigenous communities is the use of Indigenous community mental health workers, who are community members and paraprofessionals trained to deliver evidence-based interventions in low-resource settings and who are uniquely positioned to do so, given their understanding of local cultural and historical contexts (O'Keefe, Cwik, Haroz, & Barlow, 2019). Support from Elders, families, and community members was seen as necessary but not sufficient to address the mental health concerns of AN communities; professional help also was seen as crucial. In addition to providing services to individuals and families, participants recommended that mental health professionals be enlisted to provide suicide prevention education and training to community members, so that they may be empowered to intervene effectively. One community health intervention trains grassroots community leaders to host learning circles, in which they disseminate educational material and facilitate conversations in their communities to prevent suicide among Indigenous youth (Wexler et al., 2017). Participants discussed the utmost importance of having regular, consistent access to well-trained providers who could be trusted to maintain confidentiality. Taken together, these insightful recommendations may be useful for any stakeholders working to reduce suicide in Native communities.

Limitations and Conclusion

In the present study, we sought to understand perceptions of what causes and prevents suicide in rural AN villages, and to generate recommendations for culturally appropriate and potentially effective intervention strategies. Study participants were AN college students who had relocated from rural villages to attend university. As the participants had left the village, their perspectives likely diverged from those who remained. These participants may have had atypical access to resources and social support that provided them with the opportunity to attend college. There may also be other individual differences in upbringing or personality factors that motivated them to leave home despite the difficulties of doing so, and to cope with challenges they faced along the way. Furthermore, the influence of higher education and living in a college town likely influenced participants' responses in important ways. For example, many participants had received psychotherapy before, which may have influenced their recommendations for promoting counseling services as part of suicide prevention programs. Further qualitative research with other samples of ANs who remained in their village communities, or left briefly only to return home, would help expand and clarify the findings.

Additionally, we were unable to assess differences in perspectives between the AN students in our sample vs. those who did not wish to participate in the study. Students who opted to volunteer for this research may have had different perspectives on suicide than those who did not wish to be interviewed. Also, females were overrepresented in our study sample (72% of respondents). This is noteworthy, as suicide completions are more prevalent among AN males (Berman, 2014). Research with male participants may produce different findings that would be important for developing effective suicide prevention programs. Finally, future research using quantitative methods is needed to identify which factors are most important for predicting suicide and which recommendations are most feasible and useful for preventing suicide among different groups of ANs.

Strengths of this research include the use of in-depth qualitative methods to generate local, cultural knowledge among participants who have lived in rural AN communities and also have lived away, providing the opportunity to consider the topic of suicide from the perspective of both insider and outsider. Interestingly, many of the perceived causal factors identified by participants (e.g., substance abuse, trauma, exposure to

others' suicides) are well supported in the literature. Findings yielded a sophisticated, nuanced understanding of multiple factors that interact to produce suicide within the rural village context, as well as recommendations for prevention. According to the participants, effective suicide prevention programs will involve strategies to target risk factors and increase protection on the individual, family, and community levels; will incorporate traditional cultural approaches and Western medical and psychological approaches; will specifically address substance abuse and trauma, as both cause and effect of suicide; and will include efforts to increase mental health literacy in the communities. Above all, participants believed that successful prevention programs will maximize positive relationships and supportive social connections between individuals at risk, their families, and their communities. Although further research is needed to establish the effectiveness of multi-level, culturally grounded suicide prevention programs that emphasize social connectedness, the perspectives of people who have "lived in two worlds" offer a starting point upon which to build.

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Public significance statement

This study shows that community members from rural Alaska Native villages are profoundly affected by suicide, and preventing suicide is an important task for improving public health. Participants described suicide as a problem of the whole community and recommended multilevel intervention strategies grounded in Alaska Native culture as holding promise for suicide prevention.

Note

1. Code refers to participant number.

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