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ORIGINAL ARTICLE

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

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Abstract The consequences of alcohol use disorder (AUD) and suicide create immense health disparities among Alaska Native people. The People Awakening project is a long-term collaboration between Alaska Native (AN) communities and university researchers seeking to foster health equity through development of positive solutions to these disparities. These efforts initiated a research relationship that identified individual, family, and community protective factors from AUD and suicide. AN co-researchers next expressed interest in translating these findings into intervention. This led to development of a strengths-based community intervention that is the focus of the special issue. The intervention builds these protective factors to prevent AUD and suicide risk within AN youth, and their families and communities. This review provides a critical examination of existing literature and a brief history of work leading to the intervention research. These work efforts portray a shared commitment of university researchers and community members to function as co-researchers, and to conduct research in accord with local Yup'ik cultural values. This imperative allowed the team to navigate several tensions we locate in a convergence of historical and contemporary ecological contextual factors inherent in AN tribal communities with countervailing constraints imposed by Western science.

Keywords American Indian and Alaska Native · Community based participatory research · Suicide · Suicide prevention · Alcohol · Alcohol use disorder prevention

There exists no greater source of health disparity in American Indian and Alaska Native (AI/AN) communities than that involving alcohol and suicide. The available epidemiological research implicates these twin behavioral health concerns as the most significant source of existing disparities in mortality among AN people, when contrasted to the US and the Alaska general population, and identifies them as frequently co-occurring conditions (Allen et al. 2011). The consequences of these twin maladies led a panel of AN health corporation directors and board members at the 2004 Alaska Native Health Research Conference to rank alcohol and suicide as the highest priority for future research.

This call for research emerged out of a decade long discussion among AN communities on this pressing issue. In 1994, the Alaska Federation of Natives Report (Alaska Federation of Natives 1994) *A Call for Action* had described alcohol abuse as "the latest epidemic" to hit AN people. That same year, an Alaska Natives Commission Report (Alaska Natives Commission 1994) concluded alcohol abuse was a significant contributor to the breakdown of AN family and community life. However, another decade transpired before research on the topic became viewed as part of a potential solution, rather than another part of the problem. Central to this transition was the development of capacity, both within the university setting and AN communities, to collaboratively address this health

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disparity through a sustained, trusting, and non-exploitive research relationship. Here we describe some of the work that contributed to this evolution, and the translational history of its movement from basic, descriptive research to community intervention research.

While all AN communities have endured a shared history of forced acculturation and exploitation, each community has had its own experience within colonial influence. While these influences affect all facets of life, the impact of these differences in community experience of this acculturation experience varies broadly. As just one example, their ongoing nature is reflected through contemporary differences in the extent of Yup'ik language usage among different rural Yup'ik communities. Throughout this special issue, we attempt to show how these and other community level differences influenced the intervention process, impacting such diverse areas as measurement development, intervention implementation, outcomes, and perhaps most profoundly, community understandings of their intervention.

As context for the work, the previous paper (Ayunerak et al. 2014) provided an introduction by community members to the two communities in which the intervention occurred. In contrast to most scientific articles, this paper provided an insider narrative describing a distinct cultural worldview both under siege and in transition, but at the same time resilient and clearly present in the ongoing lives of members of these communities. The remaining papers hope to convey some of the ways in which this cultural way of thinking and being is critical to an understanding of the community-constructed intervention that unfolded. To set the stage, the current paper (1) locates the Yup'ik among the other Alaska Native cultural and linguistic groups together possessing significant diversity as well as elements of a shared colonial history; (2) describes epidemiological data on alcohol use disorders (AUD) and suicide among AN populations, establishing these conditions as the most significant source of health disparity within the population; (3) overviews the existing literature on AN intervention efforts with respect to these conditions; (4) explores a history that has led to distrust and negative attitudes about research in AN communities; and (5) provides a history of People Awakening (PA), a 15 years research relationship whose origins in many ways predate usage of the term community based participatory research (CBPR),[1] and that developed amidst these historical-contextual processes.

[1] We also wish to acknowledge here that community psychologists and other researchers from a broad array of disciplines have promoted these sorts of research partnerships long before public health introduced the term CBPR.

Alaska Native People

The term Alaska Native is itself an ethnic gloss (Trimble 1991), encompassing a broad range of quite distinct cultural linguistic groups. These include the Tlingit-Haida-Tsimshian in the southeast panhandle of the state, Athabaskan in the interior, Inupiaq in the north and northwest, Yup'ik in the southwest, and Aleut-Alutiq in the Southwest peninsula. Over the last half of the twentieth century, these groups have undergone significant cultural changes, including population growth and alterations in social, economic, and political structures quite often externally imposed. Accompanying these changes has been stress related to the increasing intrusion of mainstream cultural influences from the lower 48 into AN life.

Among the Yup'ik, who are the focus of this special issue, these influences are evident in the acquisition and use of technologies, introduction of processed foods and disruption of traditional subsistence nutritional patterns, and concurrent intergenerational differences including significant acculturation status gaps between elders and youth (Fienup-Riordan 1992, 2000). Accompanying these changes has been a shift in health-related concerns from infectious disease to behavioral health problems such as alcohol use disorders and suicide (Fortuine 1989).

Alcohol Abuse and Suicide among Alaska Native People

Epidemiological data identify AUD and suicide as significant behavioral determinants of health disparity in Alaska in contrast to the US general population, and among AN people in particular (Allen et al. 2011). At present, the actual prevalence and incidence of alcohol use and abuse in Alaska remains poorly described, particularly in rural settings (Allen et al. 2011). However, both alcohol consumption and binge drinking in the overall Alaska population outpaces the overall US population (Hull-Jilly and Casto 2008).

Existing data further suggest that AUD among AN people is highest among any ethnic group in Alaska, and AN people experience the highest rate of death from alcohol-induced health conditions of any ethnic group in the state (Hull-Jilly and Casto 2008). Cirrhosis death rates for AN people were 18.7/100,000 for 1997–1999, in contrast to the US baseline of 9.6/100,000, (Alaska Department of Health and Social Services 2002). In addition, AUD leads to a wide variety of other nervous, digestive, and circulatory disorders. Mortality rates among AN people from these alcohol-induced disorders from 2001–2005 were 53.8/100,000, in contrast to 6.3/100,000 for other ethnic groups in Alaska, with rural AN people experiencing the highest rates and rural AN males having a 17 % higher

death rate than females. In 2005, nearly 1 in 13 AN deaths were alcohol induced (Alaska Bureau of Vital Statistics 2009). The norm for drinking for AN people, as throughout much of Indian country, is often binge drinking, defined as five or more drinks on one occasion (May et al. 2000). In one AN community sample, 61 % of men and 37 % of women screened had engaged in binge drinking in the past year (Seale et al. 2006).

Suicide rates are likewise a significant health concern that has multiplied over time. Kraus (1974) charted changes in suicide among AN people from 1950 to 1970. Suicide was by all accounts a rare event in existing records up until 1965, after which suicide rates doubled over the next 5 years, with almost all of this observed increase among 15- to 25-year-olds. In the ensuing 5 years, from 1970 to 1974, the suicide rate among AN people doubled again (Kraus and Buffler 1979). By 1983–1984, the rate for the AN population was 43/100,000 (Kettl and Bixler 1991, 1993), and in 1986, it increased again to 67.6/100,000 (Andereggen et al. 1990). During the 35-year period following 1960, AN suicide rates increased approximately 500 % (Brems 1996). From 2001 through 2005, following significant local, state, and tribal suicide prevention efforts, the average suicide rate among AN people declined to 38.6/100,000. This was still in sharp contrast to the 20.2/100,000 rate for all other ethnic groups in Alaska (Hull-Jilly and Casto 2008) and 10.84/100,000 for the US general population (CDC 2009).

In summary, between 1990 and 2005, annual suicide rates for AN people were three to six times that of the US general population, while rates among AN 10–19 years olds were approximately four times that of their non-Native Alaska peers (Perkins et al. 2009). Suicide represented the leading cause of death for AN 15–24 years olds (Day and Lanier 2003).

A particularly disquieting feature of AN youth suicide is the phenomenon of cluster suicide (Ward and Fox 1977; Tower 1989), or series of suicides that occur closely spaced in time and proximity, and whose occurrence is etiologically linked (Bechtold 1988; Middlebrook et al. 2001). Cluster suicides have taken place in the Indigenous[2] communities of Greenland, Canada, and Alaska (Bjerregaard and Young 1998). For example, in one suicide "epidemic" documented in a Yup'ik village of 522 people, seven young men and one woman committed suicide in 1 year (Doak and Nachmann 1987; Fienup-Riordan 2000).

[2] Through out this special issue, upper case Indigenous will be used to refer here to the peoples aboriginal to Alaska, and to their local theory, practices, and understandings, as well as to other aboriginal peoples globally, and their local theory, practices, and understandings; we will use lower case indigenous in reference more generally to local theory, practices, and understandings.

At the same time, suicide varies significantly across and within regions. For example, from 2004 to 2006, the region of Alaska where the Aleut/Alutiq cultural linguistic group constitutes the majority population evidenced the lowest suicide rates for the entire state, while the Yup'ik majority census district region that is the setting for the current work displayed the highest incidence, with rates exceeding 90/100,000 (Hull-Jilly and Casto 2008). Within this same Yup'ik majority region, substantial variation in rates also surfaced across different communities. Among the two intervention communities that are the focus of this special issue, one community, with a population at the time of approximately 650, experienced 14 deaths by suicide involving youth under age 25 and 24 lethal suicide attempts overall over a 16 months period shortly before the project began work in the community, while the other community of comparable size had not experienced a suicide in the past 30 years. Our community experience suggests similar variations in rates of alcohol-related deaths, but this has as of yet not been documented by research. The importance of assessing and understanding these types of between-community differences will be amply documented in subsequent papers.

Beneath these epidemiological data are stories of the far-reaching consequences and impacts of co-occurring suicide and AUD on individual and community well-being for which systematic research documentation does not yet exist, but for which we have extensive observational data gained through years of work in these communities. When we interviewed community members in one of the communities in preparation for intervention development, we found a community undergoing significant traumatic stress related to waves of suicides since the 1980s. Community members shared trauma narratives about the suicides of multiple people with whom they had grown up, and of the deep personal loss experienced within the close, tightly knit kinship structures of their community. Individuals described repeatedly the experience of intervening in suicide attempts of their own children and of jumping in fear whenever the phone rang late at night. Meanwhile, medical personnel in the region described high numbers of acute stress reactions in a significant proportion of the population within communities experiencing a suicide cluster event. These reactions included other anxiety disorders and stress related conditions such as frequent instances of chest pain, reports of diffuse fatigue, and multiple illnesses.

Suicide and AUD as Co-occurring Phenomena

While suicide and AUD constitute significant issues on their own, existing epidemiological data document high rates of co-occurrence of suicide and alcohol abuse across AI/AN communities, and in particular among youth

(Manson et al. 1997). Alcohol has been identified as a major contributing factor in most studies of AN suicide (Allen et al. 2011; Kettl and Bixler 1991; Kraus 1974; Thorslund 1990). Data from 1999 to 2003 further suggest linkages between alcohol use and not only suicide, but also homicide (Hull-Jilly and Casto 2008) and unintentional injury, the third leading cause of death among AN people. AN men experience twice the rate of unintentional, non-fatal injury as AN women (Day et al. 2006). Thus there are important reasons to view alcohol and suicide as significant co-occurring issues with both complex relations and distinct element that produce additional broad ranging effects.

Implications of Epidemiological Data

Three important conclusions can be drawn from the existing epidemiological data on AUD and suicide among AN people that underscore the importance of developing preventive interventions for Yup'ik youth. First, these data document an enormous health inequity in contrast to both the US and the Alaska general population. AN people in general, and youth in particular, constitute at risk populations in an at risk state. Second, data suggests AUD and suicide often co-occur in the AN population, suggesting that preventive interventions addressing AUD and suicide as co-occurring phenomena are needed. Third, the presence of clear cross-regional and cross-community differences in suicide incidence, and suggested differences in AUD rates, suggests that care must be taken when making generalizations about the distribution of risk and protective factors among AN people as a group or, indeed, at the community level within the same AN group (such as the Yup'ik). Given these three conclusions, it becomes important to design preventive interventions that are flexible and adaptive in the ways they address AUD and suicide as shared risk factors with potentially different patterns of co-occurrence between and within people, communities, and AN cultural groups over time.

Alcohol Abuse and Suicide Risk Preventive Interventions for American Indian/Alaska Native Populations

Despite documented level of risk, existing research on psychosocial interventions in AI/AN contexts is extremely limited (Gone and Trimble 2012). These limitations extend to prevention of alcohol abuse and suicide among youth in AI communities in general, and among AN youth in particular. Extant reviews exist of the broader AI/AN literature on youth preventive interventions for substance abuse, including alcohol (Hawkins et al. 2004; Whitbeck et al. 2012) and suicide (Middlebrook et al. 2001). Therefore, this literature will not be comprehensively reviewed here. However, a focused, brief review on findings relevant to the central tenets of the current work will be useful to place our work within the context of this literature in order to highlight distinctive contributions.

Overview of Intervention Research Findings and Approaches

To explore the existing AI/AN alcohol, tobacco, and other drug (ATOD) and suicide preventive intervention literature, we initiated a PsycINFO database search using the key words "American Indian" or Alaska Native," and "prevention" or "intervention," and "suicide" or "alcohol" or "substance abuse." We removed treatment intervention studies and identified other preventive intervention studies in the citations of studies identified in the database. The existing literature is sparse; our search yielded fewer than 30 reports (noted in the references with asterisk). Many do not target youth and only one project (Johnson et al. 2007, 2009) reported specifically on work with AN populations. The studies vary widely in terms of their emphasis on individual versus community level processes and outcomes, description of community involvement in project development and implementation, focus on process versus outcome aspects of the work, use of local knowledge and local theory to frame the intervention, and consistency of findings.

With respect to consistency of findings, school-based preventive interventions addressing both substance abuse (Schinke et al. 1988; Schinke et al. 2000) and suicide (LaFromboise and Howard-Pitney 1994, 1995; LaFromboise and Lewis 2008) vary considerably in yielding positive (Schinke et al. 2000; LaFromboise and Howard-Pitney 1994, 1995; Johnson et al. 2009) versus negative (Dixon et al. 2007) individual level short-term outcomes. In one case, the Zuni Life Skills curriculum, which initially yielded favorable outcomes (LaFromboise and Howard-Pitney 1994, 1995), was adapted for use across a diversity of AI/AN communities. When this adapted program was compared to a non-culturally tailored suicide prevention program, the non-tailored program produced superior outcomes (LaFromboise 2009).

Beyond a few notable exceptions, these projects within the existing literature differ from the current work in three ways. Most of the best-studied interventions represent cultural adaptations of interventions originally developed for non-AI/AN youth, and/or import Western theoretical models (e.g., cognitive-behavioral theories) for their underlying theory of change. In addition, existing reports provide little discussion regarding development and impact of the collaborative process. Finally, most reports focus exclusively at the individual level for both intervention and

outcomes. Reports do not address ripple effects of the intervention into the schools or communities involved, nor do they discuss broader cascade effects on more general systems or community level processes.

A select group of programs in this existing literature constitute community level interventions: the Parent, School and Community Partnership Program (Petoskey et al. 1998), the Target Community Partnership Project (Rowe 1997), and PRIDE (Positive Reinforcement in Drug Education; Dorpat 1994). These interventions are characterized by multiple components directed toward different community, family, and individual segments. They are typically empowerment oriented, variously involve the development of local and tribal partnerships, include school-based curricula, provide community adult involvement in some capacity, and coordinate out-of school services for youth. In contrast to the present study, descriptions of processes and the specifics of the collaborations with community entities are relatively sparse.

With respect to outcomes, interventions that include multiple components of communities (e.g. community trainings, policy, community events) have yielded inconsistent results. However, studies have been plagued by multiple methodological issues that include small sample size, limited statistical power, and flaws in research design, including lack of meaningful comparison groups (Hawkins et al. 2004; Middlebrook et al. 2001; Whitbeck et al. 2012). As one example, in the Target Community Partnership Project (Rowe 1997) researchers note that intervention effects may have been obscured by the small sample size and resulting inadequate statistical power, as well as by complexities in understanding the causes for community level outcomes. One such outcome of this intervention was an increase in alcohol and drug-related arrest and referral. The researchers argue that increased arrest and referral could represent an indicator of increased community awareness regarding attitudes and subsequent limit setting on alcohol use behavior, rather than indicating an actual increase in alcohol and drug use. Further, in general, these multi-level intervention studies have under articulated theories of the why and how of involving multiple sectors of the community, and do not discuss the role and effects of collaboration in any detail.

Process Descriptions

The centrality of CBPR to the development and conduct of the present intervention project made us particularly mindful of process descriptions of the research relationship in the current literature, and the role of local knowledge, theory, and resources in the development and implementation of the intervention. In the existing literature, these types of descriptions of the research relationship over time are sparse and unsystematic, and the nature and importance of the relationship are not discussed as factors relevant to the success of health related interventions in tribal communities. For example, details of the process of researcher entry into these communities are rarely described, and developmental transitions in the roles of university and community co-researchers over time are likewise largely absent.

Collaboration around select aspects of the intervention design and evaluation are mentioned in the majority of studies, but the specific forms these collaborations take are not clearly described. One notable exception was Thomas et al.'s (2009) description of the tribal participatory research process involved in the Healing of the Canoe collaboration and a subsequent report (Thomas et al. 2010) describing a community readiness key informant approach to identifying needs and resources. Another exception is Walker and Bigelow's (2011) description of the process of developing a community-based methamphetamine intervention, which describes in considerable detail the complexities in working with multiple tribal communities. These papers highlight how local knowledge and practices affect a wide range of issues, including trust building and intervention fit with community values and traditions.

The role of professionals who are outsiders to the tribal community in intervention development likewise varies considerably. Some interventions were developed primarily by community members in response to community issues (Coyhis and Simonelli 2008; Dorpat 1994; Petoskey et al. 1998; Tower 1989). However, most fit more traditional models of community-researcher collaboration, such as consulting with AI youth and elders to tailor/adapt an intervention for AI youth (Marlatt et al. 2003) or attempting to replicate an intervention found efficacious among non-AI youth (Dixon et al. 2007). Finally, two intervention reports do not describe the collaboration process at all (Schinke et al. 1988, 2000).

While virtually all projects describe some level of community involvement and local input into aspects of the intervention, this work varies in terms of how foundational local culture is to intervention development, adaptation, and implementation. In general, projects describe how culture informed the content of the interventions through such vehicles as language, visual materials, and examples drawn from local cultural activities, rather than through deeper structural elements (Ringwald and Bliss 2006) of the interventions.

Culture can inform deeper structural elements of intervention through approaches that model local cultural modes of community organizing, including local cultural practices for conducting activities and identifying leadership. In addition, culture is reflected in following local protocol for respecting leadership, scheduling activities,

conducting a meeting or community gathering, processes of decision making, along with attending to local patterns and styles of communication. Structural elements can also include how cultural practices and worldview inform the way community needs are used to identify the focus of intervention. Finally, they can include how local theory guides intervention design, processes, and the underlying theory of change. In contrast, most interventions in the literature viewed culture as something to be enhanced or appealed to in order to achieve a desired intervention outcome, rather than functioning as a fundamental frame for addressing the entire intervention process and, in so doing, affirming local culture as an outcome in its own right.

For example, several programs working in AI/AN communities built on existing research literature and programs to develop an intervention, but included significant local input throughout the subsequent process of intervention development. The Seventh Generation Program (Moran and Bussey 2007) for prevention of AI youth alcohol abuse used the research literature to identify an intervention focused on alcohol knowledge, values clarification, and decision and refusal skills. Subsequent meetings with various community groups succeeded in identifying a unifying cultural theme for the intervention, reflected through the infusion of seven local cultural values.

The previously described Zuni Life Skills Development program (LaFromboise and Howard-Pitney 1995) for prevention of AI youth suicide involved community input to develop a culturally tailored life skills curriculum to ensure its compatibility with Zuni culture, customs, beliefs, and values. Reports include process descriptions of tailoring the curriculum. In the context of the Zuni culture, talking or even thinking about suicide is taboo, and considerable attention was devoted to the ethics and the cultural impacts of discussing suicide in the curriculum. Further, two Zuni males assisted the non-Zuni female teachers as cultural resource persons in delivering each session in the intervention. While both Seventh Generation and Zuni Life Skills Development projects engaged significant and consistent local involvement, the extent to which culture informed deeper structural aspects of the intervention, such as how community members were involved in identifying and formulating alcohol use or suicide as a problem, and how local knowledge and theory of the problem determined the intervention focus and approach, is not described.

In contrast, the Wind River Behavioral Health Program (Tower 1989) most closely parallels the perspective adopted by the present project in its degree of cultural embeddedness. The project represented a local, indigenous response to a tragic suicide cluster among local youth. It initially included an immediate supportive counseling response for survivors, then developed a long-term, locally driven multi-level community intervention that included community-wide events, policy efforts, and traditional ceremonies. Ripple effects of the intervention impacted alcohol abuse.

Wind River also provides a much-needed example of community mobilization in response to local crises. The project, however, did not include systematic evaluation; the immediate community crisis response to cluster suicide among its youth understandably trumped use of scarce resources to gather process or outcome data, much less develop a research design to evaluate its effectiveness. In contrast to the present project, community members felt that outside experts would not be helpful. Kahn et al. (1988) similarly describe how Papago tribal members developed the Papago Psychology Service to address the mental health needs of the tribe, with no desire to evaluate the program according to Western research standards. As they noted: "Research as Western academics define it is regarded suspiciously as an unneeded drain on the overwhelmingly clinical needs" (p. 378).

Limitations of the Current Literature and Contributions of the Present Project

The general conclusions drawn from separate reviews of substance abuse interventions (Hawkins et al. 2004; Whitbeck et al. 2012) and suicide interventions for AI/AN youth (Middlebrook et al. 2001) converge with specific relevance in the work reported in this special issue. Overall, a common set of reporting limitations make establishing impact of the majority of the preventive interventions in this literature difficult. Hawkins et al. note these limitations as including lack of information on the nature of the interventions, the processes of development or cultural adaptation, and involvement of community members in various stages of intervention development and implementation. The authors note the critical importance of this level of description both for explanation of findings and for generalizability, given the extreme diversity of cultural groups within AI/AN populations. They also note a lack of longitudinal, prospective research on risk and protective factors to guide intervention models.

A second central critique is methodological in nature, noting that none of the programs are adequately evaluated and, in general do not use research designs that can establish intervention efficacy. Middlebrook et al. (2001) note that none of the AI/AN suicide prevention studies in the literature fulfills all of the six Institute of Medicine criteria (Mrazek and Haggerty 1994) for describing and evaluating prevention programs. Reports variously lack description of risk and protective factors, detailed description of the intervention, clear description of a

randomized control or of a quasi-experimental design with detailed description of the comparison group, evidence for the fidelity of implementation, and/or description of the evidence supportive of outcomes.

Six additional limitations emerged in our own review of the literature. First, few of the reviewed studies were conducted in Alaska, or in similar settings possessing the distinctive culture and larger ecology of the kinds of rural communities involved in the present special issue. Second, the majority of these interventions were designed to address suicide and alcohol abuse as separate issues in isolation from each other, rather than as interrelated processes. Third, while there were some multi-level interventions engaging not only youth but also community members and organizations, the majority involved individual level, peer-led, bicultural competence skills-training interventions focused on youth only (e.g. Carpenter et al. 1985; Schinke et al. 1988, 2000). Fourth, most interventions relied on imported Western models over local theories of risk and protection, and of intervention and change processes. Fifth, there is limited description of how culture played out in the deeper structural elements in many of the interventions reviewed. Finally, Whitbeck et al. (2012) note several core methodological challenges in work with small, culturally distinct AI/AN groups, some of which highlight important discontinuities between Western scientific and AI/AN cultural values. These methodological challenges include the costs of working in remote, geographically dispersed settings, inadequate statistical power associated with small samples, and the cultural unacceptability to many tribal communities of randomization because it involves withholding prevention activities from some of the participants. This contributes to a lack of evaluation of innovative, locally developed programs.

Whitbeck et al. describe an emerging parallel AI/AN grassroots movement of innovation in prevention programming arising in response to these discontinuities at work outside the mainstream prevention science literature. These local initiatives are developing interventions more deeply rooted in cultural knowledge and values, typically grounded in cultural activities that foster protective factors. The authors challenge intervention scientists to include these innovations in the literature, noting:

> There remain 'two worlds' of prevention work: scientific trials and local practice. Scientific prevention trials encounter numerous barriers as they attempt to bridge cultural disconnects…For all the community-based participatory research (CBPR) work that has been done, many EA [European-American] researchers continue to work from a Western colonial paradigm that ignores, diminishes, and reinterprets Native ways of knowing (p. 433).

Our work with the Yup'ik, described in this special issue, is in many ways a story about the struggles, successes, and failures in addressing these tensions, as we sought to apply scientific methods in a manner that did not simultaneously diminish local understandings or local control. Our approach aims to address the six limitations outlined above. First, it adds to the limited research in Alaska by describing a project embedded within the distinctive culture and larger ecology of rural AN communities. Second, the current project recognizes that when alcohol abuse and suicide co-occur, they do so as a complex and interrelated phenomenon with distinct attributes in their comorbidity. Third, in contrast to the individual level emphasis of most extant literature, (e.g. Schinke et al. 1988; LaFromboise and Rowe 1983; Johnson et al. 2009), the present project developed a multilevel theoretical framework with protective factors recognized as shared and occurring at intrapsychic, family, community, and cultural levels (Hawkins et al. 2004; LaFromboise and Howard-Pitney 1994, 1995). Fourth, this theoretical framework represents a locally developed perspective on protective factors specific to the cultural context resulting from an intensive collaborative relationship between researchers and communities. Fifth, the work addressed community-defined issues in ways consistent with history, culture, and resources, and thus infused cultural elements in the deeper structure of intervention implementation. A final distinctive contribution described in the subsequent papers involves statistical and methodological innovations to address several issues related to sample size and measurement.

People Awakening and a Guiding Conceptual Model

The project described in this special issue is a cultural intervention designed to promote healthy development of 12–18 years old AN youth ages in rural Yup'ik communities. We term this community intervention (Trickett et al. 2011) a cultural intervention. While acknowledging all intervention is inherently "cultural," we use the term here to define an extension of the notion of multi-level, culturally situated intervention (Schensul and Trickett 2009). Cultural intervention contrasts with culturally situated intervention in that in the former, culture is both a central focus of the intervention activities, and in addition, the underlying theory guiding intervention is also indigenous to the culture. Such a framework for intervention evolved only out of years of consistent, intensive collaborative involvement between Yup'ik communities, statewide AN groups, and university researchers as part of the People Awakening (PA) project (Mohatt et al. 2004a; Allen et al. 2006). The efforts described in this issue represent a "next

step" in this research process, involving translation of the conceptual model of protective factors developed by PA into preventive intervention.

PA originated in 1994 out of a grassroots reaction to what Native people experienced as a power hegemony that defined AN people and communities through their problems. An insidious, imposed community narrative stigmatized AN peoples, describing them universally as problem drinkers, and their communities as places of abject failure and suicide. The experiences motivated a group of AN leaders to contact the university and request a partnership to instead study strengths of AN people.

Pathways to Sobriety

These leaders wanted to study sobriety, which in their local indigenous definition encompassed a broader concept of well-being, and included abstinence and non-problem drinking, in addition to the recovery from alcohol abuse typical to the Western definition of sobriety. Importantly, instead of focusing on problems, PA was designed to discover strengths through investigating what factors prevented AN peoples from developing AUD or facilitated recovery. This first PA study investigated AN pathways to sobriety (Allen et al. 2006; Mohatt et al. 2004a, b) using mixed methods. A qualitative study of 101 ANs who either never developed AUD or had five or more successful years of recovery from AUD explored their life histories. A subsequent study with 252 rural Yup'ik adults developed culturally appropriate measures of protective and recovery factors identified through these life histories. All phases of the project, including the analysis of the extensive, rich life history data set involved an iterative, collaborative, analytic, team-based process with our co-researchers (Mohatt et al. 2004a).

Through this process, the team created a culturally based heuristic model of protection and recovery important in AN adult sobriety. The original PA model, consistent with triarchic theory (Petraitis et al. 1995) proposed three levels of protective factors important in determining sobriety; these levels identified among the Yup'ik sample were termed *Yuum Ayuqucia,* or protective individual characteristics, *Ilaput,* protective family characteristics, and *Nunamta,* protective community characteristics.

Development of a Youth Focused Collaborative, Culturally Grounded CBPR Process

At the conclusion of this first PA study, community members expressed interest in using the data for action in their communities, and the PA Coordinating Council of community co-researchers set as its top priority the development of interventions based upon the PA heuristic model, with a focus on youth. Through a variety of community inputs, we were asked to develop programs that would enhance protective factors implicated in outcomes of sobriety and well-being, and that would prevent not only alcohol abuse, but also, in one of the communities, suicide risk. We began planning two interventions ultimately funded through NIH R24 and R21 grant mechanisms, initiating a CBPR process for their development.

Two rural Yup'ik communities were selected. One community on the Yukon River had experienced a long history and a recent cluster of suicide, and was recommended to the researchers as a community possibly interested in intervention research. University researchers contacted the tribal administrator, who invited the team out to discuss the project with the tribal council. The second community participating was a Western Alaska Bering Sea coastal community. This community had an existing research relationship with our group through involvement in previous health related research at the Center for Alaska Native Health Research, and a similar process of invitation and discussion ensued, with presentation before the tribal council. Additional information about this process of engagement and invitation into the community is described elsewhere in this issue (Rasmus et al. 2014). The Yukon River community named their process of intervention *Elluam Tungiinun Agelruciq Ikayuulluta Agayutmek Ikayurcirluta* (Movement Toward Wellness Together with the Help of the Creator) or *Elluam Tungiinun* (Toward Wellness) for short. The Bearing Sea coastal community named their process *Yupiucimta Asvairtuumallerkaa* (Strengthening our Identity as Yup'iut). Throughout this special issue, the Yukon River community intervention will be referred to as *ET*, and the Bering Sea community intervention will be referred to as *YA*.

The unique epidemiologies, cultures, and goals of the rural communities involved interacted with differences in the NIH grant programs that funded them to produce an intervention that unfolded differently in several important ways across the two communities (Mohatt et al. 2014). However, in both communities, the PA heuristic model steered development of the intervention and the measurement strategies to assess intervention impact on proximal variables, and its longer-term ultimate impact on AUD and suicide prevention.

A Conceptual Model for Prevention

The initial results from the PA project resulted in an Indigenous theory of sobriety for AN adults (Mohatt et al. 2004a) and the development of culture-specific measures that were psychometrically tested with 252 Yup'ik Eskimo adults residing in remote, roadless villages (Allen et al. 2006). While both the original PA conceptual model and

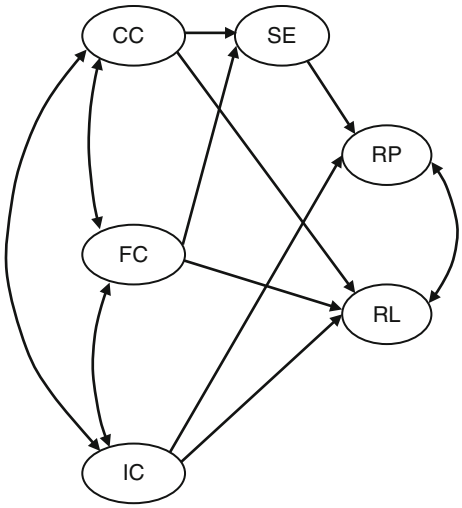

Fig. 1 People awakening adolescent protective factors heuristic model. *Key*: **CC (Community Characteristics)** *Nunamta* includes how the community organizes school, interactions between families, and other activities in childhood, and enforces alcohol policy/drinking norms. **FC (Family Characteristics)** *Ilaput* includes family cohesion, expressiveness, conflict management, moral-spiritual focus, and praise, social support, safety, values, and a model of alcohol use and giving to others as part of the caregiver relationship. **IC (Individual Characteristics**) *Yuum Ayuqucia* includes communal and personal efficacy. **SE (Social Environment)** *Nunaput* includes role models and social support, with special focus on peer influence on alcohol use and school attitudes. **RP (Reflective Processes)** *Umyuangcaryaraq* includes reflecting on experience and in particular, positive and negative aspects of drinking. It includes *Ellangneq*, Yup'ik mindfulness/awareness, seeing connections between behavior and consequences past, present and future. **RL (Reasons for Life)** *Yuuyaraqegtaar* includes an individual's self-assessment the positive aspects of life that make life meaningful, enjoyable and provide reasons why they want to live their lives

these measures guided development of the youth intervention, we adapted the model (1) to the specific developmental period of experimental substance use in youth, (2) to include the prevention of suicide as well as alcohol abuse, and (3) to translate its elements into a measurement model that was capable of testing the proposed intervention theory of change, and of providing a systematic assessment of intervention outcomes.

In this revision of the original PA model (Fig. 1), specific characteristics of the three levels of protective factors, *Nunamta* (community), *Ilaput* (family), and *Yuum Ayuqucia* (individual), function as intermediate level protective variables that interact with *Nunaput* (the adolescent's social environment) as a mediator variable, to influence development of *Umyuangcaryaraq,* a reflective capacity of awareness regarding the consequences of alcohol use, and *Yuuyaraqegtaar,* reasons for life. These two concepts function as co-occurring ultimate outcome variables that serve as protective factors for AUD and suicide. In specifying hypothesized causal mechanisms through a network of proximal variables, the model thus provides a test of a theory of protection from AUD and suicide that is multifactorial. This, in turn, provides justification for multilevel interventions that simultaneously address community, family, and individual levels rather than interventions directed at any single level.[3]

A Guiding Model for Collaboration

The guiding model underlying both the initial PA project and the youth intervention described in this special issue emerged from a CBPR perspective supported by AN leadership and local communities (Mohatt et al. 2004a). The model emphasizes the collaborative involvement of community members in all phases of the research process (Mohatt et al. 2004b) and underscores cultural elements historically left unaddressed in much of the existing research with AN people. In particular, it draws attention to what Ringwald and Bliss (2006) term deep structural elements of intervention, such as the organizing principles of leadership for the intervention, and builds upon cultural hopes, social settings, and traditions. As such, it places more surface elements of culture, such as the images, artwork, and even Yup'ik language words used in intervention materials and process, within a deeper and broader cultural context.

Over time, a process for conducting such work emerged. Figure 2 outlines an iterative process through which multiple, shared, co-equal pathways of collaboration between the local AN health corporation, formal and informal local tribal leadership, and community and university co-researchers is encouraged. The start point of the model begins in the upper left corner of the figure, at conceptual resources and inputs, and moves to the right to organizational resources and outputs, and then into the activities of the intervention development process. This leads to outputs that include prevention activities and their impacts on intermediate and outcome variables, shared analysis and interpretation, and dissemination. The approach stresses a community-controlled process flowing from Indigenous values and beliefs, leading to the creation of a culturally congruent process of intervention development, and to community ownership, that in turn leads to prevention activities that impact intermediate and ultimate outcomes. The process then comes full circle to impact the guiding conceptual model in refinements to the conceptual model and future iterative cycling. This collaborative model has allowed us to address many of the challenges faced by

[3] It is important to note that the English words provided in this capsule summary do not entirely capture the full meaning of the Yup'ik words, which include additional surplus meaning beyond the English word definitions.

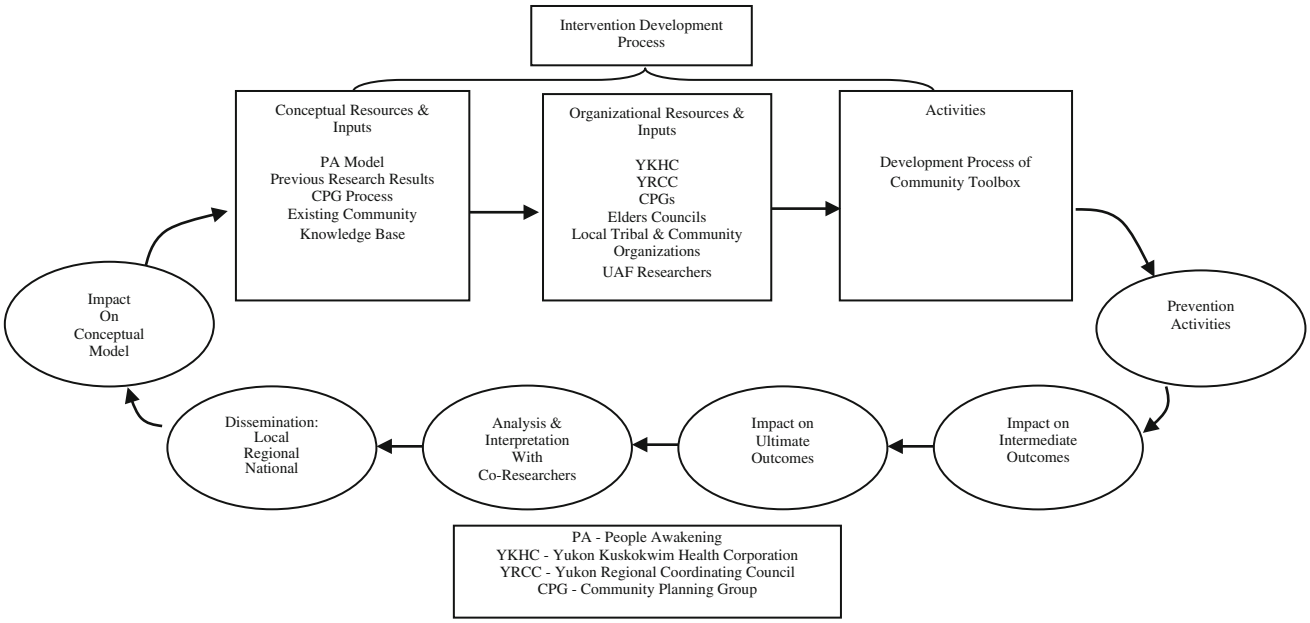

Fig. 2 Collaborative culturally-grounded CBPR logic model

researchers in rural and cross-cultural contexts, while simultaneously enhancing fidelity to the PA guiding conceptual model, participant satisfaction, and community ownership.

Conclusion

The story of our work is thus that of an extended research relationship rather than a discrete intervention. Through this collaborative research relationship, we were able to generate a robust, locally developed theory of protective factors from suicide and alcohol abuse, and a culturally-relevant evaluation of a strengths-based, multi-level, community-based preventive intervention for AI/AN youth. We believe the CBPR approach in these two Yup'ik communities was key to any intervention "successes" experienced, which the articles to follow in this special issue will describe in greater detail. Some of its specific outcomes, including validation of the theoretical model for intervention and demonstration of its feasibility, are part of a long-term effort to ultimately causally demonstrate intervention outcomes with sufficient rigor to establish this intervention approach as "evidence-based" in the formal sense of the term, as adopted by Western intervention science. While working collaboratively with AI/AN communities and developing culturally respectful interventions were recurrent themes in the reviewed literature, detailed accounts of these processes are largely absent. Here, space will allow an integrative portrait of the development of an intervention taking several of the specific issues raised above into account. In particular, we greatly value the space to describe our research relationship. The present volume, therefore, represents a distinctive opportunity to "tell the story" of the complexities, challenges, and rewards of a collaborative research relationship over time with two communities.

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