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Growing from Our Roots: Strategies for Developing Culturally Grounded Health-Promotion Interventions in American Indian, Alaska Native, and Native Hawaiian Communities

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Abstract

Given the paucity of empirically based health-promotion interventions designed by and for American Indian, Alaska Native, and Native Hawaiian (i.e., Native) communities, researchers and partnering communities have had to rely on the adaptation of evidence-based interventions (EBIs) designed for Non-Native populations, a decidedly sub-optimal approach. Native communities have called for development of Indigenous health-promotion programs in which their cultural worldviews and protocols are prioritized in the design, development, testing, and implementation. There is limited information regarding how Native communities and scholars have successfully collaborated to design and implement culturally based prevention efforts "from the ground up." Drawing on five diverse community-based Native health-intervention studies, we describe strategies for designing and implementing culturally grounded models of health promotion developed in partnership with Native communities. Additionally, we highlight indigenist worldviews and protocols that undergird Native health interventions with an emphasis on the incorporation of: (1) Original Instructions, (2) relational restoration, (3) narrative- [em]bodied transformation, and (4) Indigenist community-based participatory research (ICBPR) processes. Finally, we demonstrate how culturally grounded interventions can improve population health when they prioritize local Indigenous knowledges and health-positive messages for individual to multi-level community interventions.

Keywords

Culturally grounded; health promotion programs; American Indian, Alaska Native, Native Hawaiian, Indigenous; Indigenist research; Indigenous Knowledges; decolonizing methodologies

"That which is above shall come down; that which is below shall be raised up; the islands shall be united; and the walls shall stand upright." – prophecy by the Kānaka Maoli (Native Hawaiian) priest Kapihe.

Among the Kānaka Maoli, the Indigenous people of Hawai'i, this age-old prophecy can serve as a model for perseverance- a time in which the People will rise, draw strength from the roots of their ancestors' vision, and take collective action to ensure the health and well-being of future generations. As in this prophecy, we are now in a health research era in which Indigenous voices are rising up and uniting to advocate for the design and development of culturally grounded research by and for Native communities that integrates the worldviews, values, and ethics emanating from ancient systems of Indigenous science and knowledges. The focus is on creating contemporary interventions that, at their core, focus on "restoring order to daily living in conformity with ancient and enduring values that affirm life," maintaining well-being, and promoting healing approaches to dis-ease (Castellano, 2004; p.100). However, Native researchers often face barriers in designing and implementing interventions that are culturally valid, methodologically appropriate, and Indigenist[1] centered. Additionally, given the paucity of empirically based preventive interventions designed by and for American Indian, Alaska Native, and Native Hawaiian

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(hereafter referred to as Native or Indigenous) communities, communities and research partners have often relied on the adaptation of existing empirically based interventions (EBIs) originally designed for Non-Native populations.

While the adapted and integrated EBI approach, particularly for substance use treatment programs, has some merit (Greenfield & Venner, 2012), few *prevention intervention* EBIs have been adequately adapted by and for Native communities and thus, are not sufficiently culturally validated (Lucero, 2016). Moreover, even fewer have been developed 'from the ground up' and empirically tested (e.g., Kaholokula et al., 2014). Culturally grounded adaptation of EBIs remains difficult because Native entities are often under resourced and lack necessary support to culturally adapt an intervention. Furthermore, because Native agencies tend to be dependent on funders that emphasize using unaltered EBI's, they are placed in untenable situations where they risk loss of funding if they culturally tailor EBIs (Lucero, 2016) or loss of cultural credibility if they do not.

Methodologically, when Native health interventions are based on non-Native EBI's, they typically only measure the quantity and frequency of particular cultural practices as the underlying mechanisms for health behavior and change. In doing so, they ignore the epistemological foundation that frames Native cultural practices. Often times EBIs are supplemented with decontextualized cultural or practice add-ons (e.g., replacing English words with tribal language); in doing so, they continue to operate within the Western-oriented worldview that upholds the EBI. This "tagging on a feather" approach may, albeit in limited ways, support integration of culturally specific practices. However, without acknowledging the underlying deep epistemological and cosmological context that drives health and well-being in the Native community, which differ from Western worldviews, this approach may unknowingly diminish the salience and power of Native cultural practices. It can further reinforce stereotypes, while possibly producing unintended individual and community iatrogenic effects leading to "inadvertent colonization" (West et al, 2012). "Scientists cannot simply take Western structures of knowledge, and 'Add Indigenous and Stir,'" (Grossman, 2014, p. 53) and expect a perfectly Native-flavored synthesis of the two ways of knowing. There must be an equalization of power and valuing of both knowledges. Otherwise, as Grossman (2014; p.55) notes, "any other protocol will lock Native ways of knowing into a subordinate status, or extract Native knowledge to assimilate it within Western Science, and thereby rob Native and non-Native people alike of important tools.".

In recent years, Native communities have increasingly demanded development of culturally grounded Indigenous health promotion programs in which Native cultural worldviews and protocols are front and center in the design, development and implementation of the intervention. In particular, Indigenous communities have called for health interventions to be culturally centered (not just culturally tailored) since "culture is medicine" (Bassett et al., 2012). Among Native scholars, recent efforts are underway to [re]*indigenize* research to incorporate Indigenous knowledges (IK) that provide the "logic and internal validity" by which communities "live, learn and survive"– and in the case of health intervention research,

[1]Indigenist research seeks to develop culturally centered, liberatory research methods and practices that are rooted in Indigenous epistemologies, ontologies, and axiologies as well as community aspirations in surviving and thriving beyond settler colonialism.

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guide creation of interventions (Martin et al., 2003). However, to date, there is limited information on *how* Native communities and health researchers have successfully collaborated to design culturally based prevention efforts rooted in Indigenous knowledges, protocols, and practices from the ground up. This paper will describe strategies for designing and implementing programs based in culturally grounded models of health promotion developed in partnership with Native communities. It will highlight indigenist paradigms that undergird Native culturally based health interventions using five studies shared as exemplars of these indigenist protocols and practices.

Indigenous Knowledges

Indigenous Knowledge (IK) allows communities to thrive and is the basis for decision-making related to health. IK incorporates how one perceives and derives an understanding of "being in the world" within the context of existence (ontology) and provides the underlying values, ethics, and responsibilities (axiology) and foundation of "how we know what we know" (epistemology; Wilson, 2001). Although Indigenous Peoples are diverse, as are their specific teachings in enacting their IK, some characteristics are consistent across Indigenous populations. For many Indigenous People, IK has sustained their communities and includes a deep belief in the connectedness of all creation across time and space, with relationships between past, present and future entities. These relational connections correspond with responsibilities to place; all beings (self, family, people, clan, animals); the physical world (land, water, plants); ancestors (past and future); and the spirit world. Thus, IK is part of everyday life and provides the foundation for being and becoming a "good human being." The collectivity of IK is typically reflected in many ceremonies and teachings passed down through the generations and is often tied to place and environment (Cajete, 2014).

Too often in Native health research, IK is represented as a singular construct or cultural practice, ignoring the different expressions of IK, including "*traditional knowledge* which is handed down and based on stories and experiences of a people through time; (2) *empirical knowledge* that is gained through careful observation and practice over time; (3) *revealed knowledge* which is gained through vision, ritual, and ceremony; and, (4) *contemporary knowledge* gained through contemporary experience and problem solving" (Cajete 2014, p. 36). All four are important to understanding how IK may be expressed and experienced in modern times and, ultimately, how IKs are relevant to designing and implementing health interventions in Native communities.

We Rise from Colonial Ashes: Growing Health Interventions from our Roots

Indigenist research recognizes Indigenous knowledges, worldviews, and realities as vital to continued survival and frames research within this perspective (Martin et al., 2003). It involves honoring Indigenous social norms and processes within their lived context, particularly their social, historical, and political context, and privileging Indigenous voices, lives, and experiences (Smith, 1999). These culturally centered approaches are rooted in Indigenous epistemologies and their corresponding core values and actions. In other words, the ways of knowing, doing, and being in the world (Martin et al., 2003) not only give meaning and motivation to collective and individual action but also provide protocols for

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healthful living. This entails more than adding one cultural practice to an existing intervention, as the comparability and generalization across programs and settings are restricted with an additive approach. However, as Rowan (2014) notes, one solution is to compare cultural interventions based on their common functions or purpose they serve, (e.g., purification or increasing spiritual connection) versus on their distinctive forms (e.g., sweat lodge, dance).

Simply indigenizing is insufficient if communities are not in control of the indigenizing processes and its goals, as these goals may directly conflict with western practices and epistemologies. Thus, we must *decolonize* simultaneously as we indigenize interventions (Smith, 1999). While indigenizing is building up from our Indigenous knowledges, worldviews, and practices, decolonizing is simultaneously dismantling internalized colonization that permeates everyday living and infiltrates thought ways and practices. This includes decolonizing the mind, body, spirit and heart (e.g., thoughts, behaviors, feelings) while concurrently revitalizing healthy cultural traditions and creating new traditions to thrive. Native scholars propose that health intervention research should explicitly promote healing from well-being disruptions by building interventions from the culture or "from the ground up" (Walters et al., 2011). Drawing from this work, we concur that culturally based interventions should focus on the following: (1) incorporating Original Instructions (e.g., via ancient stories/teachings) as much as possible; (2) nurturing relational restoration (via worldviews across body, place, self, family, community, past and future generations); (3) advancing narrative and [em]bodied transformation (i.e., decolonizing the way we think and talk our [his]stories and express through our bodies); and, (4) incorporating Indigenist community-based participatory research (ICBPR) approaches.

Exemplars of Culturally Grounded Health Intervention Research

"You never change things by fighting the existing reality. To change something, build a new model that makes the existing model obsolete." — R. Buckminster Fuller

Five studies funded under NIH's "*Interventions for Health Promotion and Disease Prevention in Native American Populations*" (PAR-11–346) provide specific examples of how the concepts of (1) Original Instructions (OI); (2) relational restoration (RR); (3) Narrative-[em]bodied transformation (NeT); (4) and, Indigenist community-based participatory research (ICBPR) are integrated to varying degrees into their health promotion programs. The five studies are: (1). *Yappalli Choctaw Road to Health*; (2). *Qungasvik (Toolbox): Prevention of Alcohol/Suicide Risk in Alaska Native Youth;* (3). *The KaHOLO Project: Preventing Cardiovascular Disease in Native Hawaiians;* (4) *Residential Wood Smoke Interventions Improving Health in Native American Populations;* and (5) *Intertribal Talking Circle for the Prevention of Substance Abuse in Native Youth*. All five health promotion intervention studies are led by Native Principal Investigators (PIs) or co-PIs in partnership with Native communities, utilize ICBPR approaches, and integrate Indigenous worldviews, protocols and practices throughout their studies, although, their level of integration of OI, RR, and NeT vary from study to study based on design and community needs. Below we describe the concept (OI, RR, NeT) and then provide at least one study

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example that serves as an exemplar for that particular concept to illustrate how these culturally based concepts can be integrated into health promotion research.

Original Instructions (OI): Framing Indigenist research

Calls for centering IK in health intervention research follow the egregious mistreatment of Native people over the course of colonial and imperial histories in tandem with the advent of modern science (Walters et al, 2011). These histories are fraught with historically traumatic genocidal, ethnocidal (i.e., destruction of lifeways), ecocidal (destruction of native lands, waters, and air quality), and epistemicidal events rooted in settler colonialism that generationally have impacted Native sovereignty and wellbeing. Not only did this occur for Native groups in the US, but also for Indigenous populations in North America and the Pacific/Oceania. For Native Hawaiians/Kānaka Maoli, these series of traumatic events also led to the alienation of Kānaka Maoli from their "beliefs, customs, and sovereignty, which has had significant physical, psychological, and social ramifications…to this day." (Kaholokula, 2007; p. 280). Settler colonialism is designed to disrupt Indigenous ways of knowing and a People's ability to fulfill their Original Instructions-including their responsibilities and obligations to each other, the natural and spiritual worlds, as well as past and future generations (Nelson, 2008). Moreover, these disruptions, and resulting trauma, interrupt and suppress relational ways of being, knowledge systems and thoughtways that inform everyday living and responsibilities (Walters, 2011). Too often health interventions, and related research, ignore the impact of this historical trauma and the salience of Indigenous knowledges for achieving wellbeing.

Original Instructions (OI) are the ancient teachings regarding the protocols, practices, and responsibilities to enact Indigenous Knowledges and are expressed through stories, songs/chants, dances, ceremonies as well as calendrical, spiritual, teaching, clan and governance systems (Nelson, 2008). As noted earlier, although some of the IK and OI may have been taken the core thought ways and teachings can still be found. For example, protocols for living healthfully with the plant and animal world can be found in practices that tribal communities still utilize today. Moreover, the complexity of living in modern times and in major cities demands that we not only recognize the persistence of Indigenous peoples over 500 years of colonization, but the *survivance* (Vizenor, 2008) of Indigenous peoples in holding on to deep cultural threads of knowledge and practices that endure to this day (Nelson, 2008). The authors further argue for a focus on *thrivance,* or moving towards supporting existing health and wellbeing as guided by OI and the community.

Embedded in IK and enacted through OI are place-based teachings, relational worldviews, and ways of being, knowing, and talking in the world. In other words, how we think, communicate, and act all carry power as well as intergenerational responsibilities taught through OI. OI teachings are passed down through the generations through formal and informal teaching processes. Through the study and interpretations of these teachings, Native communities are given methods, practices, and protocols for how to live and interact in the world (Nelson, 2008). Thus, health interventions with Native communities that ignore this relationship may not be as effective as those incorporating OI. The questions now facing

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modern Indigenous communities are how to live the teachings of previous generations within contemporary times.

As noted among the Kānaka Maoli:

> Part of our spiritual preparation as Kānaka Maoli is as ancestors. It's the challenge that all of us face who are alive on earth today. How do we prepare to be the ancestors of future people? How do we make the decisions that carry the consciousness to have clean water for future generations, to put into place all the necessary things for survival that are needed and that were given to our generation to best help us to survive? (Paikuli-Stride et al, 2008, p.316)

OI Exemplar: Yappalli Choctaw Study

Yappalli is an innovative study in that it is led by both Choctaw researchers (Walters and Johnson-Jennings) as well as Choctaw community leaders (Stroud) and was developed by and for Choctaw women. Yappalli involved an intense pilot phase where the goal was to design and develop a Choctaw-specific health promotion model via re-walking the Trail of Tears. Thus, a group of Choctaw health leaders and community members, Native allies, and non-Native support staff set out over 3 pilot phases to map and re-walk the Trail of Tears in order to design and develop a health promotion model based on Choctaw knowledge gained not only from the trail experience itself (i.e., ancestral knowledge gained by re-walking in the footsteps of the ancestors) but also in consultation with community and cultural leaders, Elders, other Choctaw scholars, as well as through researching historical documents. Original Instructions and ancestral teachings that were identified during the pilot study and in consultation with the community advisory panel and Elders guided the health framework development. Out of this pilot phase and framework, a curriculum was developed and tested which formed the core knowledge base for the health intervention.

Similar to other successful Native preventions, Yappalli incorporates cultural restorative and generative activities as guided by OI, such as incorporating the Choctaw language throughout the curriculum; learning about Choctaw heritage and clan systems as well as women's roles (e.g., responsibilities for restorative ceremonies); participating in ceremonies (naming and vow-making) and other cultural practices; creating traditional materials; and, using cultural metaphors for behavioral changes (e.g., historical clan responsibilities). To date, the majority of obesity and substance abuse prevention efforts in Indian Country have primarily ignored OI and resources that contemporary Native culture can provide. Yappalli cultural innovation lies in incorporating experiential, outdoor and culturally specific trail-based activities to promote group cohesion (Schultz et al., 2016) and to increase connection to the ancestors and their OI. These place-based approaches are central to promoting connectedness to ancestors' OI from the past and for those yet to come and awakening the responsibilities of the present generation, community, and family. Additionally, the Yappalli curriculum centers core Choctaw values based on OI for social roles and codes of conduct as related to health. The Choctaw had a complex social and ceremonial life where they upheld the teachings of their ancestors (Cha^{n}spo Ikhvnanchi/ OI) through traditional clans/societies, social activities and roles. The Yappalli cultural component of the curriculum draws behavioral change protocols from the historical Choctaw clan system and the social and

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ceremonial responsibilities associated with each clan (Wolf, Panther, Holly Leaf, Deer, Racoon, White Crane, and Wind), as well as the four pillars of wellness and balance-mind, body/spirit, heart and spirit. Thus, Yappalli is a ground-breaking study utilizing Choctaw-specific theory based on Choctaw cultural knowledge and ancient teachings.

While the Yappalli intervention centers on Native OI, traditions and culture, it also incorporates evidence-based prevention models including the information-motivation-behavioral skills (IMB) model (Osborn, Amico, Fisher et al., 2010). IMB promotes increasing information/ knowledge in order to motivate behavioral change. Instead of increasing only healthful eating, a distinctive version of 'information' in the Yappalli intervention is the inclusion of cultural knowledge; *"original instructions"* (Cha^{n}spo Ikhvnanchi) related to food, activity, and medicines; and, incorporation of cultural and relational regenerative processes by drawing on historical clan structures and roles to provide guidelines for behavioral change. Information and motivation synergistically act as tools to develop behavioral skills, which then, ultimately improves health outcomes. Thus, an EBI is added complementary to the OI approach. This approach is opposite to "tagging a feather on it" and calls for researchers to remain flexible and value OI as equal to EBI's developed within other cultures.

Relational Restoration (RR): Nurturing Relational Ways of Being

For Indigenous Peoples, relationality means that one experiences the self as a part of others, and that others are part of the self–all are inextricably linked (Moreton-Robinson, 2000). Native researchers throughout the globe have given other names to the "all our relations" maxim, as Moreton-Robinson (2000) notes, labeling this process as "kindredness" or "connectedness" across time, space, place, and beings. Relationality is reciprocal as well as spatial, given it does not move forward and backward in time, but rather, encompasses all directions simultaneously. Alarcón (2008) provides an example of the spatial aspects of relational worldviews among the Maya, who have a fifth direction beyond the cardinal four directions, as captured in their mantra which translates as "you are my other I;" everyone is a mirror of each other, and each is a "unique window to the universe." Thus, relationships can be central to healing and provide the framework for health interventions.

RR Exemplar: The Qungasvik (Toolbox) Prevention Approach

Qungasvik ("koo-ngaz-vick," meaning tool box) is a strengths-based Yup'ik community-developed and driven intervention that builds protection against alcohol misuse and suicide among Yup'ik Alaska Native youth 12–18 years old (Rasmus, Charles, & Mohatt, 2014). Qungasvik is a culturally grounded Alaska Native intervention seeking to establish itself as an evidence-based practice. The research team is currently testing this community-level intervention in three studies using a dynamic waitlisted, stepped wedge, and interrupted time series design (Brown & Lilford, 2006). In a recent comparative effectiveness study, researchers found that this intervention shows promise in lowering suicide risks (Allen, Rasmus, Fok, Henry, and Qungasvik Team (2017).

Qungasvik engages youth with their community using a cultural process of project implementation, relational and intergenerational instruction, and knowledge transmission

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(Rasmus, et al. 2014). Qungasvik as a research project was initiated by Yup'ik Alaska Native communities facing serious disparities in youth suicide and alcohol misuse. Qungasvik focuses on providing protective cultural experiences for youth through the strength and resilience within their histories rooted in Yup'ik cultural ways of being (Ayunerak, Ahlstrom, Moses, Charlie, & Rasmus, 2014). Qungasvik provides protective cultural experiences through an Indigenously developed intervention process centered in qasgiq ("kuz-gik," meaning communal house). Qasgiq was originally an intergenerational space providing for the physical, intellectual and spiritual needs of the people. The qasgiq today references both historical place and set of persisting cultural protocols, practices, and organizational strategies that can be mobilized for culturally grounded intervention implementation in rural Yup'ik communities. In the Qungasvik approach, the Qasgiq Model (QM) guides the functioning of all intervention activities. QM affords a tool for Yup'ik communities to provide protective experiences through culturally-grounded activities that interact at multiple levels to 1) provide individual youth with important skills to build reasons for life and sobriety, 2) strengthen families and intergenerational connections, and 3) move communities collectively towards interdependence and well-being.

Yup'ik IK as strengths based and relational.—The Qungasvik prevention approach involves the delivery of culturally based protective factors through activities conducted by Elders with other knowledgeable community members. The approach is flexible and adaptive; each community participating in the Qungasvik Projects selects and develops their own activities based on the specifics of their local environment, language and survival adaptations. A protective cultural experience explicitly links a cultural activity to underlying protective factors described through previous research with Yup'ik communities to build strengths that foster reasons for life and protection against alcohol misuse (Allen, Mohatt, Beehler, & Rowe, 2014). This two-decade long program of research has identified culturally based protective factors within Yup'ik culture. For example, one of the protective factors that is particularly important, ellangneq (eshl-law-ng'-nek literally, "to wake up"), describes the process of becoming aware of oneself as a human being in connection with others, the animal world, the land, and a spiritual world.

Creating protective cultural experiences for Yup'ik youth.—The Qungasvik research documents how Yup'ik community members successfully create protective cultural experiences that are grounded in cultural knowledge that contribute to protection from alcohol misuse and suicide. In one example, as part of the QM process, a Yup'ik community selected a seal hunt as a cultural activity that would provide young people a specific set of protective experiences. Community Elders instructed the activity leaders to focus particularly on boys who had limited access to the resources necessary to go hunting, including those boys with few male role models in their families. The QM approach identified exposure to *role models* as one key protective factor experience as outcome from in this activity,

During the activity, community members made the direct connection to alcohol prevention when one of the boys caught his first seal. As the seal was brought to land by the group, one of the adult hunters recalled a teaching from his father to always give the seal a drink of

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water after it willingly gave up life for the people (in Yup'ik beliefs the hunted determines if the hunt is ultimately successful); the drink is to show respect and ensure the seal safe journey home, to return again in spirit. This experience in ellangneq opened for these boys new appreciations and new connections with Elders, past generations, the animal world, and the Yup'ik spirit world. After a number of boys had provided sips of water to the seal, the adult leader stopped the rest with a new instruction: do not give the seal too much to drink, or he will sink, and then he cannot return again to help the people. The instructor then taught how this is also important to remember when they are in the community; drinking too much of anything, including the powerful spirit of alcohol, can cause us to sink to depths from which we might never return. This protective experience of being in the presence and forming connections with strong role models, and of ellangneq are key to this particular Qungasvik activity's capacity to develop reasons for life as protection against youth suicide and reflective processes about the consequences of alcohol misuse.

Narrative-[em]Bodied Transformation (NeT): Strengthening Language, Dance, and Talking Story

Health interventions that include narrative transformation can serve to decolonize internalized and embodied narratives of victimization into narratives of hope and well-being. Indigenous communities have utilized narrative transformation for centuries through stories, art, song, ceremonies, and dance. Nelson (2008) noted a common adage in the Pacific Northwest is "stories make the world." Stories include creation/origin stories, ceremonial stories–reserved for specific sacred rites, humorous and lessons-to-be-learned stories–trickster stories, legends, poems, songs, chants, and dances. In modern times, these comprise as well digital stories, websites, and other media. Nelson (2008, p. 5) states that stories "are possessed with such power that they have survived for generations despite attempts at repression and assimilation." The arts, music, and stories are important vehicles to transmit OI and ways of being in the world. Many Native communities are revitalizing their songs, dances, and stories to not only embrace their ancestors' vision and teachings, but going further, to decolonize their minds and their bodies, and to transcend their histories of colonization and the internalization of unchecked embodied colonizing patterns of thought, that despite incredible resilience, may persist.

[Em]Bodied Narratives.

Recently, the body has emerged as a key focus in the social and behavioral sciences and can serve as a site for relational restoration. In particular, researchers have begun to examine the impact of inequities and intergenerational traumatic stress on physical health and how embodiment of these processes is multifaceted and influenced by social, cultural, economic, and biological processes; and this interconnectedness has gained acceptance in health interventions (Walters et al., 2011). Getting re-connected to the body and the stories that bodies tell is an opportunity to restore relationships not only to the body, but to the histories the body expresses, to the mind and spirit that is integrally connected. Native scholars and scientists have begun to examine how Indigenous dance can be a site for this relational restoration and promotion for health and well-being. Nelson (2008) notes that by engaging with traditional forms of music, dance and song, we begin to decolonize our minds and

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bodies simultaneously. For example, hula, the traditional Indigenous dance form of Kānaka Maoli not only connects the dancers to their bodies, but also directly connects them to their ancestors. This ancestral thread is activated within their mind, body and spirit through the ancient chants, rhythms, and stories being expressed. These ancestral relational processes are aptly captured by Koholokula and colleagues (2007):

> They have left us their ʻike (knowledge) through moʼolelo (history), oli (chants), and mele (songs) and our ʻōlelo makuahine (native language), and they have given us their mana through our moʼokū ʻauhau. For many of us Kānaka Maoli, we believe that it is from our kūpuna that the answer to our survival resides. We must nānā i ke kumu-look to the source for guidance. (p. 293)

Native scholars argue that IK, OI, and relational worldviews are often embedded in the stories, songs, dances, and other cultural practices, and utilizing these art-based experiences are increasingly finding their place in Indigenous health research scholarship.

NeT Exemplar: KaHOLO Project – Renewed Health Through Hula

The community-academic partnership of the KāHOLO Project examines the effects of hula, the traditional Indigenous dance of Hawaiʻi, on hypertension management and cardiovascular disease (CVD) prevention in adult Native Hawaiians which centers on relational restoration and OI. The ICBPR partnership includes *kumu hula* (hula masters/teachers and guardians of the tradition), leaders from five community-based organizations serving Native Hawaiians, and investigators from the University of Hawaiʻi and Washington State University. The hula-based CVD intervention is called *Ola Hou i ka Hula* (translated as “renewed health through hula” and referred from here on as Ola Hou). The designing of Ola Hou as a culturally-centered, community-driven intervention was motivated by kumu hula and their haumāna (students) contemporary IK insights derived through observations of hula training commonly influencing the wellbeing of dancers of all ages in the community. Moreover, the OI conveyed through ancient epic tales from time immemorial, such as Hiʻiakaikapoliopele and Keaomelemele, which tell of the restorative powers of hula.

The development of Ola Hou was undertaken with participation of the kumu hula community and other Native Hawaiian stakeholders. Thus, naming the hula intervention in the Native tongue of Kānaka Maoli recognizes the [em]bodied relational power of the dance and the intervention to renew vitality and wellbeing and also outlines the key boundaries and cultural responsibilities for the dancers, the research team and the community. Contemporarily, hula remains a powerful force for expressing the ancestral knowledges while also promoting relational connectedness, well-being, and cultural grounding. The cultural practice of hula is inextricably linked to the words of the accompanying chants and songs that traditionally convey the stories, teachings, history, and deep place-based IK which, in turn, provides nurturing relational restoration and OI to the dancers and their audiences. The traditional and empirical IK was embedded into the Ola Hou research endeavor to ensure the cultural appropriateness of hula as a health intervention to address CVD, and also, to ensure its cultural and spiritual integrity when applied as a medical intervention. During the community meetings, the Kumu Hula spoke to the spiritual (i.e., connection to nature and life-giving forces), physical (i.e., conditioning and controlled

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breathing and bodily movements), and social (i.e., familial-like relationships and being in harmony with others) benefits of learning and practicing hula. The Kumu Hula unanimously sanctioned the use of hula as a health promotion strategy to address chronic diseases, with admonition of the importance of maintaining hula's traditional practices and protocols.

Ola Hou was evaluated in a pilot randomized clinical trial to test its efficacy in reducing systolic blood pressure in Native Hawaiians and Pacific Islanders with hypertension. It was found not only to reduce SBP by 10 mmHg more than in a waitlist control but also to improve social functioning and perceptions of ethnic discrimination (Kaholokula et al., 2015). The last two findings illustrate how a culturally centered intervention can improve quality of life through social and cultural benefits. These findings also confirmed what the Kumu Hula community and Native Hawaiian patients were indicating in the aforementioned engagement activities.

Developing Indigenist Community-Based Participatory Research (ICBR)

> "Our research work must promote expert Indians instead of Indian experts."
>
> --Beverly Pigman (June 27, 2006).

Research is not just a "civilized" quest for knowledge; rather, it involves particular sets of activities that "reproduce social relations of power" (Tuhiwai-Smith, 2005). In response, Indigenist community-based participatory research (ICBPR) has emerged as a potent research approach that incorporates principles of co-learning, co-commitment to the well-being of the community, and integration of community theories, protocols, and stakeholders throughout the research enterprise (Walters & Stately et al., 2009). ICBPR incorporates an approach to research centered in Indigenous community values and epistemologies, including recognition of tribal sovereignty and community rights to self-determination (Wallerstein, Duran, Oetzel, et al., 2018). ICBPR focuses on nurturing mutual respect for cultural protocols and practices in building healthful research partnerships (e.g., development of research protocol codes) with the inclusion of Native scholars, community and cultural leaders, Elders, knowledge keepers, youth (when appropriate), and other important stakeholders throughout all phases of research (Walters et al., 2009). Moreover, linguistic competence is another hallmark of ICBPR, with incorporation of Indigenous languages, and the worldviews inherent within them, in the instruments, the interventions, and the dissemination materials in culturally credible and legible ways. Walters and colleagues (2009) provide eight "R" principles as a starting point for engaging in decolonizing and indigenizing CBPR, referring to this as ICBR: reflection, respect, relevance, resilience, reciprocity, responsibility, re-traditionalization, and revolution.

ICBR Exemplar 1: Residential Wood Smoke Intervention

There is a critical need to develop community-based interventions aimed at reduction of environmental contaminant exposures relevant to Native communities. Indoor Air Quality (IAQ) exposures can be impacted by residential wood heating, which is the often the most economic and culturally preferred form of home heating for many rural Native communities. However, such biomass smoke exposure is associated with respiratory disease in susceptible populations, (i.e., young and elder Native populations). To date, very few environmental

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science interventions have been conducted in collaboration with Indigenous communities. Researchers in Montana are creating multilevel interventions with both Indigenous and non-Indigenous homes that rely upon wood stoves for heating. EldersAIR, following KidsAIR, is aimed at reducing indoor air pollution in wood-stove heated homes with Elders residing within the home. The mixed methods study is an RCT with three conditions: air filtration, education to promote best-burn practices, and placebo filtration. The project combined western methods to measure IAQ (ultra-fine particulate matter, temperature, humidity, and cotinine) and health status of participants. The EldersAIR project also included community level intervention through creation of community wood yards to increase the availability of safer sources of fuel to burn (dry, seasoned, and stored wood). This involved collaboration with participating Native communities to invest in the local infrastructure of the tribal health, environmental, housing, and forestry departments.

Cultural adaptation.—Much of the cultural adaptation of the project focused on the development and cultural adaptation of the educational materials and methods using Traditional Ecological Knowledge (TEK; Pierrotti & Wildcat, 2000), as a guide to form the educational interventions and methods for data collection. The qualitative components of this work included conducting focus groups with Indigenous community stakeholders (including Elders, health providers, housing representatives, environmental departments, and cultural leaders) to determine cultural acceptability and credibility of all materials and methods. In addition to informing and developing these educational tools, the overall study approach was informed by Indigenous stakeholders reviewing the best burn practices which emanated from focus groups with individuals working in public health, the EPA, and wood stove retailers. Tribally based advisory board members also reviewed data collection methods (including air quality monitoring tools and methods), and the development of three short culturally adapted best-burn videos that included local Indigenous narrators, Indigenous language, and historical cultural stories of the role of fire and significance of smoke for ceremonial practices.

ICBR and OI integration.—The participatory research produced culturally relevant and meaningful curricula that incorporated OI and tribal teachings relative to fire and ancestral responsibilities. Specifically, a culturally-centered TEK narrative theme of the significance of fire emerged as did the stories relevant to how tribal members have historically served as stewards of fire. As an example, in one of the tribal communities a cultural leader shared the story of how fire came to the tribe in their oral histories of creation. The symbol of the fire was the abalone shell and the story of its creation for the tribe. As a result, the research team and tribes worked together to adapt the video to include the stories he shared and incorporated abalone shells into holders for the personal air quality monitors (small monitors that can be worn to measure exposure to particulate matter). The tribal advisory board was provided screenings of the videos for review. These videos as well as the tools described in the videos to promote best burn practices will be provided to the community at the conclusion of the study

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ICBR Exemplar 2: Intertribal Talking Circle for the Prevention of Substance Abuse

Substance abuse among American Indians (AI) is a critical health disparity and accounts for many life threatening and deadly problems such as auto accidents, chronic liver disease, cirrhosis, homicide and suicide. The high rate of substance abuse among AI adolescents is believed to be associated with a variety of environmental and historical factors, including poverty, historical trauma, bi-cultural stress, and changing tribal and family roles (Patchell, Robbins, et al., 2012). These factors and others create a situation where a community-based intervention comes into focus as a particularly relevant approach for addressing substance abuse for AI adolescents.

Adapting a Native-Specific Intervention across tribes.—The *Intertribal Talking Circle (ITC)* intervention involved adapting, tailoring, implementing, and evaluating an existing culturally grounded intervention (Keetoowah-Cherokee Talking Circle – KCTC) for AI youth in three tribes: Choctaw in Oklahoma, Lumbee in North Carolina, and Ojibwe/Chippewa in Minnesota. While most EBI adaptation studies focus on adapting a Western-based intervention for Indian country, this study is unique in that it involved adapting a Cherokee-specific intervention for three culturally diverse Native communities. Specifically, an intervention that was developed from the ground up for Cherokee youth was theoretically adapted and tailored to be culturally respectful and relevant across tribal communities.

Culturally tailoring interventions.—Given active engagement with the community in the development, community partnership committees (CPC) were formed in the first year of the project in each site to identify the needs, priorities, and resources of each community regarding adolescent substance abuse. The project also utilized the *Circular Model of Cultural Tailoring* (CMCT) as a framework for cultural tailoring in the 3 communities (Patchell et al., 2012). CMCT acknowledges that many tribes have a circular worldview with constant flow and movement, so tailoring happens not only in the planning, but in the implementation of the intervention. Through focusing on a cultural activity (i.e., talking circle) with a common function of providing a space for group support, this health intervention increases the likelihood of generalizability to other nations (Rowan, 2014) while beginning at the ground level. The process included interviewing key stakeholders (i.e., teachers, parents, community leaders, and children) in the community regarding needs around substance use. It further included identifying specific cultural use of talking circles and their utility within the specific culture and then modifying and implementing the intervention in diverse tribal communities,

ICBR Exemplar 3: Yappalli-Choctaw Language and Research Protocols

The Yappalli team is committed to conducting indigenist ICBPR processes throughout all phases of the research process and are done in partnership and under the leadership of Choctaw practitioners, community leaders, and researchers.

ICBPR protocols and the power of language.—The Yappalli team collaborates in accordance with 7 Choctaw principles in the Choctaw language that were co-developed with a Choctaw elder and team members. For example, some of the research conduct principles that all parties hold themselves and each other to include: (1) aiokpanchi (respect/coming

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together); (2) holitobli (honor); and (3) ha^{n}klo (deep listening). The importance of language in decolonizing and indigenizing our approach to ICBPR cannot be overemphasized. For example, Yappalli went beyond the typical translation approach-first asking the Choctaw language department to translate an English concept of "listen" into Choctaw-"ha^{n}klo." Then, the team back translated "ha^{n}klo" by asking first language speaker and elder Dorothy Meshaya what "ha^{n}klo" means; and she stated: "Ha^{n}klo means…What is said may be very important to your life…Listen, Ha^{n}klo is to remember that the medicine given to us is still out there. We have just forgotten to listen for it...It is about sharing from the spirit and taking the time to honor another human being." An indigenizing linguistic approach was much deeper than simply translating English words into Choctaw, it involved learning relational aspects of Choctaw words/concepts to wellbeing and healthful behaviors. By incorporating our languages, we are not only "re-indigenizing ourselves," but also embracing what Nelson (2008) terms "intellectual sovereignty."

Conclusion

Indigenous scholars have begun to explore how the epistemological underpinnings and learning processes associated with IK (Barnhardt & Kwagley, 2005) are applicable to health intervention research. Five research projects illustrate the utility of indigenist research approaches including contextualizing the research within IK. Furthermore, these projects illustrate the feasibility and process of situating Indigenous health interventions within a research framework guided by original instructions, relational restoration and narrative transformation strategies. Though indigenist research processes have been seen as viable and productive in these examples, little research exists on defining successful health interventions and how these may be generalizable to other tribal nations. Thus, future Indigenous health research could conceptually and methodologically incorporate three broad interrelated research themes: (1) documentation/articulation of IK systems across tribal nations to identify meta-measurement categories and constructs; (2) delineation of the underlying epistemological structures and learning/cognitive processes associated with Indigenous 'ways of knowing;' and (3) identification of ways in which IK and western knowledges are integrated into health intervention approaches. Through giving voice to the tribal communities, tribes can actively partner with researchers to support *thrivance*. Just as Tewa Scholar, Greg Cajete (2014) calls on Indigenous scholars to "ignite the sparkle" of their creative energies in dreaming alternative possibilities, so too does Maori scholar, Linda Tuhiwai Smith (1999; p.319) call for "a way of reimagining the world …drawing upon a different epistemology and unleashing the creative spirit. This condition is what enables an alternative vision; it fuels the dreams of alternative possibilities." These creative alternative possibilities not only can improve science and wellbeing by and for Native communities, but simultaneously improve the science and wellbeing of *all* communities. Indigenous ways of knowing not only imagine a more healthful world for Native people, but for all of humanity. After all, we are all related.

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E iho ana ‘o luna, e pii ana ‘o lalo, e hui ana nā moku, e kū ana ka paia”-

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