

Introduction to Ecological Description of a Community Intervention: Building Prevention Through Collaborative Field Based Research

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Abstract This special issue of the *American Journal of Community Psychology* is the result of a 18-year partnership with Alaska Native communities using collaborative field based research methods. Its goal is to provide a case study fulfilling the spirit of ecological inquiry, offering a detailed and nuanced description of a community intervention. The articles describe the nature of our work, including some of our successes, as well as challenges, dilemmas, and even disappointments we experienced along the way. Our primary aim was to develop and assess the feasibility of a complex, multi-level intervention to increase protective factors hypothesized to reduce suicide and alcohol abuse among rural Yup'ik Alaska Native youth ages 12–18. The articles that follow include descriptions of the cultural context, relevant literature and project history, our methods of community engagement in measurement development strategies, an empirical test of the prevention model that guided the intervention, the development and implementation of the intervention, a feasibility and impact assessment, and an evaluation of community engagement. A final article summarizes what is generalizable from the work in field based intervention research with rural and culturally distinct populations, and future prospects for decolonizing community

intervention research methods. These papers raise important issues, including (1) need for deep, contextual ecological descriptions, (2) reconceptualization of time in the research relationship, (3) distinctions between populations and communities, and (4) the conflict between values of communities and intervention science.

Keywords American Indian and Alaska Native · Community based participatory research · Community intervention · Prevention · Suicide · Substance abuse · Youth

Introduction

This special issue describes one interlude in an 18-year collaboration with rural, remote Yup'ik Alaska Native (AN) communities. The effort began when a group of AN community leaders, motivated through disenchantment with the then current psychosocial and biomedical research portrayals of their communities, approached a group of university researchers to do a study of AN 'sobriety.' From the outset, their local indigenous¹ definition of sobriety extended far beyond recovery, or even abstinence from alcohol. This understanding included, to describe a partial list, qualities of a person's relationship with alcohol if not engaged in problem drinking, qualities of a person's life following quitting problem use, and numerous concepts aligned with adaptation, health, and well-being.

In the course of clarifying and illuminating an indigenous theory of sobriety and protective factors from alcohol abuse

This special issue is published posthumously and dedicated to Jerry's memory.

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¹ Though out the special issue, we will use lower case 'indigenous' in more general universal references to local theory, practices, and understandings of cultures. Upper case 'Indigenous' refers specifically to the peoples aboriginal to Alaska, North America, and globally, and to their local theory, practices, and understandings.

across the lifespan, the leadership charted new territory in participatory inquiry that, during our early work together in 1995, preceded the advent of the term CBPR (community based participatory research). This community leadership group essentially turned the alcohol research of the day with American Indian and Alaska Native (AI/AN) people on its head, dictating that the research question would instead focus on those AN people who did not have drinking problems in order to provide an understanding of what protected them from alcohol (Mohatt et al. 2004a). Equipped with this definition and a research question emphasizing factors contributing to sobriety, the group went on to chart a different course in the conduct of research with Native people than had been done in the past in Alaska. In doing so, it defined a new relationship between researcher and community. Our goal for this special issue is description through the lens of a deep, contextual, ecological inquiry (Espino and Trickett 2008; Trickett and Espino 2004) of more recent developments in our evolving collaboration. During this time, we were focused on the design and implementation of a community intervention developed within a CBPR perspective.

During our collaboration's seminal origins, the community and university research partnership focused on qualitative description and elaboration of an indigenous theory of protection from alcohol. A model derived from this heuristic theory was then tested with Yup'ik adults retrospectively. Following this work, the research group expanded its focus, seeking to develop an emerging understanding of protection from alcohol and from suicide risk—a second topic of considerable community concern. Our group became increasingly interested in protective factors that fostered the positive outcomes of sobriety and reasons for life as a co-occurring process, and we began testing this broader protective model with youth. This work then assisted our group in devising a cultural model of intervention based in indigenous theory, and built upon cultural practices and their underlying cultural values. The group tested the feasibility and impact of an intervention directed in its development and implementation by community partners, using the conventions and methodologies defining rigor from the perspective of intervention science.

In this special issue, we hope to convey both the strengths and the cultural contradictions of this exploration of an indigenous theory using current methodologies of intervention science. This raises important and obvious questions about a continued and colonial hegemony of Western² science, and in particular, its methodologies,

² We use the term “Western” in this special issue to denote the cultural tradition influencing psychology and psychological theory with origins in Ancient Greece, which later evolved and was transported through Europe to the United States.

worldviews, assumptions, and values, in culturally situated community intervention research.

What we term cultural interventions, in contrast to culturally based, culturally responsive, or culturally adapted interventions, derive directly from the specific conditions of the community. With culturally based interventions (Chino and DeBruyn 2006), the intervention may *use culture* to treat or prevent problems, promote health, reinforce resilience, or foster growth in protective factors. In our use of the term cultural intervention, culture *is the intervention*. In addition to an emphasis on enactment of local community cultural activities, the intervention is guided by an indigenous theory. The theory describes what constitutes healthy development in youth, how leadership and planning in the community is organized, and the nature of the change process. Indigenous understandings serve as point of departure; the intervention is rooted in an indigenous theory directing intervention activities, process, and basic understandings of what the intervention is doing. All of the above approaches to intervention include cultural activities or other cultural content. However, culturally adapted intervention in the existing literature is generally described and understood through Western theoretical systems. In this way, the cultural activities remain embedded in the tenets of Western theory, as the proposed mechanisms for action and change processes guiding intervention are explained through them.³

We propose that deep ecological inquiry provides an avenue to devise and understand intervention drawn instead from local indigenous perspectives. In this spirit, in the special issue we present a detailed, contextual description of our collaborative participatory intervention research, using a conceptual framework advanced through the work of Espino and Trickett (2008). We hope to provide a nuanced presentation of community intervention work typically missing in most research reports, one that presents the work more as it is actually practiced. We anticipate that it can serve as model of a more culturally resonant procedure for intervention research.

Our expectation is to describe a way of working that can improve the value of intervention to communities, and in the process redefine the relationship of researcher to community. We begin this presentation with our process of entry to the community, which we define to include the negotiation of a decade of discovery-based research aimed at knowledge generation. The time spend collaboratively

³ We acknowledge inherent problems with use of the term cultural intervention; every intervention is cultural, and the use of this term runs risk of reinforcing dominant hegemonies over multicultural understandings as point of reference. However, through its use, we seek to distinguish community interventions based in an indigenous cultural understanding that is grounded in the local conditions of each community within which the intervention is implemented.

generating this knowledge base helped the researchers understand how people locally define and understand their own context, and provides an important step in understanding the nature of our relationships as outside researchers, before we approach communities to work on an intervention. We proceed to describe ways in which culture mattered in every facet of intervention theory, design, process, and analysis. Next, we provide an ecological analysis descriptive of our indigenous theoretical framework, the measurement development process and model, the intervention process, and our feasibility study.

Together, the articles clarify and illuminate the promise, challenges, and pitfalls of work within a CBPR perspective (Minkler and Wallerstein 2008), and its important variant, a tribal participatory research (TPR) perspective (Fisher and Ball 2003). These articles describe both our successes and failures as researchers in understanding and meeting the needs of communities. In doing this, we depict elements of how the work responded to community context, as well as the communities' role in defining, shaping, and doing the work, all in manner and a level of detail not typically allowed through the conventions of intervention reporting practices. Through this description, our goal is to suggest new ways of reporting community based intervention research.

Four broad aims guide this special issue: (1) deep contextual ecological description of the process of a community based cultural intervention; (2) a reconceptualization of intervention research time frames beyond the typical 3- to 5-year grant funding cycle, to an enhanced understanding of how change in complex systems occurs over a time span of decades, not years; (3) distinguishing populations from communities, and the important ways the needs and priorities associated with a particular community can present important cross-community variations within populations and cultural groups; and (4) a discourse on values as we negotiated transecting issues across Western science and Indigenous community values. These issues will be articulated in greater detail throughout the following articles, and then summarized in a concluding paper. Taken as a whole, this special issue raises a number of critical issues for all community researchers working within CBPR perspectives. Our hope is to provide a step along the way of a long historical path in the progression to decolonizing methodologies (Smith 1999).

An additional intent is to locate this work within a culturally distinct group of 20,000 people within a far broader context. The issues of trust, molding methods to communities, time, power, and comparable histories with respect to oppression hold true for work with ethnocultural communities, and in even broader research areas such as health disparities and human rights. We draw upon the anthropologic ideal that the more unique the group, the

more the outsider can learn about their own cultural assumptions. In this way, the work can shed light on important issues typically not taken into account in intervention research, such as the amount of time we spend joining with communities, the differences between communities versus populations, and the constraints of funding systems that compromise our efforts and reinforce ideologies rather than science. We take up these issues in the final article in this series.

Cultural Context: The Yup'ik Communities of Southwestern Alaska

The cultural context of our community intervention work is situated in Yup'ik Alaska. Yup'ik communities and the larger AN community are geocultural regions of both cultural continuity and change. This ecological context is shared with other Indigenous groups in the US and internationally (Fienup-Riordan 2000). AN peoples, along with many other indigenous groups, including American Indians, are experiencing extraordinary rapid cultural and economic change (Beauvais 1992), of an imposed and involuntary nature. During the past 50 years, AN communities witnessed significant population growth along with shifts in economic, political, and social structures. A mixed economy has emerged, with rural AN people participating in the cash economy as government workers, store clerks, commercial fishermen, and public assistance recipients, while also supporting themselves and their extended families through subsistence and harvesting strategies (Hensel 1996). The subsistence way of life is now interdependent with the cash economy for purchase of fuel, rifles, snowmobiles, and other supplies.

Health and illness also dramatically changed for AN peoples (Fortune 1989). The AN population was devastated by influenza and tuberculosis epidemics in the early 1900s, while the past 50 years witnessed a significant shift to behavioral health concerns. In particular, alcohol abuse and suicide emerged as major health problems in many AN communities (Fortune 1989).

The two communities that collaborated in the creation of the interventions described in this special issue are rural, remote communities along the Bering Sea in Southwest Alaska, in the Yukon-Kuskokwim River Delta. This region is home to the largest AN cultural linguistic group in the state, the Yup'ik. The total Yup'ik population in Alaska numbers greater than 20,000. The Yukon-Kuskokwim River Delta includes two census areas. The Wade Hampton Census area has a total area of 19,669 square miles and is inhabited by 7,459 people, while the Bethel Census area is home to 17,013 (Alaska Department of Labor and Workforce Development 2013). The 47 Yup'ik communities in

the region range from the regional hub of Bethel (pop. 5,440) to communities of <100 people. None of these communities are connected to the road system; access is by plane, boat, or snow machine. The AN population in Bethel varies between 2,000 and 3,000, including a number of individuals and families that travel back and forth between living in Bethel as the regional hub community and living in outlying smaller communities. The largest of these outlying communities is approximately 1,500 in population, many are considerably smaller, and the ethnic composition of most is approximately 95 % Yup'ik.

The Indigenous inhabitants of the Yukon-Kuskokwim region remain the most culturally and linguistically intact group in Alaska. A large number of children speak Yup'ik in western coastal communities, learn Yup'ik as their first language, and participate in the subsistence activities of hunting, fishing, and gathering. Subsistence activities remain a primary source of food and are crucial for survival for many families. These activities are also crucial economically, as transportation costs to these roadless areas means milk, if available, and fuel for home heating can cost \$10 a gallon, all in a region with the eighth lowest per capita income in the US (United States Census 2010). Beyond a source of food and economic viability, subsistence activities affirm cultural rituals, modes of expressing values, and a Yup'ik symbolic system.

Members of our university research team have worked in the Yukon-Kuskokwim Delta for 25 years. The team has conducted community based participatory research on health problems for the past decade (Boyer et al. 2005; Hutchison et al. 2005; Mohatt et al. 2004a, 2007a, b), and the *People Awakening* project research on sobriety (Allen et al. 2006; Mohatt et al. 2004a, b, 2007a, b), conducted over the past 18 years, also concentrated its efforts in this region.

A New Approach in the Community Intervention Literature

Kelly (1966, 1968, 1986, 2006) emphasized that a key implication of ecological theory involves attention to the research relationship as a central concern in the practice of community intervention, and more radically, as a crucial element in the science of understanding community intervention and its outcomes. Additionally, Espino and Trickett (2008) provide a critical review and examination from the perspective of ecological theory on how the field of community intervention science reports its work. They identify the following significant gaps and omissions in the conventions of this literature:

- (1) Limited attention to the process of entry into the community as a relational process (Trimble and

Mohatt 2006; Trimble et al. 2010) as well as an ecological assessment process, through which increasing awareness of the community ecosystem is part of a more broad development of an eco-identity (Kelly 1971), defined through a commitment to and immersion in the relational context.

- (2) Focus on a single level of intervention and analysis, usually at the individual level, to the neglect of other ecological levels in reporting.
- (3) A 'notable silence' on responsiveness of the intervention to community context; this can include description on how the intervention responded to local community resident needs, was guided in its development by community members, and its feedback activities, including analysis and dissemination of intervention results.
- (4) Scant evidence of community involvement in joint conceptualization of the intervention, the nature of the data gathered, or how the intervention and the research process could be used for local community benefit, and community involvement in the process of interpretation and meaning making from the data.

In the following articles, we hope to provide an example of how a new approach to community intervention research reporting can address these gaps by more truly fulfilling the spirit (Espino and Trickett 2008) as well as goals of ecological inquiry. The story unfolds in the following manner.

Ayunerak et al. (2014) begin by providing a description of the cultural context of the project through the voice of the Yup'ik cultural experts who are members of both the research team and the community. In their own words, they provide in a culturally distinct style of explanation and diction, some of the history and worldview essential for an ecological understanding of this intervention work. A short history of the two communities in which the intervention unfolded is presented. The authors describe the Yup'ik view of place in the world, how their cultural traditions and rituals guide them in this world, their development as a people, and the traditional institutions and social organization, both formal and informal, that sustain them. In this description, an emphasis is placed on ways traditional rituals create community and serve as a basis for contemporary intervention. The article also provides a meditation on local understandings regarding the dilemmas of traditional cultural values and practices, at times in conflict with modern life and the influences imposed from outside the community. The authors describe how traditional Yup'ik parenting values and practices remain relevant to youth today as a crucial element sustaining culture, providing a future and identity. The authors conclude by emphasizing how what they describe about their culture and in particular, their cultural values, can be seen as operating in all

the prevention activities that comprise the core intervention.

In the next article, Allen et al. (2014a) provide a literature review and a history of the 18-year *People Awakening* project. To reserve space for the ecological description we seek to provide in the articles that go after this paper, this article serves as a literature review on alcohol and suicide with AN people for the entire special issue; each of the articles that follow draw upon and refer back to the discussion of the literature in this section. The review cites important research evidence substantiating suicide and alcohol as the two most significant sources of the disparity in mortality between AN people and the general population in the U.S., through description of the extant but limited epidemiological evidence base. The review also considers the existing though scant research base on evaluations of how to intervene effectively in small, remote, close-knit, extended kinship-based AI/AN communities. The second half of the paper describes the *People Awakening* research effort. It outlines the conceptual framework for CBPR used by the project, the twin challenges of establishing trust and confronting logistics of work in this extreme landscape, the three historical stages of the *People Awakening* project, and the guiding conceptual model of protective factors underlying the intervention. This conceptual model proposes a multilevel understanding of protection, organized around local Yup'ik cultural concepts, and an indigenous theory of development and protection.

Measurement development is of critical importance in defining the outcomes of an intervention. However, less attention is paid to the ways measurement issues and solutions to these issues can also define the very nature of the research questions asked, and the manner in which topics are studied. For these reasons, we assert that application of a CBPR perspective in measurement development is a crucial, though neglected dimension in the CBPR literature (Trimble 2010). Gonzalez and Trickett (2014) describe our efforts directed towards an engaged, collaborative measurement development approach to the creation of culturally appropriate outcome measures. The article involves two interrelated stories. One story describes the process and content issues involved in collaborative adaptation and development of culturally relevant measures. The second story involves how the cultures of communities, though sharing the same general ethnocultural heritage, can differ in their needs, priorities, and concerns encompassing the local meanings of outcomes and assessments. We conclude by describing examples of how measurement development can often serve as bell weather and flashpoint whenever the values of communities and the values of intervention science diverge.

As the next step in this long-term program of translational research, Allen et al. (2014b) describe an empirical

test of the protective factors model on which the intervention is based. The measures described in Gonzalez and Trickett (2014) were used to test this culturally grounded model. A path analysis provides an empirical test of the prevention model, including an understanding of the workings of proximal and mediating variables as important mechanisms of change. The model represented an extension of theory originally developed out of previous qualitative work (Mohatt et al. 2004a, b) and the intent of this extension was to describe twin outcomes of sobriety and reasons for life conceptualized as a co-occurring process among Yup'ik youth. Among numerous important issues that emerged, the article further enhances our discussion on ways measurement and methodology can define the questions we ask and the topics we study. By describing some of what was gained, and lost in the transition from a heuristic model based in rich, qualitative data embedded in deep cultural structures, to a quantitative model based in self-report data provided by youth ages 12–17, it provides a case study on the qualitative to quantitative interplay. An important transition that accompanied the move to quantitative work included increasing specificity regarding description of the workings of various protective factors and identification of their relative importance. However, significant limitations also accompanied this transition in terms of what was lost during this interchange regarding the detailed, nuanced descriptions of protection the qualitative work afforded across a broad array of experience and contexts. The article also notes how its results represent an aggregation of the responses to different roles across different communities. While suggestive of a general model, it can also obscure important distinctions between communities described throughout the special issue. The study highlights some of the tensions inherent in the landscapes community and cultural researchers navigate regarding the role of methods in determining what is researched, knowledge formulation, and the construction of meaning.

In a careful and detailed way, Rasmus et al. (2014) then describe the development process of the intervention guided by the *People Awakening* protective factors model and our community collaborators' direction. The article outlines some of the prehistory of the local work in these two communities, the process of entry and the establishment of a common agenda in each community, efforts at relationship building, the culturally patterned process of implementation including the collaborative hiring of staff, and then, most centrally, the organic development of organizational structures for the work. How all the facets played out in the creation of prevention activities is described using one case example of a prevention activity for each of the three levels of intervention within the program (community, family, individual), in order to provide concrete substance in this account of the program. The challenge

posed by a need for an intervention manual of replicable procedures led to the solution of a flexible, adaptable intervention toolbox. This solution allows for each community's selection and local development of intervention activities; the intervention toolbox can be contextualized or 'individualized' to each new community in order to create its own variant of a multi-level intervention. This allows creation of an intervention that is composed of cultural activities localized to fit each of the diverse ecological settings of communities within the region, while still imparting the same set of protective factors. Finally, the iterative process of developing a series of activities, with feedback loops providing points of entrance for youth and community involvement and direction, is described.

Mohatt et al. (2014) describe intervention feasibility studies from two communities. This article, which represents what would typically appear in the conventional community intervention literature, also summarizes some of the challenges inherent to intervention research with rural, remotely located populations where logistical challenges to carrying out rigid design parameters and small sample size become concerns for generating robust research designs. The article describes several methodological solutions to important issues emerging in real world community research with small sample size data. Some of these issues include the primacy of measurement precision, the distinction between the measures of change required to study outcomes from measures that more exhaustively map constructs, and the issue of differences in pre-existing levels of protection across individuals. We also describe the need to think about time flexibly. For example, the effects of intervention more clearly emerged by disentangling time since intervention onset from the dose response relationships as they emerged within an intervention where attendance and time of enrollment, in keeping with local cultural values, was by choice and varied. Even more crucially, different enrollment patterns that naturalistically formed distinct cohort groups as this intervention unfolded also impacted outcome, and these effects could be included in the model and considered. These and other factors were important to our measurement approaches and statistical modeling. Typically, we think of complexity in statistical modeling as relevant and possible only in research limited to large samples. Here we highlight the fundamental importance of contemporary modeling techniques in data analysis with small samples.

Rasmus (2014) then describes an evaluation focused on the types of outcomes increasingly gaining prominence in the CBPR literature. Their evaluation focuses on community members' perspectives, both as participants in the intervention and as co-researchers. This is an important distinction from the outcomes typically measured and reported in the intervention literature, as it involves understanding the community engagement process as an important component

of outcome. Such understanding is crucial to a more holistic evaluation of CBPR intervention work for several reasons. Foremost, these outcomes involve consideration of the relational process of the research. Equally important, their evaluation allows for a more multilevel assessment of change within the focus or target for the intervention, and in addition, exploration for possible unintended consequences to intervention, as well as for possible ripple effects of intervention. By ripple effects we mean outcomes, beneficial and iatrogenic, more distal to the intervention target. This area of evaluation includes descriptions of community perceptions of such important facets as the parameters of the research partnership, level of participation by community members, leadership structure and functioning, community ownership of the research, and the overall input of the project to the more general process of community development. The evaluation describes how ownership of the intervention arose from a translational and indigenizing process initiated by the community that was supported and enhanced through the implementation of CBPR. Rasmus explores ways that an indigenizing step in CBPR progresses us further along the pathway towards the goal of having the research process initiate locally from within the community of concern.

Trickett et al. (2014) end this special issue with a summary of what these papers have addressed, and what we have learned through this close attention to context and description. We draw some conclusions about the nature of collaborative research on multilevel intervention and the central role of local culture as an organizing principle. The authors close with a description of what is generalizable from field based intervention research with a rural, remotely located, culturally distinct population to other inquiry in the US, and more broadly to global health research, along with future prospects for decolonizing community intervention research methods.

Increasingly, community researchers are seeking case study descriptions of intervention providing rich ecological description. Such description needs to attend to entering into the community, responding to community concerns, and joining with a community by developing a local ecoidentity. These practices build local ownership by articulating a community role in defining, shaping and carrying out intervention, in interpreting research results, and then in disseminating the results and the approach to intervention to other communities. This special issue is intended to contribute to an emergent narrative for describing community intervention.

This special issue is not envisioned as a set of stand-alone papers. Each paper builds sequentially from what came previously, aiming for a more holistic presentation of the challenges, hopes, paradoxes, dilemmas, and spirit of community collaboration. This presentation considers community intervention work as inevitably complex, and

consisting of efforts towards understanding that must be contextually embedded. In addition, in tribal participatory work with Indigenous people, a duty emerges to advance decolonizing methods that can, as one end point, enhance and embrace local self-determination. This imperative has immense implications for work with other disenfranchised and health disparities groups in the U.S., and is more broadly generalizable to current global health initiatives.

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