

Modifying Photovoice for community-based participatory Indigenous research[☆]

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Abstract

Scientific research occurs within a set of socio-political conditions, and in Canada research involving Indigenous communities has a historical association with colonialism. Consequently, Indigenous peoples have been justifiably sceptical and reluctant to become the subjects of academic research. Community-Based Participatory Research (CBPR) is an attempt to develop culturally relevant research models that address issues of injustice, inequality, and exploitation. The work reported here evaluates the use of Photovoice, a CBPR method that uses participant-employed photography and dialogue to create social change, which was employed in a research partnership with a First Nation in Western Canada. Content analysis of semi-structured interviews ($n = 45$) evaluated participants' perspectives of the Photovoice process as part of a larger study on health and environment issues. The analysis revealed that Photovoice effectively balanced power, created a sense of ownership, fostered trust, built capacity, and responded to cultural preferences. The authors discuss the necessity of modifying Photovoice, by building in an iterative process, as being key to the methodological success of the project.

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Introduction

In decades of research *on* Indigenous peoples, scientists from the academic world 'parachuted' into First Nations (Indigenous communities) across Canada, collected data (frequently without consent) and left, often neglecting to report research findings back to communities ([Brant Castellano, 2004](#); [Korsmo & Graham, 2002](#)). As a result, scepticism and resentment of academic researchers exists in many Indigenous communities ([Smith, 1999](#)). Further, there is expressed frustration with being 'researched to death' or research fatigue ([National Aboriginal Health Organization, 2005](#)). As a result, scholars have characterized much Indigenous

research not as a pure intellectual process, but one embedded with suspicion and anger on the part of the community under study (Smith, 1999). In an attempt to depart from and address ethical concerns stemming from this kind of traditional academic research, Community-Based Participatory Research (CBPR) has become widely adopted, resulting in research undertaken with Indigenous peoples in Canada (Association of Canadian Universities for Northern Studies, 1998; Canadian Institutes of Health Research, 2007; National Aboriginal Health Organization, 2005). CBPR is both a philosophy and a methodology that includes research participants as equal partners in problem definition, methodological development, data collection and analysis, and the communication of findings (Fisher & Ball, 2003). The work reported here evaluates the use of an emerging CBPR method, Photovoice, with a First Nation on the West Coast of Canada.

Background

Power, trust, and ownership in First Nations

The Indigenous population in Canada experiences social, political, economic, and environmental injustice and inequality (Brulle & Pellow, 2006). They also tend to be segregated, exploited, or persecuted by the dominant society (Battiste & Youngblood, 2000). However, the Indigenous experience is distinct from other groups such as immigrants or people living with disabilities for one very complex reason: colonization, i.e., an historically-political process of colonialism that is inherently embedded in Indigenous contexts (Pualani Louis, 2007).

As early as the 15th century, European colonial systems, along with European-introduced diseases including smallpox, tuberculosis, and influenza, quickly overwhelmed Indigenous communities in Canada (Waldram, Herring, & Young, 1995). The process of colonization systematically attacked Indigenous social, economic, political, cultural, educational, and health institutions through the imposition of residential schools, out-of-culture adoptions, removal and destruction of sacred objects and sites, introduction of alcohol into Indigenous communities and other externally imposed influences (Battiste & Youngblood, 2000). Generations of Indigenous peoples continue to feel the effects of this colonization process (Ashcroft, Griffiths, & Tiffin, 2000). The historical imbalance of power, deep-seated mistrust, racism, and lack of control between Indigenous and non-Indigenous peoples in Canada has also permeated the research process, fostering the need to

identify effective and culturally appropriate research tools (Minkler, 2004; Smith, 1999).

Community-based participatory research (CBPR)

CBPR is an umbrella concept that includes research conducted under many different designations, including action research, participatory research, participatory action research, and collaborative inquiry (Kauper-Brown & Seifer, 2006). Scholars sometimes even use these terms interchangeably because the concepts share underlying goals of social change (Minkler & Wallerstein, 2003). The roots of CBPR lie in the social and political movements of the 20th century. Kurt Lewin (1946) first introduced the concept in the 1940s as a way of confronting issues of social justice and challenging researcher 'objectivity' (Fals-Borda & Rahman, 1991). Paulo Freire (1970) built on Lewin's ideas with the concept of research and education for a critical consciousness, which emphasized community-based identification of problems and solutions (Tandon, 2002).

CBPR approaches differ from others in that they attempt to equitably involve community partners in research, draw on their knowledge and experience, share decision-making responsibilities, and build community capacity (Minkler & Wallerstein, 2003). CBPR employs a broad spectrum of techniques that typically involves some form of reflection, dialogue, and action (Kirby & McKenna, 1989). CBPR also aims to develop culturally relevant theories, which are typically determined by working closely with research participants to identify the most effective ways to answer particular research questions (Minkler & Wallerstein, 2003). While the goals of traditional research are to focus on relationships between and/or differences in phenomena or to focus on social structures and/or individual experiences (Wallerstein, 1999), an overarching set of goals prevails in CBPR: to equalize power differences, build trust, and create a sense of ownership in an effort to bring about social justice and change (Reason & Bradbury, 2001).

The goals of CBPR — power, trust, and ownership — are intrinsically linked to one another, therefore necessitating brief conceptual definitions to contextualize their usage regarding the empirical findings of this study. 'Balancing research power' commonly refers to researchers and their research partners/participants sharing control of the research process and outcomes (Fals-Borda & Rahman, 1991). Yet *how* to balance power is seldom adequately addressed in academic literature despite calls for participatory researchers to engage with the tensions of power differentials

(Wallerstein & Duran, 2006) and to recognize that internal community politics can reinforce and obscure power relationships (Malone, Yerger, McGruder, & Froelicher, 2006). For example, gender, age, and social position can affect how individuals act or do not act both in the community and in the research process (Malone et al., 2006). Power differentials may also influence participants' responses during interviews (Baxter & Eyles, 1997). Two further fundamental tensions concerning power are also worth noting here. First, there is an inherently unequal relationship between researchers and research participants. Second, although CBPR is collaborative, it has been developed as a Western research process largely undertaken with non-Western populations.

Recognizing and acknowledging power differentials while working towards establishing a power balance can positively influence the development of trust between parties. 'Fostering trust' is thus an overlapping and related process that begins with the sharing of power. Specifically, trust is established when researchers work in an open, honest, and transparent manner (Minkler, 2004). Trust is also built when researchers become involved in the community's activities, listen to and address community partners' needs, and reciprocate in some way. For example, there is a growing trend towards building capacity in the community through training and employing local people in research (Corbie-Smith, Moody-Ayers, & Thrasher, 2004). All of these actions are additional ways to build trust resulting in community ownership over the research process (Kauper-Brown & Seifer, 2006; National Aboriginal Health Organization, 2005).

Through shared control of the decision-making process all parties involved 'own' the research process. Ownership in Indigenous research occurs when Indigenous peoples have an active role in identifying research needs and undertaking relevant and meaningful research resulting in the generation of collective knowledge on community issues (Brant Castellano, 2004). For our purposes then 'sense of ownership' is not only community involvement in the research but also having control over decisions concerning the research that affects participants and their community as well as knowledge generation of community-identified environment and health priorities (National Aboriginal Health Organization, 2005).

Participant-employed photography

Photography in academic research is not a novel approach. It has been an accepted tool in fieldwork

practice since the 1920s (Gold, 2004). Collier (1967) was the first to describe the use of photos in research interviews (Loeffler, 2004). Since then several methods have been identified regarding how photography can be used in qualitative interviewing to make sense of daily life (e.g., Clark-Ibanez, 2004; Liben & Szechter, 2002; Taylor, 2002). While visual data is increasingly recognized as an effective method for shared interpretation in participatory research (Davidson, 2002), references to photography in academic literature remain sparse (Hurworth, 2003; Riley & Manias, 2003).

The process of photographs being taken by participants and used to elicit the participant-photographer's own narrative is typically referred to as participant-employed photography (PEP) (Hurworth, 2003). PEP allows the participant, rather than the researcher, to determine both the subject and meaning of the photograph, which is important to the power-sharing aspect of CBPR (Carlsson, 2001). Using PEP leads to a richer understanding of a particular issue under study — more so than could be collected using standard interviewing techniques alone (Gold, 2004) because it compels participants to reflect on and discern their own perspectives (Carlsson, 2001). Additionally, the participant's explanation of photographs can also convey significant socio-cultural perspectives (Riley & Manias, 2003).

Photovoice

Caroline Wang introduced the term 'Photovoice' (Hurworth, 2003) to identify a process that has previously been referred to as *auto-driving* (Heisley & Levy, 1991), *reflexive photography* (Douglas, 1998), and *photo novella* (LeClerc, Wells, Craig, & Wilson, 2002; Wang & Burris, 1994; Wang, Burris, & Ping, 1996). As a form of PEP, Photovoice uses participants' photographs as a catalyst to engage participants (those typically with less power) and policy-makers (those typically with more power) in group dialogue for social change (Wang, 2005). In keeping with the aims of traditional CBPR, Wang (2005) identifies three goals for Photovoice (1) to assist individuals with recording and reflecting on select community issues; (2) to encourage group dialogue on these issues; and (3) to influence policy-makers.

Wang (2005) identifies three major theoretical underpinnings supporting Photovoice. The first, *documentary photography*, is based on the premise that providing a camera to people who might not normally have access to one will empower them to record and instigate change in their communities (Rose, 1997). The second is Paulo Freire's (1970) *theory of critical*

consciousness, which seeks to engage individuals in the questioning of their historical–social situation. The third *feminist theory*, is meant to empower vulnerable populations, value knowledge grounded in experience, take into account masculinist power and representation, and recognize local expertise and insight that cannot be fully realized from the outside (Hesse-Biber & Yaiser, 2004).

Photovoice has been primarily used in a wide range of health research to empower marginalized recipients of health systems in an effort to create positive change, and the data suggest Photovoice is an effective way of communicating with people in positions of power (Carlson, Engebretson, & Chamberlain, 2006). For example, Photovoice has been used with rural African American breast cancer survivors (Lopez, Eng, Randall-David, & Robinson, 2005), with Latino-American adolescent immigrants (Streng et al., 2004), with patients in hospital wards (Radley & Taylor, 2003), and with other economically and ethnically diverse populations (Wang & Redwood-Jones, 2001). Women's groups have used Photovoice to document the health effects of civil war (Lykes, Terre Blanche, & Hamber, 2003) and to depict social health issues in rural communities (Wang et al., 1996). Hospital nursing staff have also used Photovoice in operating rooms (Riley & Manias, 2006) as well as in nursing education (Killion, 2001).

Vulnerable populations ranging from homeless people (Radley, Hodgetts, & Cullen, 2005), to senior citizens (LeClerc et al., 2002), to immigrant women (Bender, Harbour, Thorp, & Morris, 2001), to mothers with learning disabilities (Booth & Booth, 2003), to people living with HIV/AIDS (Hergenrath, Rhodes, & Clark, 2006) are all using Photovoice to create change for themselves and their communities. However, literature documenting its use with Indigenous communities is only just beginning to emerge (e.g., Moffitt & Vollman, 2004). Given Photovoice's success with other CBPR projects involving marginalized populations, it was selected for this project to not only evaluate its ethical effectiveness in Indigenous research (Brant Castellano, 2004) but also to contribute to this growing body of methodological literature.

Ethics

Photovoice, because it entails the capture of visual images, creates an additional set of challenges to the ethical conduct of community-based research (Wang & Redwood-Jones, 2001). The act of taking pictures in any community is a political act and, as with other methods, the resulting data both disclose that which is photographed and hides that which is *not* (Wang &

Burris, 1997). As such photography can be an intrusive activity and may lead to unintended consequences (Riley & Manias, 2003). In this project, anonymity and confidentiality, especially photographs of people, were dealt with in four ways throughout the research process. First, training sessions were conducted with participants at the start of the process concerning the ethics and mechanics of photography to ensure that they understood the implications of doing photographic research. Second, signed informed consent forms were required from any individuals who were photographed in order to ensure that they understood why the images were being collected and what would be done with them. Third, member-checking and transcription verification permitted participants to read through interview texts and delete any potentially harmful information as well as ensure that the power to define what was included or excluded remained with the participants themselves. Finally, photograph release consent forms ensured that participants understood what their photos would be used for and where their photographs would be published. Together these safeguards ensured that the project received ethical approval by meeting the requirements of the Tri-Council Policy Statement (TCPS) of the primary Canadian research councils.

Methods

In April 2005, Huu-ay-aht First Nation hosted a Symposium to discuss their past, present, and future needs for cedar, a sacred resource. Ongoing environmental changes, pending Treaty settlements, and community-based concern over degradation had all combined to elevate local concern over cedar. Based on needs identified by the community at this time, a community–university research partnership evolved. Huu-ay-aht elected and hereditary leaders agreed to embark on a CBPR partnership with a PhD student from a Canadian University in order to better understand the environment and health risk perspectives in the Huu-ay-aht traditional territory (see Fig. 1). The elected Huu-ay-aht Council immediately appointed an Advisory Committee consisting of one elected Councillor, one hereditary Chief, and one experienced community researcher. The Advisory Committee's role was to collaborate on the project and to provide guidance throughout the study. The CBPR process at those meetings, which took place primarily at the request of the principal investigator, involved discussions of colonialism and power and thus forged the way for agreement, trust, and community control. While the principal investigator presented an outline for the research design, the

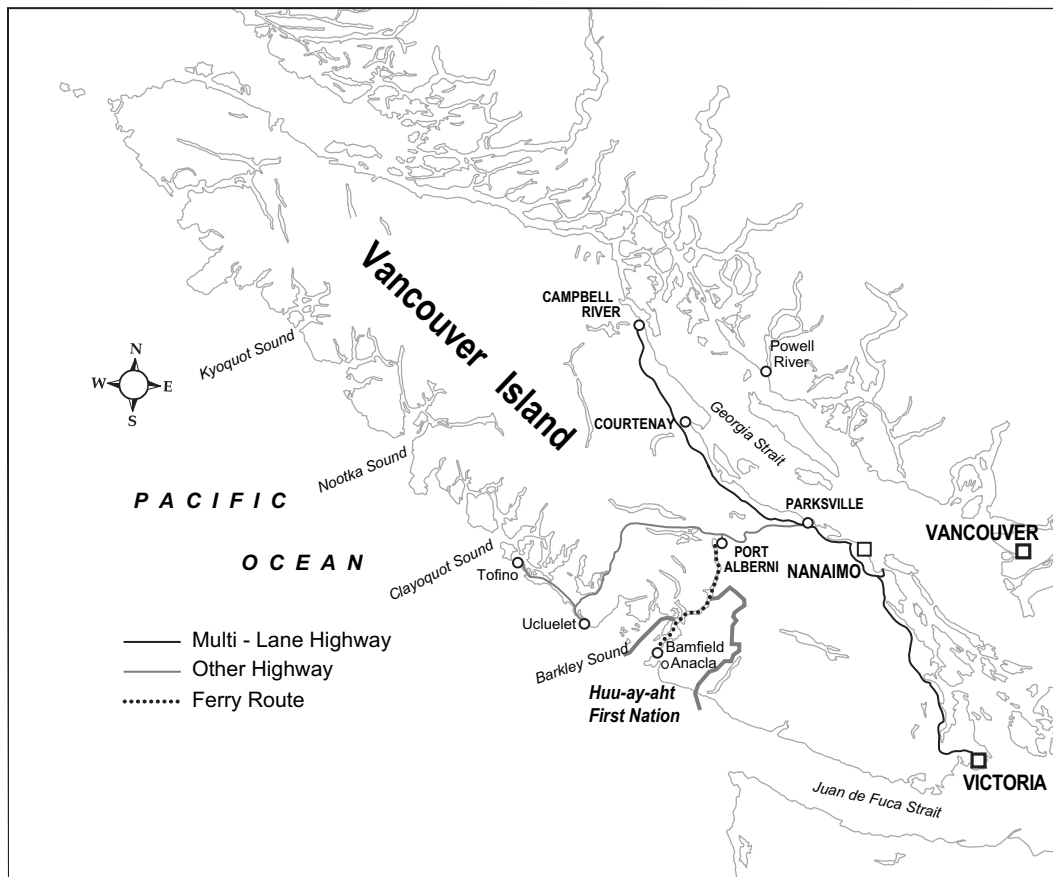


Fig. 1. Map of Huu-ay-aht First Nation, British Columbia, Canada.

Advisory Committee's suggestions for modifications and differences of opinion were resolved through respectful cross-cultural dialogue and explanation. Two community researchers were also trained and employed on the project and were actively engaged in collecting and analyzing the data. Because of its extensive participation in all aspects of the research design, implementation, and analysis, Huu-ay-aht First Nation has given permission to be identified as the research partner with pseudonyms assigned to individuals.

Participant recruitment and data collection took place between October, 2005 and April, 2006. Participants ($n = 45$, including three Advisory Committee members and two community researchers) ranged in age from 19 to 75 years. Community participants ($n = 40$) were recruited using stratified purposeful and opportunistic (snowball) sampling (Creswell, 1998) in which sampling continued until an effective cross-section of the community was included, with a focus on including as many different 'voices' as possible. In order to bound the study, we limited participation to Huu-ay-aht members (male = 25, female = 15) living

within the boundaries of Huu-ay-aht First Nation (approximately 150 members) as well as select Huu-ay-aht leaders and non-Huu-ay-aht individuals as identified/recruited by the Advisory Committee ($n = 5$). Five participants withdrew from the study, all citing time constraints as their reason. Once they agreed to take part, each participant was given a short training session regarding the ethical and technical use of the provided 27-exposure disposable camera. Participants were asked to take photographs of places and activities that represented environment and health risks and non-risks. Participants returned completed cameras, the research team developed the film, and semi-structured interviews were held using the individual participant's photographs to guide the interview.

Interviews consisted of a preamble and general line of questioning, after which participants were shown their own photographs one at a time and asked where each picture was taken, why it was taken, and what it meant to them. At the end of the interview, participants were asked to select two photographs among their collection: one that best represented environment or health

risks and one that best represented well-being or safety. This step was taken for two reasons. First, it was an opportunity for participants to further reflect on and prioritize their environment and health risk perspectives. Second, it aided the research team in data analysis and for communicating back participants' priorities for action. At the conclusion of each interview, participants were also asked to comment on the Photovoice process itself (e.g., did they like it, why or why not, would they do it again). A copy of the photographs after the interview and an (unexpected) honorarium at the conclusion of the study were provided as a way of thanking each participant for his or her involvement.

As participants' photographs were developed and interviews were conducted, the research team and Advisory Committee decided to provide updates to the community via a newsletter and a series of monthly potluck dinners. Each of the five potluck dinners featured a poster consisting of a collage of participants' 'priority' photographs and associated narratives. After the potlucks, posters were placed at four sites in the community that experienced high traffic volume in order to communicate the ongoing results of the research with those who were not in attendance. Copies of the posters were also provided to individuals on request. Ongoing community contact after the data was collected provided opportunities not only to submit progress reports to the Huu-ay-aht Council and Advisory Committee but also to update the general membership, thus maintaining accessibility and transparency about the project. The Huu-ay-aht Council and Advisory Committee also reviewed the research findings prior to publication.

Analysis

All interviews were tape-recorded and transcribed verbatim. Transcripts were returned to participants to confirm accuracy and for comments and/or clarification about the information provided in the interview (Baxter & Eyles, 1997). Participants were also given an opportunity to comment on the preliminary analysis. The data reported here emerged not only from interview text regarding the Photovoice process but also from participant observation of the process, peer debriefing of community researchers, and Advisory Committee consultation meetings. Inductive content analysis (Denzin & Lincoln, 2005) identified several emergent themes, which were then developed into consistent categories as concepts became more concrete (Miles & Huberman, 1994). Through an iterative process of comparing and contrasting (Miles & Huberman, 1994), five

key themes were refined around Photovoice. To ensure credibility, transferability, dependability, and confirmability, the following accepted measures for rigour were undertaken: multiple methods of data collection; pilot-testing the interviews; member-checking interview transcripts to confirm accuracy; prolonged immersion in the fieldwork to establish rapport and confirm interpretations; and an Advisory Committee to corroborate the results (Baxter & Eyles, 1997).

Results

Participants indicated satisfaction with the Photovoice method. This satisfaction stemmed from the method's success at balancing power, creating a sense of ownership in the research, fostering trust, building capacity, and implementing a culturally appropriate research project in the community.

Balancing power

In traditional research, the researcher determines the research questions, design, and direction. As a CBPR technique Photovoice balanced power on two scales: individually, permitting participants to determine the interview subjects and community-wide, through the Advisory Committee's decision-making power on behalf of the community. Following a pilot-test of the Photovoice interview, direction from the Advisory Committee was explicit.

I think that will be your number one question: 'Where was this picture taken? And why did you take it?' (Rose, Advisory Committee member)

Entrusting cameras to participants allowed them to determine the subjects of their photographs rather than the researcher making such decisions. This process meant the research team gave up its power while enabling participants to gain control and set the agenda for the ensuing interview.

I think it worked with pictures because... if you do have [interview guide] questions it sort of limits it... I think this is good, because it's more of the voluntary sharing, and a picture — you choose what you take — it's up to that person to have to like think of what they want, find it for pictures. (Barry, Advisory Committee member)

The volunteers who have been taking pictures for the project are very excited and the pictures have allowed them to open up and discuss their true

feelings about our village and it's very exciting to see this happening. (Hugh, community researcher)

Sense of ownership

As a CBPR project created in partnership with Huu-ay-aht First Nation, ownership at the leadership level was explicit at the outset. Having an Advisory Committee was a way of initiating a sense of community-wide ownership over the research. The extent of participation, nearly 50% of the eligible population, suggests that such ownership was taking place.

You have done so well in getting the whole community to participate... I am amazed and I think that the rest of the Council is too, because I hear them talking about the project more... the whole project, it is so amazing. (Evelyn, Advisory Committee member)

In fact, several participants completed the Photovoice exercise and subsequently requested an additional camera to continue their involvement. They commented on the importance of the project and learning about each other's perspectives. This reflects the degree to which they owned the research and speaks to the concept of Indigenous ownership of collective community knowledge.

I really appreciate this because... our young people are getting involved, which we need. And I really think this is going to do a lot of things as the years go by... our young people... taking pictures. They look at things different than we do and I really think this is so special. (Grace, participant)

Participants commented how the photographs would serve as a community-owned archive in the future.

I like the idea of keeping these pictures to look back on the issues that I had and other people had and to see the changes that have taken place... so you can go back and say, 'what did I do to make a difference, how did I make a difference, did it work?' (Doug, community researcher)

[We] are going to produce something that is going to be invaluable to our future generations... put it in our archives. Someone from 100 years from now might pull that out and go, 'Is that what it used to be like? ... [I] find real value in that. (John, participant)

Participants took seriously the responsibility of representing community issues. Most of the participants

needed more than the original one week given for the photography exercise. Allowing this extra time, in some cases more than a month, permitted increased reflection with the end product becoming a part of the community's collectively owned knowledge.

The process that I went through was interesting because I spent, 6 weeks, or 2 months, thinking about it in my mind, going, 'what do I want to say' and 'how do I want to say it?' I thought the photos [were] a neat way to go about it... I thought this was going to be a good memory for me, this experience. So I said 'you know what, I want to put a little bit of effort into this.'... So I chose very carefully... It was an interesting proposition. There [were] a lot of things going on in my mind as I mulled my way through 'what do I want to say.' (John, participant)

Attendance at the community potluck dinners increased throughout the project and the research posters presented at these dinners were an important way of not only generating informal community dialogue but also creating community ownership over the knowledge generated. Providing an opportunity for comment and discussion on the issues photographed served to verify individual perspectives at the community level and generate dialogue and action among community members regarding important environment and health issues.

This is an awesome opportunity... to participate in recording, documenting, listening, taking part in, and understanding other peoples' feelings. We can all make change if everybody understands how everybody else feels. (Doug, community researcher)

Fostering trust

The Photovoice process fostered a sense of trust by empowering participants with self-determination regarding the subjects of their photographs, which demonstrated the researchers' confidence in the participants' knowledge and ability in prioritizing their issues. It also created opportunities for the principal investigator to engage in extensive community interaction and relationship-building by visiting people in their homes to inquire about camera progress and to engage in cultural activities, local recreation, and volunteering.

You are involved with us. You go to basketball and join with the young adult people, which is great. (Grace, participant)

[That picture] totally captures you. Look at your face, how much fun you are having! Even though we were trucking through water, we should have been miserable. The water was cold at this time of the year... I think that is a great picture. (Evelyn, Advisory Committee member)

Participants were invited to take photographs anywhere within the boundaries of their traditional territory but many did not have access to a vehicle. After debriefing the pilot-test, an Advisory Committee member identified a resolution:

PI: What are your feelings on [transportation] right now? Are you worried about it?

R: Yes, sort of, because if you weren't driving me around I probably wouldn't have taken any [of those] pictures [outside the community]... that's what I'm worried about.

PI: Do you have any ideas of how we might deal with that?

R: Take them for a ride... that might help. [A participant]... might show you a place I've never been... if that's what [they] want to do. (Rose, Advisory Committee member)

This provision created further opportunities for the research team to interact with and, in two cases, accompany participants. These daily interactions contributed towards building trust between the principal investigator (a non-Indigenous PhD student) and the participants.

The potlucks and posters were a way of making the research process accessible, transparent, and a part of the entire community while also providing opportunities to recruit additional community members as trust developed over time.

Building capacity

An important outcome of CBPR is to support training and skill development in the community (Corbie-Smith et al., 2004). As a result of this study, two community members are now fully trained in the research process using Photovoice. Community members have also continued to take pictures after the data collection phase concluded, which is further evidence that they felt confident with their skills not to mention that both the process of taking pictures and the findings belonged to the community. For example Rose (Advisory Committee member) indicated that she has continued to document environmental and health issues through photography (personal communication, September 20,

2006). Rose also noted that the community leadership had decided to collect photographic data on other subjects in the community (e.g., historic fishing boats, cedar baskets and mat weaving) and to create posters to disseminate their findings to the community (personal communication, October 24, 2006).

Evidence of capacity can range from hardly visible to vastly evident and from intangible to concrete. One example is worth noting here. At the third potluck dinner, the research team displayed their third poster. One of the photographs on the poster was of the village's fire hall defaced by graffiti. The photographer's concern was not only about the graffiti but also about the need for more activities for Huu-ay-aht youth. Later that evening five youth were spotted in the cold winter rain with rags in their hands. They had been 'caught' cleaning the graffiti from the fire hall. When asked why they were doing it, their response was 'we saw the poster'. Their actions were captured on film and appeared on the fourth research poster along with a caption indicating a sense of pride in the youths' actions. Community concerns became visible through the posters and were, in this case, catalysts for change. The posters fostered change, another form of capacity, in the community.

Being able to see the pictures, having them posted in all the offices... it makes change... [The number of participants] is more than what we get at a band meeting... Maybe we will have to set up our next band meeting like an interview process or something. Give everybody cameras. (Evelyn, Advisory Committee member)

There is a slow learning to this, and you can see it... you can see the changes in some of our children... and some of our adults.... There [are] posters... to remind them, "okay, right, we've been there" just to make the reserve better... Because it has gotten better, very slow, but it has. I'm not kidding you... It is [linked to this project]. I know it is. Big time... Our young people are getting involved... A lot of good things happening. Important stuff too. You notice that adults are getting more involved... which is good. (Grace, participant)

Photovoice: a culturally appropriate method

Community members saw Photovoice as an appropriate and effective approach to explore their environment and health issues.

Mhm, for sure, mhm. Because [the photograph] is right there. You can't lie. (Paul, participant)

It was a good way for us... to express our thoughts and feelings... A picture is worth a thousand words. (John, participant)

Several participants expressed positive feelings regarding their experience with the Photovoice project. This is particularly important given the frustration with academic research and research fatigue in many Indigenous communities.

By [using] photography with Aboriginal persons who are more comfortable with oral and visual [forms of communication], then this way you are drawing out the information, this isn't intimidating. We are over-grilled right now, 'not another interview'. I'm really glad that you did it this way because it is a way of drawing out information rather than interviewing or having to answer a bunch of questions. (Donald, participant)

Participants also indicated that the pictures they took were meaningful beyond the scope of the project; they were affective records of their daily life.

I've enjoyed [taking pictures] 'cause that's the only way it refreshes your mind — the thoughts when you take those pictures — it does something to you too. It does. I'm not kidding you. It did to me. And each picture I took, I'll never forget it, never, because it meant so much to me. (Grace, participant)

Discussion

The results of this work suggest Photovoice was an effective method for sharing power, fostering trust, developing a sense of ownership, creating community change and building capacity. Taken together, these findings are congruent with the intended goals of CBPR. The following discussion is organized around implementing Photovoice 'on the ground'. The research team found that it had to modify the proscribed process to maintain cultural continuity and address inherent limitations with the method.

Modifying Photovoice

In line with its philosophical underpinnings, CBPR researchers are typically flexible and reflexive in terms of the way data are collected in the field. Therefore, methods must be adaptable to a community's particular research needs and goals. Photovoice, as a CBPR method, should be no different. Interestingly, [Caroline Wang's \(2005\)](#) description of Photovoice is presented as a fixed method that involves a preliminary workshop

for participants on the Photovoice technique and then a photography assignment followed by a group dialogue with policy-makers based on the photographs. A side-by-side comparison of Wang's stages of Photovoice and the stages used in the modified Huu-ay-aht project illustrate a key difference: the presence/absence of a feedback loop (see [Fig. 2](#)). While Wang's approach has a concluding evaluation stage, by comparison, the modified Huu-ay-aht project involved a feedback loop, seeking input from the entire community at regular intervals throughout the project.

Wang's approach to Photovoice was initially planned for the Huu-ay-aht study. However, it quickly became apparent that the 'classic' Photovoice approach was similar to the academic trend of doing 'parachute' research in Indigenous communities. In previous Photovoice studies, data were often collected in a few short weeks, whereas the data collection for this study extended for six months. This prolonged immersion in the field served to establish rapport and build trust. Interestingly, the literature on research using Photovoice has not involved significant discussion regarding the importance of building trust despite it being an important component of CBPR. There are two possible explanations. First, trust may not have been as important as was the case here given the colonial legacy in Indigenous communities. Second, it may not have been possible to fully develop or explore the concept of trust without an iterative process similar to the one built into the Huu-ay-aht study. As a result, trust may have remained largely unexplored in other Photovoice studies. If Photovoice is to become a successful CBPR method with Indigenous partners, researchers should consider including the iterative process to balance power, create a sense of ownership, *and* build trust.

Other modifications relate to recruitment and the interview process. The Advisory Committee felt it was inappropriate to recruit Elders for the photographic exercise as many had limited mobility. Therefore, it was agreed that while Elders were certainly eligible to participate, they would not be actively recruited so as not to compel participation. This was a difficult decision as Elders' perspectives are highly valued in Indigenous communities. Elders are important sources of Indigenous Knowledge (IK), which is commonly defined as local, culturally specific knowledge unique to a particular Indigenous population and the intellectual product of direct observation and experience passed from generation to generation through oral tradition ([Battiste & Youngblood, 2000](#)). Elders' perspectives concerning the project were sought informally through home visits and at community potluck dinners.

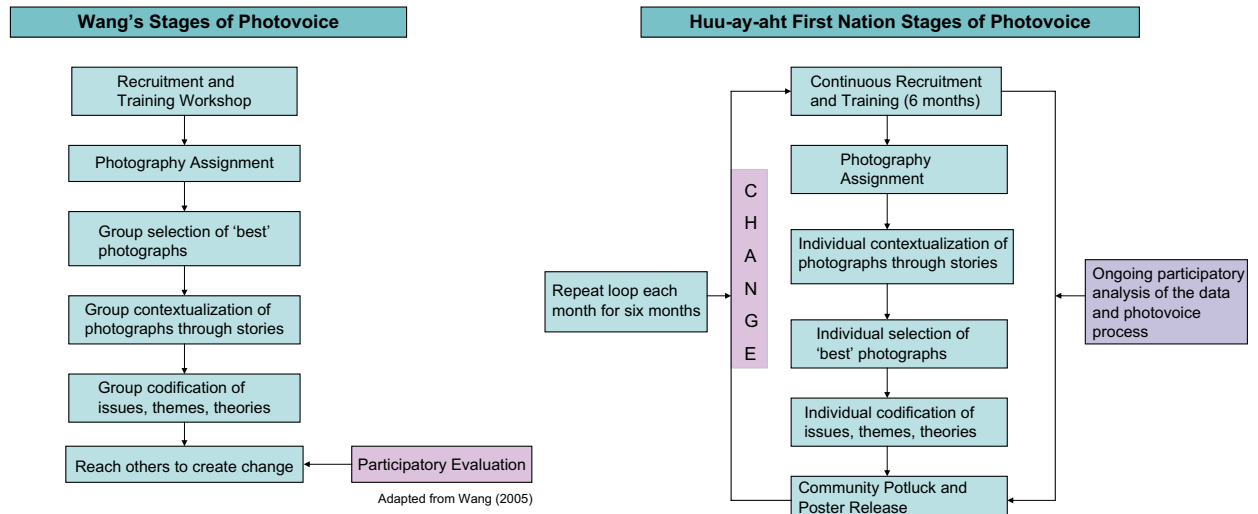


Fig. 2. Stages of Photovoice: comparing approaches.

Rather than undergo a single group dialogue process to select and contextualize the photographs, individual interviews were conducted soon after participants' photographs had been taken. This was a necessary modification as recruitment was ongoing during the six-month data collection period and cameras were returned throughout allowing participants time to reflect on and photograph issues. Had a group workshop been held at the end of the data collection period, long after many participants had taken their pictures, there was increased likelihood that participants would have forgotten where the pictures were taken, why they were taken, and what meaning had originally been attached to them. A further modification of the interview process involved participants' commentary on *all* of their photographs. Limiting participants' comments to only their 'best' photos (as Wang and others have done) would have skewed the results of the overall study, which sought *the full range* of community perspectives on health and environment issues. Participants photographed and discussed issues that extended from differences in Western and Huu-ay-aht worldviews concerning the concept of 'resources' to concerns regarding the perceived risk of tsunamis and from the need for residential school healing to the physical hazards associated with the logging industry.

Our prediction that Photovoice would be an effective and engaging tool for CBPR research with a First Nation proved accurate. The photography aspect of Photovoice 'captured' direct observations of the environment and health issues important to this First Nation. Photovoice extended the observational aspect of Indigenous Knowledge by coupling photographs with participants' stories, which is in line with oral traditions. Using

photography in conjunction with the oral storytelling approach applied in the Photovoice exercise was a means of recording perspectives using current technology to ensure cultural continuity concerning resource use in their traditional territory. Photovoice projects with First Nations can therefore be of use to their leadership concerning information-gathering and policy-making as well as providing archival documents for future generations.

Limitations of Photovoice

Photography in research presents particular limitations, in part because there are limits to what is observable (Rose, 1993). For example, access to that which was *not* photographed is denied and subsequently not discussed in the Photovoice interview, which is as important to consider as what was present in the collection of photographic representations (Gregory, 1994; Said, 1978). In this case, interviews were purposefully structured to explore participants' perspectives beyond just what was photographed through a general line of questioning at the start and through an opportunity to comment on 'other' issues at the conclusion.

In any study employing photography, participants may struggle with the challenge of how to photograph non-tangible items or issues. At the same time, photography presents opportunities for creativity by lending itself to a certain depth of critical reflection. In this study, for example, one participant wanted to address the social health issue of 'gossip' in the community. Her solution was to photograph the word spelled out on a Scrabble game board.

Photovoice projects, whether traditional or modified, involve a significant commitment of time and effort on the part of participants and researchers. Participants agree to much more than a survey, an interview, or a focus group typical of some data collection methods. In Photovoice, there is a camera and ethics training component, a potentially lengthy process of taking photographs, followed by an interview, and subsequent action for change. The research design must factor in the time involved in recruitment, camera retrieval, and interviewing. Participant retention, a common issue in traditional qualitative studies, is a limiting factor, possibly more so with Photovoice as participants may feel pressure to complete the photography exercise and interview, which may ultimately impact their decision to participate. Seasonality and weather are additional factors that can also influence and limit photographers' choices and research results.

Photovoice projects require certain materials and resources, the most obvious being access to cameras and film-developing. The quality of the photograph may be compromised (e.g., photographs may be out of focus or over-exposed). The purchase of cameras and potential replacement costs of lost cameras as well as photo development can impact a research budget. Misplaced cameras or inadvertent switching of participants' photographs can also lead to frustration for both participants and researchers. A way to resolve this latter issue is to take a picture of each participant at the outset using his/her camera to help identify film in case of confusion. Interviewing should take place immediately following a participant's return of the camera to facilitate memory retention, thus nearby access to developing services is necessary.

Conclusions

The research approach in this study is a response to Indigenous peoples' criticism of academia regarding power, trust, and ownership in Indigenous research. The modified Photovoice process provided grounds for the researchers to listen to and discuss community issues, to demonstrate a positive regard for Indigenous perspectives, and to value the participants' knowledge and expertise. Relinquishing power and decision-making control over the study and adopting a flexible and open approach to the research process worked towards building trust between the researchers and the First Nation. The outcome of such power-sharing and trust-building is a greater sense of community ownership, which is a core component of CBPR.

A modified version of Photovoice was an effective and useful CBPR methodological tool for this study.

We recommend that those who apply this method to their own CBPR research carefully document and report the details of their work so that others may reasonably evaluate 'rigour' in the analysis. Perhaps the most telling indicator regarding the utility of this approach has been the response from other First Nations. Recently, the research team was invited to make a presentation about the Photovoice project to a group of neighbouring First Nations. A number of the leaders present were eager to use Photovoice to address environment and health questions pertinent to their own communities. This indicates that the approach has the potential to be a useful tool for future community—university research alliances.

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