ABSTRACT

Objectives. To determine how residents of the Inuit community of Nain, Nunatsiavut, Canada would like research results disseminated to their community.

Study design. Qualitative study using focus groups and key informant interviews.

Methods. As part of a larger study on food safety, one focus group was conducted with hunters (n=7) and a second with members of the general community (n=7) to determine research dissemination strategies previously used in the community, and to obtain recommendations for effective and appropriate strategies for future use. One-on-one key informant interviews were also conducted with Nain community members (n=5) selected for their insights on the study themes. Informants included a teacher, a nurse, a community elder, and one official from each of the Nain and Nunatsiavut governments. Data from focus groups and key informant interviews were combined and analysed using thematic analysis.

Results. Open houses were identified as the preferred method to present research results to the community. Presentation methods should be interactive, visual and presented in both English and Inuktitut. Research dissemination efforts should be timely and involve both the researcher and a local official or community member to give the results additional validity and relevance. If possible, involving youth in the presentations will increase the impact of the message.

Conclusion. Preferred information dissemination techniques in this Inuit community echo successful techniques from research conducted in Aboriginal communities. Future knowledge translation efforts in Inuit communities should consider involving youth in presentations due to their influential nature within the community.

Keywords: Inuit, knowledge translation, Nunatsiavut, qualitative research, research dissemination
INTRODUCTION

Knowledge translation (KT) involves the synthesis, exchange and application of knowledge between researchers and users to accelerate the implementation of beneficial research results (1). As such, KT has become a research priority in international public health over the past decade (2), with many granting agencies now requiring a KT component in research proposals. Additionally, the Canadian Institutes of Health Research (CIHR) have created guidelines for research involving Aboriginal people, which include a requirement for researchers to promote their findings to the community and ensure proper dissemination of information (3). However, in public health and health research, the majority of KT studies involve academic research scientists as the purveyors of knowledge, and health care providers as the recipients of that knowledge (2). Less attention has been paid to KT between researchers and the general public, and only a small proportion of this work has focused primarily on Aboriginal communities, each of which has unique cultural needs (4). Past research that has examined or involved KT in North American Aboriginal communities has focused specifically on the dissemination of health information, such as anti-smoking campaigns, and not necessarily on the dissemination of research results themselves (2,5–7); only 2 of the identified studies included Inuit communities (2,7).

This work is part of a larger International Polar Year (IPY) study (IPY Study No. 186 [8]) working with Inuit hunters from the community of Nain, Nunatsiavut (the Inuit region of northern Labrador, Canada), to test wildlife meat samples for zoonotic parasites. Nain is the seat of the Nunatsiavut regional Inuit government (9), with a population of 1,035 people (2006 census data) (10), of which over 98% speak English (11). The majority of residents are Inuit or Kablunângajuit, people of combined Inuit and European ancestry (9).

Previous research has found that education and outreach programs in Aboriginal communities have the highest success rate when they are culturally relevant, community-driven, easily understood by the target audience and in-line with traditional knowledge (5,12). Hence, the purpose of the present study was to involve Nain in a community-specific examination to determine the preferred methods to communicate research results to an Inuit community.

METHODS

Five key informant (KI) interviews and 2 focus groups (FGs) were conducted at a local meeting hall with adult residents (range: 21–>65 years) of Nain, Nunatsiavut, during the first 2 weeks of June 2009. The interviews were conducted in English since all participants were comfortable with, and fluent in, English. A local northern partner (CL) joined the project to offer local knowledge and northern insights, help make local contacts and recruit participants.

The KI interviews were conducted one-on-one with Nain residents who had specific insights into the research interests (communication methods, health, tradition and youth involvement). The key informants (3 females, 2 males) were a school teacher, a local nurse, a community elder, and one official from each of the Nain and Nunatsiavut governments. All KI interviews lasted approximately 16 minutes. One FG was conducted with male and female Inuit hunters (3 females, 4 males), and another was conducted with Nain residents who were not hunters (5 females, 2 males). Sessions lasted, on average, an hour and a
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half. The FGs were moderated by the first author, with CL acting as an assistant-moderator who took notes on the body language, dialogue and group interactions of all participants. The KI interviews and FG discussions were audio-recorded and professionally transcribed to facilitate analyses. All transcripts were checked for accuracy using the original audio recordings. A structured interview guide was developed according to Krueger and Casey (2000) (13) and was designed to maximize the amount and quality of data collected (Appendix 1). Focus group discussions were centred on participants' awareness and perceptions of previous research dissemination strategies in the community and what strategies they felt should be used in the future. The KI interviews covered the same themes, but were tailored to determine past research dissemination strategies and probes were designed to focus on each informant's particular area of knowledge.

The KI interview and FG data were analysed together using thematic analysis. Thematic analysis uses data from participants to generate and shape patterns or themes about a process or phenomenon (14,15). As per the established literature, major data coding categories were developed from participant responses and then divided into specific themes using an iterative process (13–15). Inter-rater agreement of data coding was assessed between the primary author (ELP), AQJ and CL; discrepancies were discussed and resolved through consensus. Quotations in need of clarification were annotated for context and are indicated by square brackets.

Both the KT study and the larger IPY study were approved by the Nunatsiavut Government Research Advisory Committee and the University of Guelph Research Ethics Board. All participants were recruited purposively by CL based on her extensive knowledge of community members, and each provided written informed consent. No financial compensation was given to the participants, although refreshments were provided at the FGs.

RESULTS

The KI interviews and FGs produced complimentary data, with no contradictions. The FGs instead enriched and expanded upon the data gathered in the KI interviews. Four key themes pertaining to KT in the community emerged during the data analyses: frustrations around past research dissemination, how participants felt research information should be presented, who should present that information, and how often research updates should be provided to the community.

Frustrations around past research dissemination

Less than half of all participants recalled research dissemination being conducted in the community in the past. One participant reported:

R1: “[We] haven’t seen a whole lot [of research information] come back to the community.”

Other FG participants spoke in a tone of frustration and anger in this regard:

R1: “Way too often, researchers in the past, they have done their own thing.”

R2: “We’ve had fisheries researchers up here for years, studying char and stuff like that...we have not heard any information. You don’t get anything back from it.”

R3: “It doesn’t seem to come back to the community as a whole, I mean, you can go and get it, but I don’t see anything in my mailbox or any signs posted or anything like that.”
Only 2 participants could recall specific instances of research being presented back to the community. One of those, a KI, could recall research being presented in an effective manner:

R1: “direct interaction so that the researcher was seen as a real person and not just someone who shouts a lot of language that’s sometimes difficult to understand.”

R1: “...a lot of demonstrations of what [the researchers] are doing and how they’re going to do this and how they’re going to do that.”

The other, a participant in the hunter FG, commented that presentations had not been successful:

R2: “instead of breaking it down into something we can understand, it’s in probably university level or doctor’s level...in big words and stuff like that, that most people just can’t understand.”

Overall, the consensus was that participants would

R1: “really like to hear about what the results are” and that

R2: “anybody who comes in here and does research has an obligation to...give us the information.”

A few participants did acknowledge that in recent years there has been improvement in relaying information to the community:

R1: “In more recent years, I’ll just say ten years...[researchers] have been coming back [to present their results].”

R2: “We never, ever got the information back from the people doing the research, but I think in recent years, anyone who does research, ...they were supposed to get permission, ...so the focus is now on how they give you the information, on how you communicate it.”

Preferred ways to present research results in the future

Interactive open houses

The majority of the participants felt that open houses would likely be the most effective way to convey research results to the community because in the past, when personnel from mining operations talked to the community,

R1: “open houses seemed to work fairly well,” but R2: “public meetings don’t seem to work very well, not many people come out.”

For participants, an open house would be characterized by the local laboratory opening its doors to the community, inviting residents to come in and learn about the research in a small, relatively informal, interactive environment. In contrast, a “public meeting” to participants might involve a more formal presentation held in a larger location, such as the school gym. Most participants preferred interactive open houses to disseminate information because

R1: “...whatever way you go about it, it needs to be hands-on, or interactive, instead of just standing and telling.”

At the open houses, it was suggested to have

R1: “someone there to discuss and present some points, with a lot of visuals,”

R2: “little sample tables and little stands and you can have the information on each one” and

R3: “all the information available, where people might have an interest and they can just go and ask somebody some questions about certain things.”

Several participants in the community FG suggested having free food and prizes available as additional ways to foster community participation.
It was stressed by all participants that information needed to be presented in a visual manner because
R1: “Inuit are visual people,” and
R2: “[some people] are not good enough readers to read certain big words on a report, but if you show them a picture, right away they can identify it.”

It was also important to the participants that it be shown how the research is relevant to their lives. One KI commented that the delivery of information needed to focus on the big picture questions, for example:
R1: “What does this really mean? And what is the broader, the bigger picture of getting the message out to the public? Make it simple.”

Overall, participants felt that to conduct research effectively in and with the community researchers must integrate into the community:
R1: “they’ve got to become a person to us rather than a researcher.”

Bilingual presentations with simple language
In terms of language used, it was stressed that information should be available in both English and Inuktitut. Both KIs and FG participants also placed high importance on the presentation of results in simple terms in accessible language that would be understood by everyone:
R1: “Keep it short and get to the point. Don’t bore people to death with the scientific words and that sort of thing.”
R2: “Don’t make it too highfalutin that people don’t understand.”
R3: “You hear certain things are bad for you, ...but it’s in almost a foreign language to us. It needs to be explained in terms that people around here can understand.”
R4: “Whatever the message is that’s being delivered must be simple, understandable, ...and the majority of the older population, they don’t speak English, so the message must be very simple. Make it as simple as I am.”

Local radio and posted notices to advertise open houses
All participants commented that while the local radio station (OKâlaKatiget Radio, or OK Radio) was an extremely important and effective tool for information dissemination, it would not reach everyone in the community:
R1: “OK Radio – people here love call-in shows and call in regularly.”
R2: “…the radio is good for, I would say, 90% of the community.”
R3: “If they only advertise it on the radio, we don’t hear it because we’re here at work.”

Focus group participants noted that a radio talk show could be used to present basic research results, spark community interest in the research and potentially increase attendance at the open house. It was also suggested that posting notices in prominent locations such as the post office and major stores would reach a greater proportion of the community because
R1: “you’re going to see it if it’s in a place that everybody goes.”

Focus group participants cautioned that flyers in mailboxes should be avoided because they would be thrown away or would “end up on the floor of the post office,” which was corroborated by the nurse, who had experienced this when the local clinic tried to relay health information to the community in this manner.
Who should present research results?
There were differing opinions among participants as to who should present research information back to the community. However, in general, participants felt that research information should be presented by an appropriate representative of the Nunatsiavut Government (NG), the researcher(s), or a combination of the 2.

People who supported the NG as the purveyor of information felt that with the NG speaking to the issue,
R1: “it could be seen that Nunatsiavut supported this research, supported the results [and] supported the advisories coming from it” and that this “would be important.”

The NG official who participated in our key informant interview confirmed that
R1: “if NG is given enough advanced notice, they will be involved.”

On the other hand, some people felt it should come directly from the researchers,
R1: “because the researchers are the ones that people see and talk to when the research is being done...it will be easier for them to be identified again because there are so many research projects on the go, you might...get confused with another.”

The majority of participants felt that a presentation involving both the researcher and an NG official would be preferable because it
R1: “may give some validity that the researcher was there, but at the same time people want it from their community.”

In the community FG, yet a fourth option was suggested, which was that of a local facilitator. All participants in that group believed that it would be good to have a facilitator that’s a local person who knows the people in the community to
R1: “help [make] the community people comfortable in asking questions...people would probably listen better.”

Youth involvement
All participants believed that using youth to communicate research information would be beneficial because
R1: “using youth to help communicate the message would be good,”
R2: “depending on what your research is, it does have a stronger impact if it comes from the children” and
R3: “kids are very influential with their parents.”

Participants also felt that even if youth were not involved in presenting the information, they should at least have the information presented to them because
R1: “the more information they get about what’s going on and what’s being done here, the better off they are.”

Frequency of research updates
Responses to a question asking how often the progress or the results from ongoing research projects should be presented to the community varied. There was agreement that results of a completed study should be presented in a timely manner and updates of longer-term studies given as often as necessary. One FG participant clearly captured the prevailing view of the importance of a continued presence in the community:
R1: “...you have to find little ways of keeping interest...something that keeps the focus on the fact that [the researcher is] still here and [is] doing this and it’s going well, or not.”
DISCUSSION

Participants in the study expressed a clear interest in and desire for information from the research community. Their enthusiasm was, however, tempered by their belief that many researchers had not adequately presented the results back to the community in the past. This feeling has been expressed in other Canadian Aboriginal communities, where people felt insufficient attention had been paid to the development of knowledge translation activities (4,16). This was frustrating for most of our participants whose comments reinforced the notion that research participants have a right to be informed of the results of research being conducted in their community. Despite the problems faced in the past, there was an acknowledgement that over the last decade researchers have been increasing their efforts to present their results to the community. For example, a participatory research project into various types of health risks in the community used recommendations from community researchers and the Nunatsiavut Government to present research results (17). Despite their use of the government recommendations to present results, Jardine and Furgal indicated that their KT efforts were met with minimal response (17), which was possibly due to the use of methods not specifically tailored to the community. As experienced by Jardine and Furgal, and as expressed by participants in the current study, there remains room for improvement in knowledge translation efforts.

This research produced several key findings that will help to improve the success of KT activities in the Inuit community of Nain, Nunatsiavut, and which may also be applicable to Inuit communities elsewhere. The preference for visual tools and face-to-face interactions for information dissemination seen in this study has also been recognized in past studies in Aboriginal communities (2,7). Additionally, the current study identified youth as key elements of KT efforts, a finding not seen in previous work. While other work has highlighted the importance of providing research messages to Aboriginal youth (18), they have not investigated the importance of youth delivering the message.

Another novel finding was the importance of the researcher in the communication of results to the community. While this may seem logical, current CIHR guidelines recommend using “community members, Aboriginal community-based organizations, and/or Aboriginal leaders” to communicate research findings as people generally learn better from their peers (19). Our research shows that while the use of community liaisons and local government is critical for information uptake, it is also important for researchers themselves to be involved as they are viewed as the experts on the subject and their presence will lend validity to the results.

That being said, participants stressed that for any research or dissemination activity to be effective, it is necessary for researchers to attempt to minimize the divide between themselves and the community by being recognized as a “person” as well as a researcher in the eyes of the community. Previous work has discussed a distrust of outside researchers among Aboriginal communities that may stem from a time when researchers were considered more exploitive, in that they would go into Aboriginal communities, collect their data and then leave without engaging the community or presenting anything back to them (4). This led to a feeling among some Aboriginal community members of being “researched to death” (4). Attitudes are beginning to change and these same communities feel that, in conjunction
with like-minded outside researchers, it is time to start “researching ourselves back to life” (4).

If researchers are to provide appropriate and effective information on research results to Inuit, an understanding of not only their preferred dissemination strategies but also how they want to be engaged is a prerequisite. Community engagement has been recognized as an important part of the KT process in Aboriginal communities by CIHR, but no clear outline of how to achieve that engagement has been provided (19). This work has shown that an ongoing presence in the community, hiring someone local, forming partnerships with government bodies and having a local contact person could greatly enhance community engagement and therefore the successful relaying of results. Similarly, past research in Aboriginal communities has shown that research that engages the community has a high degree of participation and increases participants’ desire to become more involved in the research process (6). In addition, KT activities have been shown to create social connections between researchers and community members, which can lead to research findings influencing and being incorporated into decision-making processes (5). While there are associated challenges to KT activities in remote communities, such as physically accessing the community, and addressing and acknowledging a variety of different agendas (community, regional, provincial, health, environmental and economic), these challenges should not discourage researchers from engaging in KT activities. It has been shown that when KT work is tailored to the situation and the community, it can be highly effective in getting the research message to the community (20).

Some limitations of this study reflect that qualitative interview methods lend themselves to the acquisition of depth rather than breadth of knowledge on a specific area. Qualitative interviews may not reflect the views of the target population as a whole due to purposive sampling and the relatively small sample sizes typically employed. Purposive sampling is, however, widespread in qualitative research, and study participants were of a roughly equal ratio of females to males and covered a wide age range, which may have helped minimize this bias. Encouraging participants to spend more time in the interview process met with varying success. The study results likely would have benefited from longer interview times on average, thereby allowing more in-depth probing of comments and clarification of thoughts. While this study was conducted in the context of a larger food safety study, the questions asked relating to KT were tailored to the best of our ability to reflect all areas of research, not food safety alone. Given that the participants were aware of the food safety focus of the larger study, there could have been some confusion as to what participants understood “all research” to be, and thus their lack of acknowledgement of other research. We also recognize that the participants’ lack of knowledge about past research dissemination in their community may not necessarily mean that little research dissemination has been done. It is possible that participants were simply unaware of past efforts, or perhaps that research information was only presented to a select group(s) of people due to confidentiality issues or because it was not relevant to the whole community. Given that most participants were unable to describe past research dissemination efforts, including both government officials, it is likely that little dissemination has been conducted in this community.

This study has contributed to the development...
of an Inuit perspective on research dissemination strategies. Participants in this Inuit community identified the importance of information dissemination techniques that involve visual, hands-on methods and that present data in simple terms in both English and Inuktitut. This was communicated through a community-specific examination of past and preferred research dissemination techniques. This understanding of desired dissemination strategies will guide subsequent information dissemination efforts in our larger study and could be useful for other research projects in other Inuit communities.

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Conflict of interest statement
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Appendix 1. Focus group and key informant interview structured interview guide.

Opening question
1. “Let’s go around the table and introduce ourselves, and say what you enjoy doing in your free time.”

Introductory question
2. “What types of country foods do you eat?”

Transition questions
3. “What’s the first thing that comes to mind when you think about country foods?”
4. “Is there anything in particular that you like about country foods?”
5. “Is there anything in particular that you dislike about country foods?”

Key questions
6. “Do you have any concerns about the safety of country foods?”
   Probe:
   “What about parasites or worms in the food?”
7. “There are other various research projects going on in the community (for example, there’s a project looking at heavy metals, like mercury, in animals, and another on water quality), and we’d like to ask you some questions about the ways that you get information from these projects. So to start, how is the information presented to the community?”
   Probes:
   “Radio?”
   “Posters?”
   “Town meetings?”
8. “Is there anything in particular that you like about these methods?”
9. “Is there anything that you dislike?”
10. “Are there any other ways that you’d like to get information?”
11. “Alright, so how often would you like to get updates?”
12. “And who would you like to get the information from?”
   Probes:
   “From the researchers?”
   “From a government official?”
   “Through school programs?”
13. “In an ideal world, how would researchers communicate what they’re doing and their findings to the community?”

Ending questions
14. “Thank you everyone for participating in this focus group. From what I’ve gathered... (give oral summary of discussion). Does that seem right?”
15. “Is there anything that we’ve missed or should have talked about but didn’t?”