

Social Networks and Health / Les systèmes sociaux et la santé

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Célébrons ce 10e numéro du *Journal de la santé autochtone*

C'est avec plaisir que nous vous présentons cette dixième édition du *Journal de la santé autochtone* ! L'Organisation nationale de la santé autochtone (ONSA) remercie tous les créateurs et les nombreuses personnes qui ont contribué à leur façon à la réalisation de ce numéro : les auteurs, les réviseurs, le comité de rédaction et l'équipe de production. *Nia:wen kowa* (merci) à Santé Canada, notre principale source de financement, pour son soutien à un projet tel que le *Journal de la santé autochtone*.

Il y a des milliers d'années, le Grand Pacificateur introduisit chez les nations iroquoises guerrières le concept du *ganigonhi:ob* (un bon esprit), c'est-à-dire un esprit qui cultive des pensées d'amour et de paix. C'est dans cet esprit qu'ONSA vous livre le présent ouvrage.

Le *Journal de la santé autochtone* est une publication évaluée par des pairs qui relate des histoires de réussite dans le domaine de la santé des Premières nations, des Inuits et des Métis. On y traite de problématiques importantes et de pistes de solution; on y rapporte également l'information et les recherches les plus récentes pouvant intéresser les Premières nations, les Inuits et les Métis. Le *Journal* présente en outre des analyses approfondies des recherches et enjeux cruciaux pour la santé, avec notes bibliographiques complètes. Le *Journal* facilite la discussion éclairée sur la recherche actuelle, les publications récentes et les nouveaux projets; on y examine également les déterminants de la santé du point de vue des Inuits, des Métis et des Premières Nations.

Depuis la publication du premier numéro du *Journal de la santé autochtone* en 2004, nous nous sommes penchés sur un certain nombre de sujets tels que l'administration de la santé des Autochtones, la santé de la population et les déterminants de la santé, la santé des Autochtones en milieu urbain, la santé des femmes autochtones, les communautés de Premières nations en crise et la décolonisation de la santé par le savoir et l'application des connaissances autochtones. En cette année 2011, l'ONSA est ravie de vous offrir cette édition du *Journal* sur « les systèmes sociaux et la santé ».

L'ONSA est heureuse de pouvoir approfondir avec vous de nouveaux sujets tels que l'approche autochtone à la santé;

nous nous proposons également de rendre le *Journal* plus accessible en procédant à son indexage dans des bases de données universitaires consultables. Pour alléger le fardeau de notre mère, la Terre, l'ONSA se propose également de publier le *Journal* en ligne.

Le *Journal de la santé autochtone* est un journal libre d'accès, c'est-à-dire qu'il est offert gratuitement à toute personne qui a accès à Internet. L'ONSA vous invite à vous joindre à ses quelque 2 000 abonnés et à télécharger votre exemplaire du *Journal* en allant au www.naho.ca/jah.

Au nom de tous les artisans du *Journal*, j'espère que ce dixième numéro vous plaira. Je souhaite également que vous contribuerez aux prochaines éditions pour nous faire profiter du fruit de vos recherches, de votre expérience, de votre créativité et de votre savoir. Unis dans un même esprit, préparons un avenir radieux pour les générations d'aujourd'hui et de demain.

Nia:wen kowa,

Paulette C. Tremblay, Ph.D.
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Social Networks and Health

At the end of a talk, our People often say “All my relations.” These three words are a declaration that we—people, the four-legged animals, and all of nature—are all connected and related. But how do these connections or social networks influence health?

This collection of papers represents a weaving together of diverse discourses on health. While one paper discusses the attitudes of Aboriginal young people toward pregnancy and fertility, another tackles the issue of suicide attempt among Māori youth in New Zealand. Within this diversity, there are common threads that weave each of these papers together.

One, of course, is health. In the Anishinaabe culture, “mino bimaadzwīn” (the good life) is a holistic conceptualization of health, where health is a balance between the physical, mental, emotional, and spiritual realms of life. It is also a life that is lived according to the seven grandfather teachings of wisdom, love, respect, bravery, honesty, humility, and truth.

The second common thread is the concept of connections or social networks. As individuals, we are all a part of intricate, complex, and ubiquitous social networks that tie us to family, friends, organizations, and so on. These social networks have a significant influence on our health. Research by Nicholas A. Christakis and James H. Fowler has shown that obesity is contagious—if you have a friend who is obese, your risk of obesity goes up by 57 percent (Christakis & Fowler, 2007). They’ve also shown that happiness is contagious (2008). And perhaps the most devastating example of the power of social networks is suicide contagion. People are connected, so their health is connected.

Each article in this issue of the *Journal of Aboriginal Health* tells a story about how we negotiate mino bimaadzwīn in a post-colonial and increasingly connected world. They also provide examples of how our health is influenced and shaped by our social networks, in addition to other determinants of health.

In a qualitative study conducted by Karen M. Devries and Caroline J. Free, we see how Aboriginal young people share views on planning for pregnancy, having children, and how these relate to condom and contraception use. This study has important implications to improve sex education programs and reduce rates of sexually transmitted infections.

Terryann C. Clark and colleagues found similar results in their random survey of Māori students in New Zealand exploring risk and protective factors for suicide attempt. Their findings highlight the importance of family in shaping health. For example, having a close friend or family member die by suicide was a significant risk factor for suicide attempt, and being connected to family not only reduced the risk of suicide attempt, but reduced it across all levels of risk, not just at higher levels of risk.

In a qualitative study by Peter J. Hutchinson and colleagues, we are introduced to six communities, or social networks, and their experiences around establishing tobacco control policies (TCPs). The authors identified three main factors that influence the success of TCPs, which were most strongly illustrated in three different community halls used for bingo: economic drivers, the smoking majority, and community and grassroots support. This study suggests that when smokers are the majority in a network, they hinder the success of TCPs, and when people in the network support the ban of smoking, TCPs are more likely to succeed.

John F. Anderson and colleagues explore place-based learning communities (PbLCs), which are dialogue-based networks, and how these can be used to support a community’s ability to generate its own research projects and co-produce locally relevant knowledge with other researchers. This article suggests that PbLCs can be used to strengthen connections within a network. The Health Integration Project Planning Committee, which is a partnership between the First Nations community of Sts’ailes, the Fraser Health Authority, and researchers at the University of Victoria and the University of British Columbia, implemented the principles of PbLCs in a primary health care project, and this resulted in an intimate, trusting partnership.

A qualitative study by Jude Kornelsen and colleagues describes the birth experiences of women in rural First Nations communities before and after the loss of local maternity services. They found that many of the women felt a sense of isolation, alienation, and powerlessness as a result

partenariat entre la communauté de la Première nation de Sts'ailes, la Régie de la santé du Fraser et des chercheurs de l'Université de Victoria et de l'Université de la Colombie-Britannique, a appliqué les principes des CAEL à un projet de soins de santé primaires, ce qui a donné lieu à une étroite collaboration empreinte de confiance mutuelle.

Une étude qualitative menée par Jude Kornelsen et coll. nous informe sur l'expérience d'accouchement vécue par des femmes des communautés rurales des Premières nations avant et après la perte de services d'obstétrique dans leur milieu. Les chercheurs ont constaté que les femmes qu'on avait envoyées accoucher à l'extérieur de la communauté vivaient des sentiments d'isolement, d'aliénation et d'impuissance. Cependant, la plupart des femmes se montraient résilientes, cherchant avec insistance à obtenir les raisons de la réduction des services, ou posant des gestes concrets pour atténuer leurs sentiments d'isolement et de marginalisation au centre de soins où elles avaient été dirigées (par ex., en se faisant accompagner par des membres de leur famille et en retournant à la maison aussitôt que possible).

Cet assemblage diversifié d'articles nous sensibilise au fait que notre santé, qu'il s'agisse de nos opinions entourant la grossesse et la fertilité ou de notre risque de tentative de suicide, est influencée par nos systèmes sociaux. Ce phénomène d'influence donne à penser que nous avons tous la capacité d'être en santé, résilients et influents au sein de nos réseaux; il stimule également la propagation de comportements positifs en matière de santé. Il nous oblige aussi à repenser notre façon de promouvoir et d'améliorer la santé des Premières nations, des Inuits et des Métis, et nous met sur la piste d'approches innovantes en matière de santé publique.

À tous les miens,

Camille Lem, BScN, RN, MEd

Rédactrice en chef

Journal de la santé autochtone

Organisation nationale de la santé autochtone

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Reasons for these differences in sexual experiences and behaviour are less clear. Walters and Simoni (2002) have stressed the importance of considering context when describing behavioural and health outcomes, and highlights that failure to do so can lead to the pathologizing of Indigenous Peoples. Indigenous young people must contend with the destructive effects of colonialism on the structure of communities and interpersonal relationships (Kelm, 1998; Walters & Simoni, 2002), socioeconomic disadvantage (BC Ministry of Education, 2005; Statistics Canada, 1998), and internalized racism and negative stigma (Larkin et al., 2007), all of which likely contribute to individual HIV risk by influencing factors in the microenvironment. Recent Canadian research has outlined links between individual experience of sexual abuse, substance use, and living on a reserve with increased likelihood of pregnancy, STI, and potentially risky sexual behaviours such as condom non-use (Devries et al., 2009a, 2009b). There have also been several U.S. studies linking sexual orientation (Saewyc, Skay, Bearinger, Blum, & Resnick, 1998), peer norms regarding pregnancy (Mitchell & Kaufman, 2002), and knowledge of cultural traditions (Mitchell & Kaufman, 2002) to increased risk of pregnancy in young American Indian women.

The role of norms around pregnancy and fertility in shaping sexual behaviour, particularly in relation to condom non-use, has not been fully explored among young Aboriginal Canadians or American Indians. In Ontario, a focus group and survey study suggested that some service providers for Aboriginal young people viewed Aboriginal communities (particularly in Northern areas) as more accepting of adolescent pregnancy, although young people themselves did not cite this as a reason for pregnancy (Anderson, 2002). Among Northern Plains young people in the USA, early sex and HIV risk perception, alcohol use, and teenage pregnancy (Kaufman et al., 2007) are seen as contributors to HIV risk. Some small-scale quantitative and qualitative studies of pregnant American Indian adolescents (Liu, Slap, Kinsman, & Khalid, 1994; Saewyc, 2003) have also emphasized the potential contribution of pregnancy-related norms to higher rates of adolescent pregnancy.

Using data from a larger qualitative study of sexual health and condom use among Aboriginal young people in British Columbia (Devries & Free, 2011), we explore young men's and women's attitudes and expectations around having children, planning for pregnancy, and how this relates to condom and contraceptive use behaviour.

METHODS

Our qualitative study consisted of 30 in-depth individual, lightly structured interviews (where a brief topic guide was used but conversation also explored topics brought up by participants) (Wengraf, 2001). Participants were young men and women aged 15 to 19 years who self identified as Aboriginal. Interviews were conducted in one urban and two neighbouring rural communities, from 2004–2005.

Community participation and ethical approval

Our ethical approval process involved four sets of permissions. First, Aboriginal community members working with young people in both rural and urban settings were approached to discuss community interest in the project. In the urban setting, there was nobody available to grant formal community ethical approval for the project, so community interest and collaboration was taken as community approval. Second, in the rural setting, we received formal ethical approval from the local tribal council. Third, institutional ethical approval was granted from the University of British Columbia Institutional Review Board, and fourth, from the London School of Hygiene and Tropical Medicine Ethical Review Committee.

Procedure

Young people were purposively sampled to include males and females, and urban and rural residents. The urban setting, located in Vancouver, BC, is one of the poorest neighbourhoods in Canada and has one of the largest urban Aboriginal populations in the country (Ma, 2006). Because they were recruited from this area, the young people in the urban setting interviewed likely represent a subset of Aboriginal young people at increased risk. In the urban setting, young people were recruited by youth worker contacts. Interviews were conducted in private offices/tables in a pool hall and an after-school drop-in centre for Aboriginal young people.

The rural setting, located on Vancouver Island, BC, is relatively remote and consists of neighbouring reserve communities. Young people were recruited by the local STI nurse and the local youth worker. Interviews were conducted in private offices in on-reserve health clinics, one of which doubled as the reserve Internet access point (and was therefore a gathering place for young people).

Consent procedures were outlined verbally and in writing. Parental consent was not required. All participants were invited to sign a consent form, guaranteeing anonymity.



Interviews lasted from about 0.5 to 1.5 hours, and each participant was reimbursed for their time with \$20.

Interview content

The purpose of the interview was explained as “seeking young peoples’ views on sexual health and condom use to make better sex education programs. Participants were asked about condom use and non-use and the sexual encounters in which these occurred; as rapport was established, many young people began to discuss a wide range of sexual health issues and other topics that were important to them. Pregnancy and use of contraceptives were important issues for many young women and men, and many spoke at length about these topics during the interviews.

Analysis

Interviews were tape-recorded and transcribed by Karen Devries. QSR NUDIST software (QSR International, 2006) was used to organize data. A descriptive, thematic analysis was conducted, drawing on some of the techniques from Grounded Theory, including constant comparison and searching for deviant cases (Charmaz, 2000; Glaser & Strauss, 1967). Transcripts were read and re-read, and initially coded thematically using a framework developed based on the first seven interviews. Themes were refined and new ones were added to reflect emerging information (Charmaz, 2000). We initially identified categories of discussion about community norms around pregnancy, young people’s desire for pregnancy, and views on contraceptive use. During the interview process, it became apparent that young people’s views on contraceptive use were somewhat dependent on the type of sexual relationship in which it was occurring. Upon further exploration, it emerged that a subset of young people could view pregnancy as desirable. Here, we present data on these themes with quotes to illustrate our findings.

RESULTS

Perceived community norms

Participant characteristics are described in Table 1. Adolescent pregnancy was somewhat socially normative and occurred among friends, siblings, and cousins in the social circles of young men and women. Participants reported that there was still some negative stigma attached to adolescent childbearing, but some perceived that their parents or grandparents actively desired children or grandchildren.

Perceptions of positive attitudes were especially apparent in the rural setting, although urban participants also reported this:

Participant (P): Like every month she has to ask me, are you pregnant, [Interviewer (I): Yep] I don’t know, I think she just, she just wants another, another nephew, [I: She does?] A niece or nephew. (Rural female)

Others thought their family would be more ambivalent: P: They wouldn’t be mad or sad or anything, they’d be alright with it. (Rural male)

Regardless of whether or not a pregnancy was viewed as stigmatizing, or if young people perceived that their families would be upset if they were to become pregnant or cause a pregnancy, young people universally reported that their families or caregivers would welcome and help care for new children.

TABLE 1. PARTICIPANT CHARACTERISTICS (TOTAL NUMBER OF PARTICIPANTS = 30)

Characteristic	Number of Participants	Percent (%)
Average Age	17 years	
Female	15	50
Urban	19	63
Ever Had Sex	22	73
Ever Been Pregnant or Caused a Pregnancy	6	20
Attending School	18	60

Desire for a pregnancy

Most male and female participants reported that it was desirable to delay pregnancy until they were ready to cope with the responsibility:

P:...when I’m like 20 or something, so I can actually take care of it. Right now it would be too hard, cause I don’t have a job or anything, so that’d be harsh. (Rural male)

Some participants described an ideal time near the end of adolescence or in their early twenties and finishing high school/having an income as prerequisite, but for others, having a stable emotional environment was the most



important determinant of readiness.

In contexts where stable emotional environments were achieved, such as serious relationships (Devries & Free, 2011), both young men and women reported somewhat ambivalent attitudes toward pregnancy:

[I: Well, you are very knowledgeable. Ya, and so, what does she think about getting pregnant, like she's?]

P: I think she wants one, I think she's...ready to be responsible, [I: Ya?] sometimes my answers switch sometimes, it's like ok, I guess I am ready, then next couple days it's like no. [I: Ya?] Oh ya I'm ready, I'm responsible. (Urban male)

Only one young woman desired a baby without mentioning a partner or relationship context.

Views on condom and contraceptive use

Views on condom use were highly dependent on relationship type. In shorter-term “booty calls” and one-night stand relationships, most young people reported consistent condom use to prevent STIs (Devries & Free, accepted August 2010). In the context of longer-term and more serious relationships, several young men reported always using condoms to prevent pregnancy, and several young women also reported consistent use of some method (either condoms or “the pill”). However, other young people described a decision to stop using condoms with their partners, without a switch to other contraception.

This subset of young men and women voiced concerns about hormonal contraception. Young men's comments related to concerns for their partner's health; young women's comments covered health concerns and also suggested fatalistic beliefs about pregnancy. One young woman who had been pregnant was considering birth control but was concerned about side effects:

P: Yeah. I'm thinking about birth control too but it kind of messes up your whole system and stuff. [I: Ya. Which kind were you thinking of?] I don't know. [pause] I don't know. It's kind of risky, but it's good. It's very risky like if you miss one day it's like, whoa. (Urban female)

Other young women described their mothers wanting them to “go on the pill” or doctors wanting them to have “the shot” (Depo-Provera), but were dubious about their efficacy and side effects. In some cases, young women made their objections apparent by not taking pills, taking them

irregularly, or not attending clinic appointments for repeat injections. Young women's descriptions hinted at underlying beliefs about pregnancy as natural, desirable, and inevitable:

P: It's not something you have to be scared about, but it's just whether or not you want lots of children or you don't want a lot of children. (Urban female)

This young woman sees contraceptive failure as an issue influencing how many children to have, versus something scary. Among this subset of young women, discussions were about spacing of pregnancy and number of children, versus timing of the first pregnancy and prevention of pregnancy, again reinforcing that having children is expected:

P: Oh, I guess in a way we knew we were probably going to have a baby together but it wasn't planned or anything. [I: So it was like the timing...] It's like the saying, you know, everything happens for a reason.

Earlier in the interview:

P: I think the Creator put a baby in our lives just to change our lives. (Female, with child)

Thus, for some young men and women in serious relationships, agreeing to cease condom use appears to signify agreeing to the possibility of a pregnancy, although young people did not often report actively desiring a pregnancy.

Role of family

Families played an important role in shaping ideas of what was desirable and normal/acceptable behaviour in relationships among participants. Very few participants lived with both parents; many lived with mothers, grandmothers, or other relatives. Several participants mentioned wanting to correct mistakes they thought their parents had made, when they did become pregnant or have a child:

P: . . . and she was in and out of my life, she's an alcoholic, and my father, too, he's a drug addict right now; he's been in and out of my life. I just want to make sure I'm able to be there for my child when I have one. (Urban male)

This young man (and several others) had experienced disrupted family relationships, but had clear aspirations to accomplish various goals and clear intentions to delay



pregnancy. However, the relationship between family instability and behavioural outcomes for young people is complex. Other young people who had lived with different caregivers over their lives very clearly described sexual behaviour that was risky both from an STI control perspective (which could result in STI transmission), and from an emotional standpoint (regretted incidents).

DISCUSSION

Although there was still some stigma related to pregnancy during adolescence, acceptance and some positive norms surrounding pregnancy and fertility were clear in our sample. Most young people still reported that they would like to delay pregnancy until they were ready. For a subset of Aboriginal young people, “ready” was determined by having a serious relationship. In a serious relationship, ambivalence toward pregnancy and concerns about the efficacy and side effects of hormonal contraception created a situation where unprotected sex was likely to occur, hence increasing STI risk.

Findings in relation to other literature and recommendations for future research

Studies with several First Nations communities in British Columbia indicate that historical cultural norms positively emphasized childbearing and fertility (Barman, 1997; Fiske, 1996). Other studies examining the attitudes of contemporary Aboriginal young people tend to report more discussion of acceptance of pregnancy (Kaufman et al., 2007) versus positive norms. In our sample, young people did perceive some positive norms around childbearing and adolescent pregnancy in their wider communities, beyond simple acceptance. Further research is needed to examine how childbearing, pregnancy, and fertility is perceived within contemporary Aboriginal communities (beyond just young people), and how these norms impact young people’s perceptions and behaviour.

In our sample, despite perceiving somewhat positive norms in the community, young people often reported feeling ambivalent about becoming pregnant. Although outright desire for a pregnancy was not often discussed, young people in serious relationships sometimes did not use contraception effectively. These apparently paradoxical attitudes are not unique to Aboriginal young people. For example, Kendall et al. (2005) studied intentions and timing of pregnancy among poor inner-city African-American

women in New Orleans and found that although women reported wanting to wait to become pregnant, their behaviour was incongruent with these goals. Barrett and Wellings (2002) noted that the entire idea of planning a pregnancy may not be widely applicable among diverse groups of women—some UK women felt it would be too clinical and that they would like it to be a surprise. Further, they found that women’s definitions of planning involved more than researcher’s usual definitions of simply having a positive intention to become pregnant. This may help to explain why some young Aboriginal women did not actively avoid pregnancy, but still did not describe themselves as actively wanting to become pregnant.

The importance of family was clear among our participants, both in terms of families of origin and childbearing. Among Aboriginal young people in British Columbia, family connectedness is strongly associated with having only one sexual partner and using a condom at last sex (Devries et al., 2009b), similar to other populations (Perrino, Gonzalez-Soldevilla, Pantin, & Szapocznik, 2000; Stanton et al., 2002). This is supported by the qualitative data presented here—many but not all young people who had disrupted family relationships described more potentially risky sexual behaviour. Further research is needed to characterize young people who do have disrupted family backgrounds but do not report risky sexual behaviour.

Although it did not emerge in the present analysis, another area that merits further exploration is the link between experience of sexual abuse and beliefs and expectations regarding fertility. In other populations, young women who had been abused were more likely to want a pregnancy versus their non-abused counterparts (Rainey, Stevens-Simon, & Kaplan, 1995). It could be that some of the young people in our sample who had more ambivalent attitudes toward pregnancy were motivated by concerns over their ability to have children after experiencing sexual abuse. Our previous quantitative work showed high levels of sexual abuse and unwanted/forced sex among both male and female Aboriginal young people relative to the general population (van der Woerd et al., 2005), and that these experiences were strongly correlated with risky sexual behaviour, pregnancy, and STI outcomes (Devries et al., 2009a, 2009b).

Limitations

We were able to include both urban and rural young people from two neighbouring reserve communities, thus providing unique data on beliefs about pregnancy and fertility among Aboriginal young people. However, interviewer-participant



interactions shape information given in interviews and how it is interpreted. Ms. Devries is a Caucasian female, and at the time of the interviews, was 25 years old. Most young people appear to relate to the interviewer as a same-age peer but a cultural outsider, and several took the opportunity to educate her about their culture. Interviewees may have presented themselves differently to Aboriginal and male interviewers, and may have disclosed different information. Data collected by different interviewers and methods would be useful to gain different perspectives on sexual health and triangulate these results. Future studies should examine consistency and diversity in attitudes toward pregnancy and fertility among diverse groups of indigenous young people in other locations, since this study focused on one urban and one rural setting. Finally, this analysis focused on one thematic area from a larger study, and was exploratory in nature. Although we reached theoretical saturation with respect to the aims of our larger study, additional qualitative work on the themes presented in this paper would be useful to further explore variation.

IMPLICATIONS AND CONCLUSIONS

Attitudes favouring pregnancy and childbearing mean that condom use interventions are unlikely to be fully adopted among a subset of Aboriginal young people, since condoms prevent pregnancy. Interventions to change individual behaviour must address reasons to delay pregnancy and/or provide improved support to young people who are expecting children. Research into new interventions are needed that focus on the structural elements that shape the development of sexual behaviour and address beliefs around pregnancy, fertility, relationship patterns, and patterns of family interaction.

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depressive symptoms (OR = 4.3, $p < 0.0001$), having a close friend or family member commit suicide (OR = 4.2, $p < 0.0001$), being 12–15 years old (reference group: 16–18 years) (OR = 2.7, $p < 0.0001$), having anxiety symptoms (OR = 2.3, $p = 0.0073$), witnessing an adult hit another adult or a child in the home (OR = 1.8, $p = 0.001$), and being uncomfortable in NZ European social surroundings (OR = 1.7, $p = 0.0040$). Family connection was associated with fewer suicide attempts (OR = 0.9, $p = 0.0002$), but this factor did not moderate the relationship between depressive symptoms and suicide attempt ($\chi^2 = 2.84$, $df = 1$, $p = 0.09$). Family connection acts as a compensatory mechanism to reduce the risk of suicide attempts for Māori students with depressive symptoms, not as a moderating variable.

KEY WORDS

Adolescence, indigenous, Māori, suicide attempt, protective factors, moderation, compensatory mechanism, risk factors, family connection

INTRODUCTION

Indigenous youth around the world experience disparities for suicide and suicide attempts compared to their peers. American Indian/Alaska Native young people (10–24 years) have a suicide rate 3.3 times higher than the U.S. national average (27.7 suicides per 100,000 for males and 8.5 per 100,000 for females) (Centres for Disease Control and Prevention, 2009), and Canadian First Nations youth (15–24 years) have rates five to six times higher than non-Aboriginal youth (126 per 100,000 for males, and 35 per 100,000 for females) (Advisory Group on Suicide Prevention, 2003). Aboriginal and Torres Strait Islander youth (0–24 years) have a suicide rate at least three times higher than non-Indigenous youth (30 per 100,000 for males and 10 per 100,000 for females) (Australian Institute of Health and Welfare, 2006).

In New Zealand, the Treaty of Waitangi (1840) assures Māori, as the Indigenous Peoples, equal standards of health care and health outcomes. Yet indigenous youth in New Zealand do not have equitable access to appropriate healthcare or equitable health outcomes compared to non-indigenous youth. Māori youth (15–24 years) have a suicide rate of 43.7 and 18.8 per 100,000 in males and females, respectively, compared to 18.0 and 9.1 per 100,000 for non-Māori males and females (Beautrais, Collings, Ehrhardt, & Henare, 2005; Beautrais & Fergusson, 2006). The overall suicide death rate for Māori youth (15–24 year olds) in 2006 was 31.8 per 100,000, compared with the non-Māori rate of 16.8 per 100,000 (Ministry of Health, 2008; Coupe, 2000). Given these health concerns, access to appropriate healthcare is essential yet almost 50% of Māori youth could not access the healthcare they had required during the past year. In addition, compared to Pākehā (NZ European) youth,

Māori youth were significantly less likely to access the health care they required [odds ratio (OR) = 1.3; 95% confidence interval (CI), 0.99–1.60] (Clark et al., 2008).

Despite these significant health disparities for indigenous youth, there is limited information about the indigenous- and youth-specific factors associated with suicide attempts. There is also increasing evidence that identification and reduction of risk factors is insufficient to improve outcomes for youth (Resnick et al., 1997). Accordingly, attention is being diverted from a deficits approach that focuses on identifying risk toward a healthy youth development approach that supports the resources of indigenous youth that might reduce the effects of risk factors (Denny, Clark, Fleming, & Wall, 2004; Luthar, 2003; Masten, Best, & Garmezy, 1990; Masten & Shaffer, 2005; Rutter, 1985; Silk et al., 2007; Utsey, Hook, & Stanard, 2007; Logan, 2009; Blum, 1998; Keelan, 2001). Identifying how these mechanisms operate, particularly amongst indigenous youth, is needed to identify factors that can be helped by intervention and to address the persistent mental health inequities faced by young people in Māori and other indigenous communities. This study explores the risk and protective factors associated with suicide attempts, and family connection as a mechanism to reduce the risk of suicide attempts for Māori youth in New Zealand.

METHODS

Ethical approval was granted by the University of Auckland Human Subjects Ethics Committee to conduct a representative national youth health and well-being survey of secondary schools throughout New Zealand (Adolescent Health Research Group, 2003). In 2001, there were 389



eligible secondary schools with more than 50 students enrolled in Years 9–13 (ages 12–18 years). One third of these schools (133) were randomly selected and invited to participate in the survey. In total, 114 schools throughout New Zealand took part in the survey. The response rate for school participation was 86%.

Students who participated were required to be New Zealand residents, have English language skills equivalent of Year 6, and be physically able to use a standard laptop computer. At each participating school, 15% of eligible Year 9–13 students were randomly selected from the school roll and invited to participate. On the day of the survey, if selected students did not arrive at the school study venue, students on a randomly generated reserve list were then invited to participate. In total, 12,934 students were invited to participate in the survey. Three-quarters (9,699) or 75% of students agreed to take part. This represents 4.0% of the total 2001 New Zealand secondary school roll. The age and gender distribution of students who participated in the survey was similar to that of the student population at the surveyed schools and of all secondary students nation-wide (Adolescent Health Research Group, 2003).

Secondary analysis of the data provided by the Māori students was undertaken. Ethical approval for secondary analysis was obtained from the Minnesota Institutional Review Board. All students who reported Māori ethnicity (24.7% of the sample) were included in the analysis, resulting in 2,340 participating students. The Statistics New Zealand ethnic prioritization method was used to classify students' ethnicity (Statistics New Zealand, 2005). Therefore, any student who selected the Māori ethnic group was classified as Māori (participants were able to choose more than one ethnic group). Of the Māori students in the sample, 52.9% were male and 76.1% were 15 years or younger.

Instrument

The survey instrument consisted of a 523-item, anonymous, self-report, branched questionnaire with a comprehensive range of questions related to the health and well-being of students attending secondary school in New Zealand (Adolescent Health Research Group, 2003). The survey was administered via multimedia computer assisted self-administered interview (M-CASI) (Watson et al., 2001).

Consequent variable: Suicide attempt

Suicide attempt is measured using a dichotomous variable derived from the question "During the past 12 months have

you ever tried to kill yourself?" A similar question has been used in the Youth Risk Behaviour Survey (YRBS) in the United States since 1991. Test-retest reliability of the YRBS item in 1999 showed substantial reliability ($\alpha = 72.7\%$) (Brener, Billy, & Grady, 2003).

Focal variable: Depressive symptoms

Depressive symptoms are measured by the Reynolds Adolescent Depression Scale (RADS) (Reynolds, 1987). It consists of a 30-item questionnaire using a four-point Likert scale. A total score above 77 is the level of symptoms associated with clinical depression. The RADS instrument has internal consistency coefficients for American youth Grades 7–12, ranging from 0.91–0.96 with a total sample alpha reliability of 0.92. This instrument appears to be acceptable and valid for measuring depressive symptoms amongst New Zealand youth with a Cronbach's alpha over 0.9 for all ethnic groups, including Māori students (Milfont et al., 2008; Walker et al., 2005).

Moderating variable: Family connection

A family connection scale was developed in consultation with a Māori advisory group, using questions that might theoretically constitute family connection for Māori youth (Table 1). Scales were explored for reliability and validity to create an alpha coefficient of at least 0.60 (Cronbach & Meehl, 1955). Items were summed and scaled where necessary to have a range of 1–4. The resultant score ranged from 10 to 40. The family connection scale had a Cronbach's alpha of 0.84. The family connection scale median was 35 with a range of 13.7–40, suggesting that Māori students report high levels of connection to their families.

Analyses

Frequencies of suicide attempts and hypothesized risk and protective factors were reported by gender (Table 2). The relationships between suicide attempt and hypothesized risk and protective factors were explored through logistic regression adjusting for age, gender, and socioeconomic (SES) variables: school decile (a proxy measure of school level socioeconomic status), parents or family worrying about food, and moving residence frequently. Correlations between explanatory variables were checked as part of the inclusion process. Odds ratios were used to compare the odds/risk and explore associations between the different groups (suicide attempt/no suicide attempt) and various risk and protective factors. Chi-square tests were used to



TABLE 1. FAMILY CONNECTION SCALE

Questions/statements	Responses (n = 2142)	Correlation with total (10 items, $\alpha = 0.84$)
"How much do you and your family have fun together?"	does not apply to me not at all a little *some *a lot	0.59
"How much do you feel that people in your family understand you?"	does not apply to me not at all a little *some *a lot	0.60
"Does your family care about your feelings?"	does not apply to me not at all a little *some *a lot	0.66
"How much do you feel your family pays attention to you?"	does not apply to me not at all a little *some *a lot	0.64
"Most of the time I feel close to my mum" "Most of the time I feel close to my dad"	does not apply to me hardly ever *sometimes *most of the time	0.56
"How much do you feel your relatives (who do not live with you) care about you?"	does not apply to me not at all a little *some *a lot	0.39
"How much do you think your mum cares about you?" "How much do you think your dad cares about you?"	does not apply to me not at all a little *some *a lot	0.46
"Most of the time your mum is warm and loving toward you" "Most of the time your dad is warm and loving toward you"	does not apply to me hardly ever *most of the time *sometimes	0.55
"How much do you feel other family members care about you?"	does not apply to me not at all a little *some *a lot	0.43
"Most weeks you get enough time to spend with your mum" "Most weeks you get enough time to spend with your dad"	never, as he/she is not living with me a little does not apply to me *some *a lot	0.53

Responses were binary and * refers to the factor being present.



determine the strength of associations between a suicide attempt and the other variables (Table 3). A level of significance of 0.1 was used as the basis for deciding which variables were included in the final multivariable model. Distributions were described with prevalence estimates and their 95% confidence intervals. In all analyses, the appropriate procedures for complex survey designs were used to ensure that the correct standard errors were calculated.

Multiple logistic regression analyses were used to explore the relationships between suicide attempt and the family connection scale while accounting for risk and protective variables. Factors that were significant independent predictors of suicide attempt and the family connection variable were included in the final combined logistic regression (Table 4).

To determine if there was dynamic conditionality of moderating variables (e.g., does family connection change or alter its trajectory based on the amount of risk?) an interaction term (depressive symptoms x family connection with suicide attempt as the outcome variable) was used (Rutter, 1985).

TABLE 2. PREVALENCE OF HYPOTHESIZED RISK AND PROTECTIVE FACTORS FOR SUICIDE ATTEMPTS BY GENDER

Hypothesized risk items	n/N	Males % (95% CI)	Females % (95% CI)	Total % (95% CI)
Significant depressive symptoms (RADS)	381/2268	9.5 (7.8–11.4)	22.7 (20.4–25.0)	16.6 (15.1–18.1)
Anxiety symptoms	115/2185	5.8 (4.4–7.3)	4.7 (3.5–6.0)	5.2 (4.3–6.2)
Gay, lesbian, or bisexual	92/2063	4.4 (3.0–5.7)	4.3 (3.0–5.7)	4.3 (3.4–5.3)
History of sexually coercive/abusive experience	630/2175	22.6 (20.2–24.9)	34.1 (30.9–37.2)	28.7 (26.8–30.7)
Bullied weekly or more frequently	147/2219	7.3 (5.6–9.0)	5.9 (4.4–7.3)	6.5 (5.4–7.7)
Having a friend or family member who had committed suicide	951/2204	30.2 (27.1–33.3)	54.4 (51.3–57.4)	43.0 (40.3–45.7)
Witnessed adults hitting a child or adult in their home	560/2117	24.9 (22.0–27.8)	28.0 (25.0–31.0)	26.6 (25.0–31.0)
Weekly or more frequent use of marijuana	250/1981	14.6 (11.7–17.5)	11.5 (9.0–13.9)	12.9 (11.0–14.8)
Binge alcohol use	1012/2012	52.0 (48.5–55.5)	49.5 (46.8–52.2)	50.6 (48.3–53.0)
Have a disability or chronic illness	920/2329	36.0 (32.8–39.3)	43.0 (40.0–45.9)	39.7 (37.3–42.1)
Moving home more than twice this year	400/2309	14.6 (12.1–17.1)	19.3 (16.7–21.8)	17.1 (15.0–19.1)



Hypothesized risk items	n/N	Males % (95% CI)	Females % (95% CI)	Total % (95% CI)
Uncomfortable in Pākehā (NZ European) surroundings	616/2311	26.2 (23.2–29.2)	26.2 (23.4–29.0)	26.2 (24.2–28.2)
Have a friend to talk to about a serious problem	1688/2043	74.2 (71.4–77.0)	89.8 (88.1–91.6)	82.5 (80.5–84.5)
Have an evening meal with family most days	1296/2279	60.1 (56.8–63.5)	53.8 (50.7–56.9)	56.8 (54.3–59.2)
Proud to be Māori	1620/1875	84.7 (82.0–87.5)	87.4 (85.3–89.5)	86.2 (84.2–88.1)
Education about Māori culture from parents relatives, *Marae, and *Kohanga Reo	1615/2285	63.0 (59.3–66.8)	77.2 (73.9–80.5)	70.6 (67.6–73.6)
Have people in my neighbourhood who care about how my life is going	1466/1978	71.5 (68.6–74.5)	76.3 (73.8–78.9)	74.1 (72.1–76.1)
Have an adult outside my family I would feel okay talking to about a serious problem	1203/1974	58.2 (54.8–61.6)	62.9 (60.2–65.7)	60.7 (58.5–62.9)
Neighbourhood is safe	1640/1966	86.3 (84.0–88.6)	81.0 (78.2–83.9)	83.5 (81.5–85.5)
Spirituality is important	1459/1931	68.4 (64.3–72.6)	81.4 (78.8–84.0)	75.4 (72.6–78.2)
Family connection scale	2142	33.9 (33.6–34.1)	34.5 (34.2–34.7)	33.4 (33.0–33.7)

*Marae is a traditional meeting place for whānau (family), hapū (sub-tribe), and iwi (tribal) members usually characterized by a named whareniui (meeting house) and named wharekai (dining house). Some marae are more commonly known by the name of their whareniui, which is usually named after a tupuna (ancestor).

*Kohanga reo is a kindergarten designed to immerse children in Maori language and culture.

Item	N	p	Odds ratios (95% CI)
Have a friend to talk to about a serious problem	2033	0.37	0.83 (0.56–1.23)
Have an adult outside my family I would feel okay talking to about a serious problem	1973	0.38	0.86 (0.60–1.22)
Neighborhood safe	1961	0.0184	0.67 (0.48–0.93)
Spiritual beliefs are important to me	1922	0.35	0.86 (0.63–1.1)

#The family connection scale is associated with a reduced odds of attempting suicide. For every one unit increase in the family connection score we expect a statistically significant decrease (0.90) in the odds of attempting suicide.

TABLE 4. REDUCED MODEL FOR SUICIDE ATTEMPT

	OR	P
Age	2.68 (1.69–4.24)	<0.0001
Gender	1.27 (0.84–1.91)	0.26
Anxiety	2.29 (1.25–4.21)	0.0073
Depression	4.35 (2.47–7.66)	<0.0001
Witnessed adults hitting a child or another adult in their home	1.81 (1.27–2.58)	0.001
Friend/ family member committed suicide	4.20 (2.84–6.91)	<0.0001
Uncomfortable in Pākehā surroundings	1.70 (0.84–1.91)	0.004
Family connection scale #	0.94 (0.91–0.97)	0.0002

#The family connection scale is associated with a reduced odds of attempting suicide. For every one unit increase in the family connection score we expect a statistically significant decrease (0.94) in the odds of attempting suicide.



RESULTS

Focal variable: Depression

Overall, 16.6% of Māori students had a score >77 on the Reynolds Adolescent Depression Scale, indicating they had significant depressive symptoms (female 22.7%, male 9.6%). The odds of a student reporting significant depressive symptoms were over two and a half times higher among females than among males (OR = 2.77, 95% CI (2.14–3.57), $p < 0.0001$).

Consequent variable: Suicide attempt

Overall, 11.9% of Māori youth in the sample reported a suicide attempt in the past year (females 15.3%, males 8.0%). The odds of a student reporting a suicide attempt were two times higher among females than among males (OR = 2.08, 95% CI (1.51–2.84), $p < 0.0001$).

Risk and protective factors for suicide attempt by gender

Many Māori students reported a history of sexually coercive and abusive situations (28.7%), witnessed adults hitting children or other adults in the household (21.0%), or having a friend or family member commit suicide (43.0%) (Table 2). Over half of students reported committing an act of violence (54.0%), and half (50.4%) reported binge drinking. A significant proportion of Māori students (39.7%) reported that they had a chronic health condition or disability. Most Māori students reported that they had a friend that they could talk to if they had a serious problem (82.5%), and most reported being proud to be Māori (86.2%). In general, Māori students reported high levels of protective resources. However, females more frequently reported depressive symptoms, a history of sexually coercive experiences, a chronic illness or disability, a friend or family member who had committed suicide, and having a friend to talk to about a serious problem.

Logistic regression for suicide attempt

Logistic regressions were undertaken to see whether there was an association between the risk and protective variables for suicide attempts when controlling for age, sex, and proxy SES variables (Table 3). Most of the identified factors were correlated with a suicide attempt except “a friend to talk to,” “proud to be Māori,” “education about Māori culture from parents, relatives, Marae, and Kohanga Reo,” “have an adult outside my family I would feel okay to talking to about a

serious problem,” “know people in the neighbourhood,” and “spiritual beliefs are important to me.”

Model building

All variables found to be statistically significant in the logistic regressions were included in a model to examine risk and protective variables for suicide attempt within the past 12 months, with age, gender, and proxy SES variables.

In the initial model, 35% of the students had missing data for at least one of the variables and were excluded, leaving 1528 out of a possible 2340 observations. In an attempt to retain more students in the model and reduce the likelihood of bias, variables with fewer than 2000 students were removed. This resulted in a model with fewer variables but a larger sample size ($n = 1686$, 28% of the total Māori sample). In a final step, variables that were not significant from that model were removed to create a final reduced model (Table 4) ($n = 1835$, 78% of the sample).

The strongest risk factor for a suicide attempt in the past year, was depressive symptoms (OR = 4.335, $p < 0.0001$) (Table 4). Other significant factors were having a close friend or family member commit suicide (OR = 4.212, $p < 0.0001$), being in a younger age group (OR = 2.676, $p < 0.0001$), having anxiety symptoms (OR = 2.313, $p = 0.0068$), witnessing an adult hit another adult or a child in the home (OR = 1.812, $p = 0.0010$), and being uncomfortable in Pākehā (NZ European) social surroundings (OR = 1.698, $p = 0.0040$).

There was one factor that worked in a protective manner for a suicide attempt in the past 12 months: family connection (OR = 0.938, $p = 0.0002$).

Moderation model

It was hypothesized that family connection would moderate the relationship between depression and suicide. Students who reported depressive symptoms were significantly more likely to report a suicide attempt compared to those who didn't report depressive symptoms (39.8% vs 6.2%, OR = 9.4, $p < 0.0001$). To test whether family connection was moderating the risk of suicide, an interaction term was added into the model (family connection x depression) to test the relationship over and above the effects of covariates. The association between suicide attempts and family connection was not found to differ between those with and without depression (OR = 2.8, $p = 0.0942$). Therefore, family connection does not appear to moderate the relationship between depression and suicide.



exposure or risk, rather than only when a young person is exposed to high risk or adversity. This is contrary to multiple other studies that have found that family connection acts as a protective factor and moderates risk (has a resilience effect) (Resnick et al., 1997; Borowsky et al., 1999; Pettingell, 2008). Our findings are consistent with other studies that found that family connection is a compensatory mechanism (Fergusson & Horwood, 2003; Fleming, Merry, Robinson, Denny, & Watson, 2007; Luthar & Cushing, 1999; Scaramella, Conger, & Simons, 1999; Steinhausen & Metzke, 2001).

These findings have important public health implications. The identification of risk factors are a necessary part of screening, referral, and treatment of suicidality, however, Hawton et al. concluded that “suicide rates are unlikely to decline as long as we confine our prevention efforts to only those who are at immediate risk of attempting suicide” (Yip, 2005, p. 29). Population approaches that seek to reduce suicidality among the whole population are in turn likely to reduce the proportion of morbidity and mortality associated with suicide (Rose, 2008; Yip, 2005). Our study found that family connection plays a significant role in reducing risk of suicide at all levels if Māori youth perceive their families to be caring and supportive. Evidence suggests that programs that help parents to develop positive parenting skills can help reduce mental health problems in their children (Fergusson, Stanley, & Horwood, 2009; Greenberg, Domitrovich, & Bumbarger, 2001; Kumpfer & Alvarado, 2003; Martinez & Eddy, 2005; Toumbourou & Gregg, 2002; Kotchick, & Forehand, 2002). In addition, programs and policies that enhance indigenous families’ knowledge through whānau (family) transformation processes, positive whānau development, and enhance mana (prestige and integrity) are more likely to actively engage Māori/indigenous families rather than mainstream programs of parenting that are often perceived as blaming or judgemental (Herbert, 2001; Livingstone, 2002). Strategies that support positive mental health programs (Beautrais, 2003; Yip, 2005) and improve and support family connection for indigenous populations are required.

There are several limitations in this study. Socioeconomic factors are important to measure accurately, however, children and youth are notoriously inaccurate at reporting parental income (Currie, Elton, Todd, & Platt, 1997). We used proxy socioeconomic measures that students would be able to respond to such as “parents or family worrying about not having enough food,” and “moving residence or home frequently.” Alongside these items, school

decile (a school level socioeconomic measure that accounts for household incomes in the area, parental occupation skill levels, household crowding, parental qualifications, and income support/welfare) (Ministry of Education, 2010) was used. The authors acknowledge that these proxy socioeconomic measures may not be the best indicators for measuring socioeconomic factors among this population. The risk and protective variables in this study were not exhaustive, rather they were comprised of items available within a national youth health survey. Therefore, there were several risk factors for suicide that were not included in this survey, such as panic attacks (Fergusson, Woodward, & Horwood, 2000; Pilowsky, Wu, & Anthony, 1999) and a broad range of significant traumatic life events including intergenerational trauma (Dube et al., 2001; Gould, Greenberg, Velting, & Shaffer, 2003; Ypinazar, Margolis, Haswell-Elkins, & Tsey, 2007). These risk factors for suicide are not accounted for in this analysis.

Another limitation of this study is the measure of family connection. Capturing this complex cultural construct is a challenge in quantitative research. While the family connectedness scale was developed in association with the Māori advisory group, a mainstream youth health survey does not have the capacity to fully explore the cultural concepts for Māori families and how they establish and maintain connectedness. Further qualitative research is needed to explore the unique role of Māori families and how family connection can be fostered. Another limitation is that this data was collected in 2001. While this secondary analysis is now 10 years old, the authors believe that this research adds to the scarce literature regarding indigenous youth and mental health outcomes. Finally, as with any cross-sectional study, it is impossible to infer causality or identify the factors that may precede a suicidal act.

CONCLUSIONS

This study demonstrates that family connection reduces the risk for suicide attempt for Māori youth across all levels of risk. Policies, programs, and services that prioritize indigenous youth mental health and support indigenous philosophies of family well-being and connection are required. These strategies are likely to improve mental health for all indigenous youth, not just those who are at high risk for negative mental health outcomes. Finally, this study adds to the growing body of evidence that a dual strategy to reduce a range of risk factors and foster the positive



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What Are the Odds? Community Readiness for Smoke-Free Bingos in First Nation Communities

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ABSTRACT

Community members have identified second-hand smoke exposure among young women and children within First Nations communities as a concern. As part of a community-based research project, we analyzed experiences related to establishing smoke-free public spaces and the challenges related to smoking and bingo. The purpose of this study was to a) describe and compare community smoking at bingo in First Nations communities, and b) draw implications for assessing and supporting community readiness for comprehensive tobacco control policies (TCPs). Data were collected using individual interviews, group discussions, and observations in the community. The establishment of smoke-free public spaces in communities evolved out of concern by people traditionally responsible for the well-being of the community. Despite close proximity and similar socioeconomic contexts, readiness to extend these successes to bingos held in community halls was influenced by three main factors: a) economic drivers, b) the smoking majority, and c) grassroots support. Although models for assessing community readiness provide a useful starting point for understanding local TCP development and implementation in First Nations communities, other factors also need to be considered. Using a comprehensive approach to assessing community readiness has the potential to increase success in extending TCPs and practices in First Nations communities in ways that are culturally relevant, address local conditions, and build on existing efforts.



KEYWORDS

Second-hand smoke, tobacco control, policy, public health, Aboriginal

INTRODUCTION

The prevalence of cigarette smoking in First Nations communities in Canada is estimated to be three times that of the general population (First Nations and Inuit Health Committee, 2006). Regardless of age, health-related consequences are evident (Assembly of First Nations, First Nations Information Governance Committee, 2007; Hutchinson et al., 2008; Johnson et al., 2004). Smoking-attributed deaths account for 8.5 potential years of life lost amongst Status Indians compared to 5.8 years for the general population in BC (Office of the Provincial Health Officer, 2007). An effective strategy to reduce second-hand smoke (SHS) exposure and decrease smoking overall is to implement tobacco control policies (TCPs) (Rohrbach et al., 2002). While TCPs have been a topic of much research, there is a lack of understanding about the development and implementation of tobacco policies in First Nations communities to curb cigarette smoking and exposure to SHS.

As part of a community-based research project exploring ways to support young First Nations women in their efforts to protect their children from SHS, we became interested in community efforts to develop, implement, and maintain policies to create smoke-free public spaces, and the challenges that were experienced regarding extending smoke-free policies to bingo. The objectives of this paper are to a) describe and compare community responses to smoking and bingo in First Nations communities and b) draw implications for assessing and supporting community readiness for comprehensive TCPs.

BACKGROUND

Smoking is related to social disadvantage and health inequities (Graham, 2006), a relationship clearly reflected in First Nations communities in Canada where chronic socioeconomic disadvantage exists because of colonization, multigenerational effects of residential schools, and high rates of unemployment. Research suggests that these experiences create unique challenges associated with

reducing tobacco use and creating smoke-free spaces in reserve communities (Greaves & Jategaonkar, 2006). As a result, the rate of tobacco use by First Nations people is decreasing at a slower rate than in the general population (First Nations and Inuit Health Committee, 2006)

Results of studies indicate that while TCPs in indigenous communities may be formally implemented and maintained in government and school buildings, these same policies often do not extend to other public spaces (Glasgow et al., 1995; Hall et al., 1995; Ivers et al., 2006; Lichtenstein et al., 1996). Tobacco use persists where smoking is linked to sources of community revenue, such as recreational spaces that are used for sports, fundraisers, casinos, and bingo (Glasgow et al., 1995). A better understanding of the enactment of smoke-free policies in First Nations communities is needed to identify factors influencing community readiness for comprehensive TCP development and implementation as well as considerations in tailoring these to local conditions and cultural influences.

The community readiness model (CRM) (Oetting et al., 1995) was originally developed to assess and guide community capacity for alcohol and drug prevention and treatment programs. The model includes six dimensions (i.e., knowledge, leadership, resources, community climate, existing policy efforts, and political climate) that are believed to determine community readiness for change. These dimensions are used to assess the community's overall stage of readiness. Recently, the model was adapted to assess community capacity for planning and implementing smoke-free policies in Kentucky (York et al., 2008). Although the model has shown promise for assessing Aboriginal community readiness for drug and alcohol programming and other initiatives (e.g., breast cancer and HIV/AIDS prevention) (Borrayo, 2007; Jumper-Thurman et al., 2007), it has not been used to assess readiness for TCP change.

In Canada, TCPs are not consistently applied within First Nations communities because of the recognized inherent rights to self-governance and successful challenges by individual First Nations to the jurisdictional applicability of particular policies. When this research was conducted, First Nations reserves in most provinces, including



TABLE 1. TOBACCO CONTROL PRACTICES AND POLICIES IN THE STUDY COMMUNITIES

Community	Description of Smoking Practices in Community Halls	Tobacco Control Policies and Strategies				Activities Held at Community Halls		
		Written Policy	Informal Policy – Accepted practice	Environmental Control of SHS (e.g., strategies to promote air exchange)	Designated Non-smoking Room	Bingo	Community Events	Sport and Recreational Activities
#1	Partial Ban: Smoke-free dances/meetings/feasts. Smoking allowed at bingo. Non-smoking room and heating/cooling/air exchange system (inoperable during bingos)		X	X	X	X		
#2	Partial Ban: Smoke-free during youth/school activities and community events. Smoking permitted during bingo and dances		X			X	X	X
#3	100% Smoke-free for all events: Financial penalties to event organizers if smoking occurs in hall	X				X	X	X
#4	Partial Ban: Only upstairs section of the building is smoke-free		X		X	X	X	X
#5	Partial Ban: Non-smoking during feasts		X					
#6	Partial Ban: Non-smoking during feasts		X					

British Columbia, were largely exempt from provincial regulations governing tobacco control (First Nations and Inuit Health Committee, 2006). As this project came to an end, the province of British Columbia enacted changes to the Tobacco Control Act (British Columbia, 1996) to extend tobacco control measures by prohibiting smoking within any enclosed or partially enclosed public structure. Although this new policy was meant to protect all British Columbians, its implementation in First Nations reserve communities in British Columbia remains uncertain. So, it is becoming increasingly important to understand the systematic influences on the creation of smoke-free spaces and community readiness for change in First Nation communities and to provide strategies to support TCPs that are relevant to First Nation communities. We believed that a close examination of First Nation communities' responses to smoking in the context of increasing regulation of smoking in the province could provide important information for assessing and supporting community readiness for comprehensive TCPs as well as a basis for evaluating the potential usefulness of the CRM in guiding future initiatives.

METHODS

This study was conducted as part of a larger community-based research project that investigated exposure of young women and their children to SHS. To address this concern, a partnership between community members, university researchers, and the First Nations and Inuit Health Branch of Health Canada was established to obtain funding to conduct the research and facilitate knowledge exchange.

Study context

The research took place in a region that included six small First Nations reserve communities and a small off-reserve town in close proximity to one another. The communities ranged in size from 200–700 residents. At the time of the study, unemployment rates were reported to be 33–50% for men and 11–41% for women. Median annual incomes ranged from \$8–14,000, with women reporting slightly higher incomes than men (Statistics Canada, 2008). Anecdotal evidence gained from informal community surveys suggests that almost half of local residents smoke cigarettes. SHS was consistently prevalent in these First Nations communities at several locations including homes, bingo, and sporting events.

In each community, elected band councils set policies for their respective community and managed community affairs. Each band council was also responsible for managing a community-owned hall, including setting rental fees and smoking policies. Differences arose in the formal and informal policies that were developed and carried out relating to smoking among the communities. Formal written policies related to smoking were in place for only one community and in the remaining communities, informal practices reflected community decisions related to smoking (see Table 1).

These halls were centrally located in communities and provided a venue for feasts, private functions (e.g., weddings, funerals), and other community activities including bingo. In one community, the hall was attached to a school and served as the school gymnasium during the day. Hall managers were often hired to take care of the building and report compliance with policies. Community halls provided a valuable source of revenue for each band in the selected communities.

Data collection

Data was collected over a two-year period and involved tape-recorded individual interviews and focus group discussions with 26 women, 17–35 years of age who were pregnant or parenting young children. The smoking status of these women were ex-smokers (7), occasional smokers (9) and daily smokers (10). Also interviewed were key informants (15), elders (9), middle-aged women (7), youth (6) and men (3). Most interviews were conducted by the community research assistant who grew up in the area and was also a band member from one of the other participating communities. The University of BC behavioral ethics review board confirmed that this research project met all ethical guidelines.

Discussions focused on what life was like in the communities for pregnant women and women with small children with respect to smoking and SHS, challenges and changes needed in communities to minimize exposure to second-hand smoke, strategies employed to reduce or minimize exposure to SHS, how smoking was addressed in relation to community events including bingo, what decisions were made and by whom, and what factors influenced policy decisions related to tobacco and creating smoke-free spaces in community halls and other public spaces. All interviews and small group discussions were tape recorded and transcribed word for word. These data were supplemented with participant observations about areas and events where smoking took place and how smoking was



managed. Finally, documents related to federal, provincial, and regional written policies on smoking in public places were analyzed and compared with study findings.

Data analysis

Qualitative analysis was done on the transcribed interviews, focus group data, and field notes. The data analysis began with a close reading of these data by members of the research team. Through a repeated process of reviewing the data, posing sensitizing questions (e.g., what is going on there?), and team discussions of the data, themes were identified. A coding scheme was developed based on these themes and was used to code the data. NVivo (QSR International, 2008), a computer software program for qualitative analysis, was used to retrieve the data to allow the team to examine issues and dynamics related to tobacco control in each village, and to compare experiences across the study settings. For this paper, we focused on data related to bingos because it consistently appeared in the data as controversial space for both smokers and non-smokers and presented the most consistent experiences of exposure to second-hand smoke among participants. Preliminary insights were shared with representatives of the community to validate and refine findings.

RESULTS

Among the six community-owned and operated halls in the study, there were variations in accepted practices and policies related to smoking in the community halls (see Table 1). The most successful maintenance of a smoke-free environment was the accepted practice of banning smoking in community halls during feasts, a practice that was evident in all of the communities. The development of this practice occurred outside formally recognized policy development structures, i.e., band council, tribal association, or other governing bodies. Rather, it evolved out of concern by those people who were traditionally responsible for the well-being of the community, the hereditary chiefs, and supported by a high regard for demonstrating respect for others' choices. However, these successes in establishing smoke-free public spaces had not translated to bingos with the same consistency. In some of the same community halls where feasts were hosted, bingos were held where there were no restrictions on smoking. In comparing efforts to extend smoke-free practices to bingos, several factors were identified as influencing differences in community readiness: a) economic drivers, b) the smoking majority,

and c) community and grassroots support. Each of these factors and their influence on developing and implementing smoking restrictions at bingos is discussed in the following sections and illustrated by using community experiences.

The economic drivers of tobacco control policy: The case of Hall #1

P2: They did try to cut [smoking] out in our hall twice and they didn't pull very many people in for bingo [so they gave up].

P1: All they think of is profit, they don't think of the end results.

The economic influences on tobacco policy were most clearly reflected in Hall #1. Although smoking has been prohibited in all community-owned buildings including a smaller hall since the 1970s, exceptions are made for bingos in the main community hall. In 2002, two steps were taken to reduce exposure to SHS during bingos. The band council authorized a non-smoking room for bingo players with a wall of windows and a door opening into the main area of the hall. In addition, a heating and air exchange system for reducing second-hand smoke was also installed at great expense. Participants commented that the non-smoking room was a "strange approach" to addressing SHS because it isolated the people trying to make healthy choices. One elder remarked that the comfort of the smokers was clearly prioritized over that of non-smoking bingo players. The poor design of the non-smoking room resulted in some non-smoking bingo players staying in the smoking area and enduring the smoke rather than be isolated in the non-smoking room. Moreover, when the powerful heating and air exchange system disrupted the enjoyment of bingo players, complaints led to a decision to completely turn off the exhaust system during bingo games. Ultimately, the non-smoking space and the expensive exhaust system became unpopular among non-smokers and smokers, and did not serve as an effective intervention to protect the health of those in attendance.

Economic pressures underpinned efforts to accommodate smoking during bingos. These pressures were related to the lack of alternative revenues to support community activities (e.g., recreational activities, purchase of sports equipment) and for the operation and maintenance of the hall. Bingos were key revenue generators when the sale of cigarettes, the rental fee paid by bingo hosts, and the proceeds of each bingo were considered. One participant underscored the importance of retaining smoking for bingo at the hall by stating



We [would] have a revolt if we [let non-smoking] get in. Unfortunately, it generates a source of revenue, cigarette sales at the bingos. It generates revenue because we have a quota of cigarette from the government for that purpose.

The importance of generating revenue through bingo resulted in the hall being used less frequently for its original intended purpose, i.e., sports and recreation.

Research participants remarked that an effort to communicate with the band council about the smoking policy at hall bingos was not productive. In fact, at the time of the study, the band leadership was considering increasing the investment in ventilation for the hall and turning it “into a bingo facility 100%, because that’s all it’s used for.”

The smoking majority: The case of Hall #2

The influence of the smoking majority was clearly shown in Hall #2. This community had a multipurpose building, which served as their community hall to host a variety of events and as a gymnasium because it was connected to a school for kindergarten to grade 7. There were no written smoking policies for this hall. Although there were smoking restrictions during feasts and similar community events when children and elders were present, smoking was permitted during bingos. Even though the school also used the building, smoking bans on all school grounds in the province did not appear to work.

Our band council tried to make it a non-smoking hall but bingo is our source of income for programs in our community and you can’t stop having them ‘cause we need them.... For other activities, like when we have children, babies, people that are chronically ill that come to feasts and we don’t allow [smoking] because of second-hand smoke.

Some community members noted there were problems with current practices. Although the multipurpose hall was supposed to be available for school athletic activities, with bingos occurring Friday, Saturday, Sunday, Monday, and Thursday each week, it was more convenient to leave the tables and chairs set up for bingo, resulting in cancellations or restrictions of other activities, including those for children.

They don’t consider our students ... It just went to show you know, they left it set up for bingo all those days, didn’t let those poor kids in there and just still had a bingo. So, I think they think bingo is just more important.

Some also complained that the hall often smelled of smoke, making it an unpleasant and unhealthy space for children’s athletic activities. In addition, non-smokers were frustrated that the bingo revenue was not being used to maintain or improve the facility for the children. Despite these concerns, the popularity of bingo and the smoking majority were barriers to creating a smoke-free hall in this community. Some held little hope that bingo hosts and band council would change the smoking policy because they themselves were smokers and bingo players. The fact that one of the bingo hosts was on the school board added additional complexity to making any changes.

Non-smokers were clearly the minority amongst bingo players, and the few non-smokers who complained about SHS in the hall to the band council and school board were met with silence.

I’m not sure why it’s so hard to keep the smoking from the bingos. I know in our community centre here we’ve addressed the issue with letters and during planning sessions with band council. We’ve addressed the issue as well when this new council got in. They had a planning session with the community and that issue was also addressed and still like it’s almost two years now and they still haven’t responded to any requests of having a non-smoking hall when it comes to bingo.

While the multipurpose building in this community provided a shared space for community members to interact, the imagined and real importance of bingo and the reluctance to institute smoking restrictions for bingos reduced the accessibility and intended use of this multipurpose site.

Community and grassroots support: The case of Hall #3

The influence of community and grassroots support for smoke-free spaces was most clearly shown in Hall #3. Here, the community hall was a large stand-alone facility equipped with a kitchen, exercise room (that was closed at the time of the study), snack bar, and several small meeting rooms used



by community groups (e.g., Head Start program) and for band council meetings. Unlike other halls in the area, smoking was not permitted in the building for any event. The decision to “go smoke-free” was made by the band council following a grassroots community consultation. Support from a cross section of the community was perceived as important in the process:

When we went non-smoking, we did have the support of the elders and we did have support of some youth and youth programming coordinators so, it was a full spectrum. So, maybe that was why it was an easy thing for us to do ‘cause we knew it was a concern from all age demographics.

In taking on the often unpopular decision to implement a smoke-free policy, band councilors and others did not expect it to be easy and anticipated complaints from smokers as well as lost revenue. However, a resolve to make the right decision for the community, being prepared to respond to criticism, and a desire to protect their newly renovated hall helped them stand their ground:

When we walked into the non-smoking, we said half a year minimum. Give it six months you know ‘cause the first two, three months people are going to grumble about it and then the last four to six months people are getting use to it. So it’s not something that you can’t just try for a month ... you just must ride it out. And then about four to six [months] people start seeing the benefits. They start noticing, “Gees I don’t smell like an ashtray.”

At the time of our study, the hall had been smoke-free for approximately two years. When the smoking ban was introduced, bingo attendance declined as smokers gravitated to halls hosting bingos where smoking was allowed. However, over time attendance improved, and individuals who had previously quit going to bingo because of the smoke returned to the hall. Because attendance had not returned to previous levels, other sources of revenue generating activities were being considered, including renovations to refurbish the hall as a “fully functioning sports facility” to host popular all-Native hockey and basketball tournaments. Supporting Native sports was considered a “big business” activity that could generate much needed revenue for the community and also benefit youth in the community. Finding the resources to make these changes was identified as a priority.

Competition for bingo players and revenue

There was fierce competition among the six communities for bingo players and revenue generated from bingo that was fuelled in part by geographic proximity, the lack of other recreational opportunities, and shared economic circumstances. Accordingly, the non-smoking policy at Hall #3 and the temporary closure of another hall (#4) for renovations resulted in the opportunity for attracting larger numbers of people to bingos that allowed smoking. This resulted in increased revenues for those venues—a circumstance that was noticed by band councils. In an otherwise economically deprived region, there was very little profit or incentive for band councils to mandate smoke-free bingos when the demand for smoking bingos appeared to be increasing.

Contrary to the perception that a “revolt” would break out if smoking was banned at bingo events, the experience of implementing a non-smoking policy at Hall #3 bingos suggested that responses might be milder than anticipated. Most regular players, many of whom are smokers, continued to attend the bingos at Hall #3 when it went smoke-free. One participant observed, “I don’t think the demographic has changed much, I think people just taught themselves to live by the policy.” However, it appears that there were some limits to a non-smoking policy for bingo venues because of the uneven playing field. When a large number of bingo players was needed to provide “big prizes,” bingo organizers made sure to hold the bingo at a hall that allowed smoking to “get the crowd.”

DISCUSSION

The findings of this study illustrate the challenges that face First Nations communities when they try to develop, implement, and maintain comprehensive TCPs to protect community members from SHS, as well as successes in establishing smoke-free spaces. Knowledge of the health effects of SHS and the actions of key stakeholders in the community have been effective in changing smoking practices at community events such that smoking restrictions have become accepted. Despite these successes, smoke-free measures are trumped when economics are at play, as in the case of bingo. The uneven economic and social field created by band councils making different decisions about smoking at bingo was a disincentive to change.



The findings provide support for the use of the CRM (Jumper-Thurman et al., 2007; Oetting et al., 1995; Plested et al., 1999) and its refinement for TCP development (York et al., 2008). Important dimensions of community readiness, including knowledge of the effects of SHS, leadership, resources, community climate, existing smoke-free policy efforts, and political climate, were reflected in experiences in the study communities and explain some of the differences in policies relating to smoke-free public space. For example, the importance of community climate was reflected in shared values and norms related to respect for others' beliefs and differences, the high regard for elders, the importance placed on child and youth health, and the significance of socializing with family and friends in rural communities, all of which create a positive climate for introducing smoking bans. Previous efforts to gain support for smoke-free feasts in study communities drew on these values in building grassroots support for voluntary changes.

Similar to other findings (York et al., 2008), however, voluntary practices related to banning smoking at some community events showed weakness in influencing the expansion of TCPs to bingos. Although the CRM provides a useful starting point in understanding the processes involved, it does not appear to be comprehensive enough to capture complexities found in the study communities. Important factors identified in this study that influenced community readiness were economic pressures (related to the lack of dependable sources of revenue) and the smoking majority (related to social circumstances underpinning high rates of smoking). The close proximity of the study communities coupled with their shared experiences of disadvantage resulted in competition for scarce economic resources and a lack of political will to change local policies relating to extending smoke-free space. Another important dimension of readiness for change was grassroots support. With a strong base of community support for extending smoking bans to bingo at Hall #3, those in formal leadership positions were willing to take risks for the health of their community and introduce smoke-free bingos. Although leadership is included as an important dimension in the CRM (Oetting et al., 1995), findings related to the influence of economic and social factors are not clearly reflected in the model.

In disadvantaged Aboriginal communities, the use of models of community readiness to guide the development and implementation of TCPs need to account for the underlying factors that underpin tobacco policy on reserves, particularly social and economic factors underpinning smoking (Wardman et al., 2007). Graham et al. (2006) have

argued for more attention to "leveling-up" opportunities and living standards in disadvantaged communities to address these factors. Our findings also reflect this direction. Policies and programs to support economic development, provide stable employment, and expand opportunities for social support, recreation and social networking to reduce reliance on bingos are likely to increase readiness for extending TCPs and support tobacco reduction efforts in First Nations communities. Although a surcharge on tobacco sales on reserve can provide additional revenues and is an effective population-based approach to reducing tobacco use (Wardman & Kahn, 2005), other revenues will also be needed. Our findings suggest that communities that see opportunities to develop sustainable sources of revenue (e.g., providing venues for growing interest in Aboriginal sports) are more willing to implement smoke-free policies. Supportive structures that increase attendance at non-smoking bingos, such as child minding or other incentives, may provide an interim solution.

CONCLUSIONS

In summary, only one of six First Nations communities at the time of this study was successful in extending smoke-free policies to include bingos. Using a comprehensive approach to assessing community readiness has the potential to increase success in implementing comprehensive TCPs and practices in First Nations communities in ways that are culturally relevant, address local conditions, and build on existing efforts.

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Strengthening Aboriginal Health through a Place-Based Learning Community

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ABSTRACT

The Sts'ailes Primary Health Care Project is a partnership in Sts'ailes, British Columbia, between Sts'ailes, Fraser Health Authority (FHA), and academic researchers at the University of Victoria and the University of British Columbia. The creation of knowledge by and for Aboriginal Peoples and a commitment to strength-based research are key aspects of the project. These key elements guide the partners as they work together to explore and identify ways to enhance health services for the Sts'ailes people and other FHA clients in the region. This paper describes how the principles of place-based learning communities (PbLCs) are being implemented within the collaboration in order to facilitate the co-production of culturally appropriate strength-based knowledge that supports the health and wellness of the Sts'ailes community. PbLCs are a welcome innovative mechanism for generating a cross-cultural understanding of local health and wellness issues. This paper makes a contribution to the documentation of successful participatory community-academic research partnerships.

KEYWORDS

Aboriginal, Indigenous, knowledge, strength-based, dialogue, trust, intimacy, power, authority, connectedness, place-based learning, participatory action research



INTRODUCTION

The Sts'ailes Primary Health Care Project is a participatory action research (PAR) project in British Columbia (BC). Sts'ailes (previously Chehalis) is a reserve community located on the Harrison River, 10 miles west of Agassiz, BC. For the past 3 years, members of the Health Integration Project Planning (HIPP) Committee, a partnership between Sts'ailes, Fraser Health Authority (FHA), and academic researchers at the University of Victoria and University of British Columbia, have worked together to identify and explore ways to enhance health services for the Sts'ailes people and other FHA clients who reside in the region. (The region is defined as the area bordered by Hemlock Valley to the north, Fraser River to the south, Mount Woodside to the east, and Lake Errock to the west.) The HIPP Committee is part of a broader FHA response to the Transformative Change Accord (2006) intended to support the health of Aboriginal people and communities in BC. As a result of this collaboration, the partners have jointly developed and implemented the Sts'ailes Primary Health Care Project, a PAR knowledge synthesis/exchange initiative funded by the Canadian Institutes of Health Research (CIHR). The purpose of the project is to examine how Indigenous and Western models of health care inform the delivery of health and wellness services to Aboriginal communities.

This paper describes how the principles of place-based learning communities (PbLCs) are being implemented within the HIPP partnership to facilitate the co-production of culturally appropriate strength-based knowledge, which will be used to enhance the health and wellness of the Sts'ailes community. Place-based learning communities are dialogue-based networks that support people by responding to their needs, developing a capacity to generate their own research projects, and creating supportive relationships with other researchers to co-produce locally relevant knowledge (Davidson-Hunt & O'Flaherty, 2007). This paper documents and celebrates the implementation of a PbLC that is being used as a vehicle for conducting the PAR Project and creating a new knowledge legacy designed to inform the expansion of community health and wellness services. The authors of this paper include one community representative, one representative from FHA, and three academic partners. All partnership members reviewed and approved this manuscript for publication.

BACKGROUND

There is a well-documented need for innovative solutions to improve the health and well-being of Aboriginal communities in Canada [FHA, 2006; Transformative Change Accord, 2006; Royal Commission on Aboriginal Peoples (RCAP), 1996]. PAR projects such as the Kahnawake Schools Diabetes Prevention Project (KSDPP) in Quebec, Canada, and the Rumbalara Mental Health Project (RMHP) in Victoria, Australia, are notable examples of innovative community-based solutions to local health challenges. The KSDPP demonstrated the value of PAR that incorporates Aboriginal culture and local expertise to implementing a community-based diabetes prevention program (Macaulay et al., 1997), while the RMHP facilitated the development of community mental health programs by bringing together the Indigenous and Western systems of knowledge and training local Aboriginal people in mental health research (McKendrick, 2001).

Numerous national documents and research papers [FHA, 2006; Transformative Change Accord, 2006; Assembly of First Nations, 2005; Kirby, 2004; Romanow, 2002; RCAP, 1996] describe how the fragmentation of services and funding leads to negative impacts on the health of First Nations and other Aboriginal communities, and deepens cultural disruption. It is also increasingly recognized that mainstream models of primary health care service delivery have not been sufficient in serving either Aboriginal people or people who have been marginalized due to systemic inequities (Adelson, 2005). Furthermore, the frequent requirement for Aboriginal people to travel outside of their communities to access health services is a potent reminder of the experiences of residential schools, boarding homes, and tuberculosis sanatoriums (Kelm, 1998), and the practice of being forcibly removed from one's community. These impacts have been repeatedly identified by Sts'ailes as major barriers to health and healing, and have culminated in the desire to create an integrated community health centre on the reserve (HIPP Committee, 2008). A leading objective of the HIPP Committee is to develop a health centre model with a broad mix of integrated health services and programs that will complement and enhance existing services in the region and meet future increased demand. Additional goals include creating a plan for a primary health care centre and training site, along with the participation of Sts'ailes Lhawathet Lalem (Sts'ailes Healing House), Aboriginal Wellness Centre "Sacred Connections" (Timethet we'oyolawtxw) programs, and "Kwikwexwelhp"



Aboriginal Corrections Facility (formerly Elbow Lake). The Sts'ailes Primary Health Care Project concentrates on producing locally relevant knowledge to inform this work.

The creation of knowledge is critical to the self-determination of Aboriginal peoples (Kana'iaupuni, 2005). A key theme from the collaboration arising from the HIPP discussions and meetings is that health service delivery must be developed so that "Indigenous knowledge, both traditional and contemporary, can complement Western 'mainstream' science in developing strategies to improve health" while avoiding the placement of Indigenous knowledge in a secondary position behind science (HIPP Committee, 2008). As participants in community development, researchers and practitioners are both users and creators of knowledge, committed to sharing their expertise while recognizing that the community must ultimately determine the direction and goals of change (Sohng, 1998).

A second theme emphasizes research activities that focus on sources of community strengths (i.e., what has worked in the past and what is the most appropriate community vision for future success) as opposed to the more traditional research approach that focuses on problems (i.e., why and where has the community failed) (Tsey et al., 2007; Brough, Bond, & Hunt, 2004). Strength-based research begins with the premise of creating social change and empowering the people involved: "In contrast to the expert-driven, top-down approach assumed by deficit models, it means treating the subjects of study as actors within multi-layered contexts and employing the multiple strengths of individuals, families and communities to overcome or prevent difficulties" (Kana'iaupuni, 2005). A strength-based approach to research focuses on knowledge that addresses the concerns of communities first, and of policymakers and science second (Kana'iaupuni, 2005).

A major challenge of the HIPP collaboration is how to address the historically problematic relationship between academic researchers and Aboriginal communities in which Aboriginal knowledge and values are discounted and overrun by the scientific worldview. Using a construct known as place-based learning communities (PbLCs) described by Davidson-Hunt and O'Flaherty (2007) (natural resource researchers at the University of Manitoba), our research collaboration is committed to ensuring that Aboriginal knowledge is considered equal to the science-based perspective. Our goal is to create a relationship of mutual benefit between participants, ideas, data, and emerging theoretical perspectives (Anderson, Smye, Peters, & Schroeder, 2009). Table 1 outlines the principles of

PbLCs described in the literature (Davidson-Hunt & O'Flaherty, 2007). The PbLC principles are applied in the partnership to guide the development of protocols and facilitate a common understanding of community health issues, among others. The following section describes how PbLC principles are being implemented within the HIPP collaboration in order to facilitate the co-production of culturally appropriate strength-based knowledge that enhances the health and wellness of the Sts'ailes community.

METHODOLOGY: PRINCIPLES AND PRACTICE IN A PLACE-BASED LEARNING COMMUNITY

Protocols

The collaboration between Sts'ailes, academia, and the local health authority is guided by RCAP's Ethical Guidelines (1993), OCAP (Schnarch, 2004), and Canadian Institutes of Health Research guidelines (CIHR, 2007, 2008; Martin-Hill & Soucy, 2005), which outline the principles for conducting health research with Aboriginal peoples, including strategies for ensuring that the research findings benefit Aboriginal peoples. All parties have established a commitment to work together through two separate research agreements that guide the partnership: (1) Research Agreement between Sts'ailes and the Academic Researchers, and (2) HIPP Terms of Reference, which validate the importance of Aboriginal identity and traditional knowledge.

Verbal exchanges within the HIPP forum are structured to ensure equality of power (Purcell & Onjoro, 2002) between the participants. The community members, in particular, must hold enough power to express the Aboriginal identity of their constituents and seek knowledge that promotes the spiritual and material well-being of the community. In most instances, formal preparation (e.g., prayer, drumming, and song) comes before discussion. During meetings, members bring forward information gathered through literature reviews and other sources for discussion. The meetings are recorded and analyzed to ensure relevance, i.e., whether the topic or findings serve the participants' interests, and credibility, i.e., whether participants recognize the analytical representations of experiences as their own. The community advisory board manages the data in terms of collection, storage, interpretation, and dissemination of results and conclusions.



FIGURE I. HIPP METHODOLOGICAL PROCESS

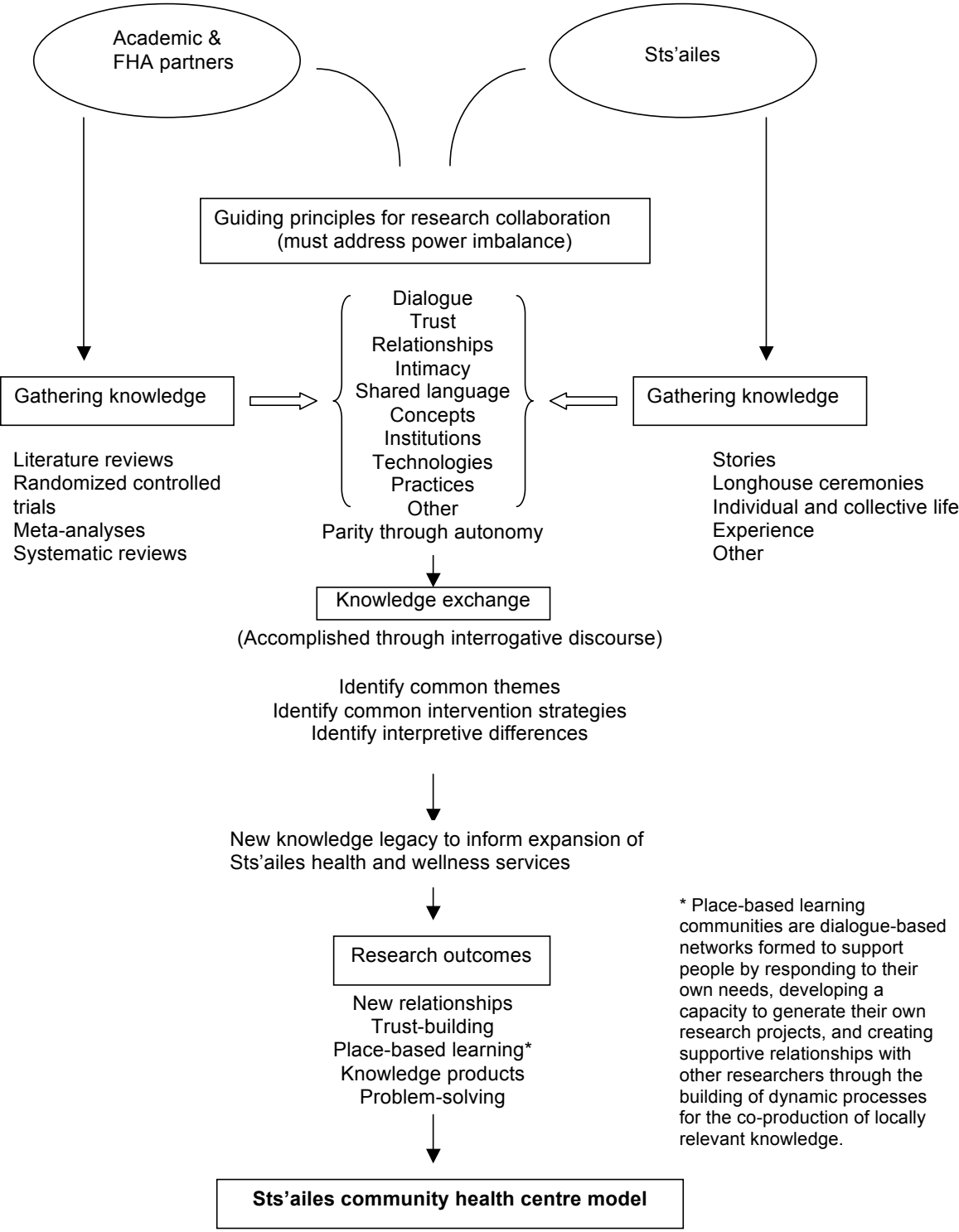
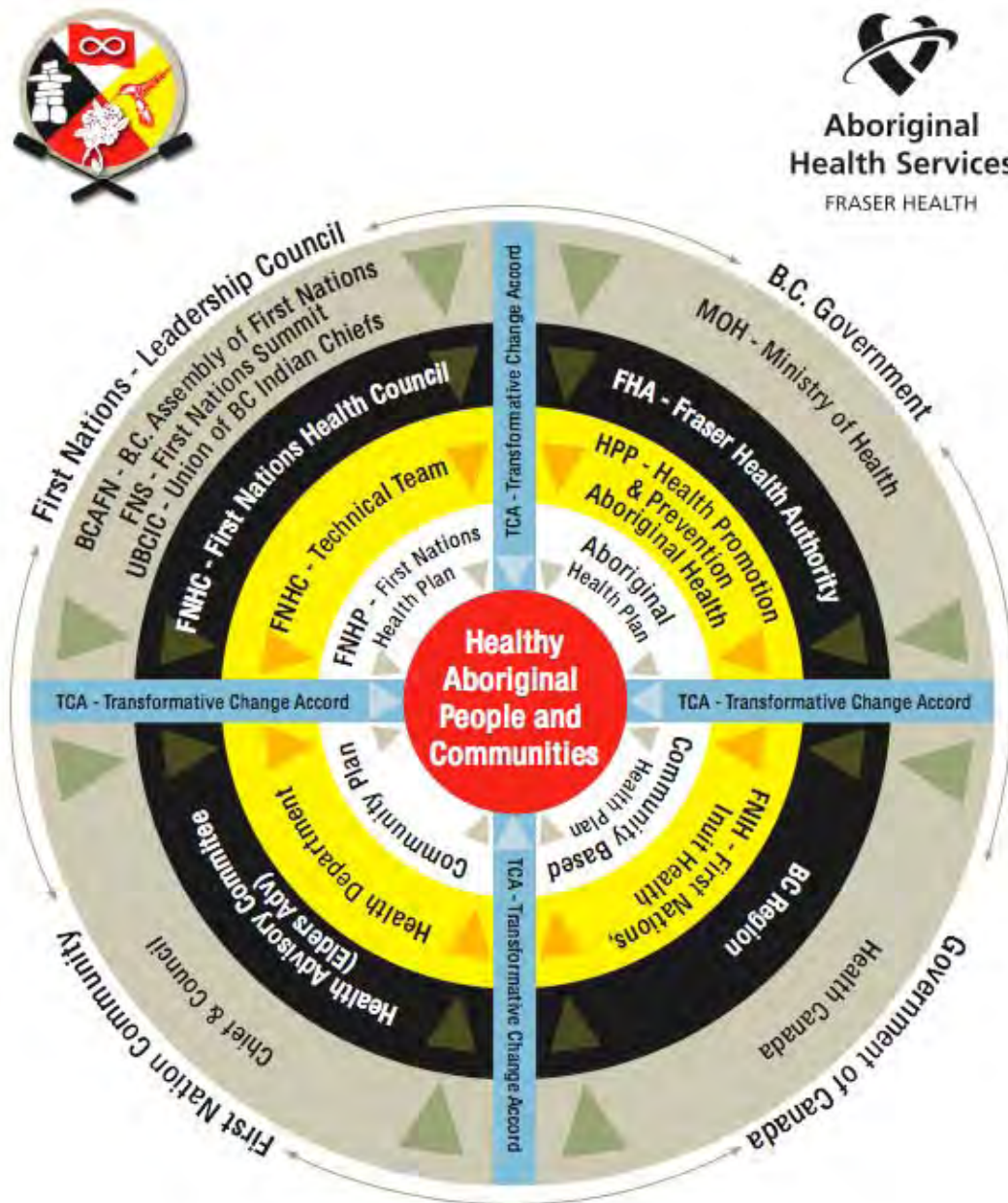


FIGURE 2. FRASER HEALTH SERVICES AND THE TRANSFORMATIVE CHANGE ACCORD



Developed by Leslie Schroeder, Project Director, Aboriginal Health

Created: October 2007



(Victoria, BC), Cultural Gatherings (Semelá:lh sq'eq'ip), Naming Ceremonies (Kwixet sq'ep), and Winter Healing Ceremonies (Temxeyeyllt ey sq'ep).

Honouring traditional teachings

For many Aboriginal people, knowledge claims arise from an intimate, long-term, equal-exchange relationship with a Creator who gives Aboriginal peoples everything they need to survive on the land in return for exercising their duty to care for the land (Barnaby, 2005; Castellano, 2000; Turner, Ignace, & Ignace, 2000; RCAP, 1996). Therefore, Indigenous knowledge is a gift from the Creator upon which the survival of Aboriginal peoples depends. The people of Sts'ailes are well connected to their land and the richness of its resources, to the wisdom found in their traditional stories, and—by living close to ancient dwellings and grave sites—to the ancestors whose kinship ties reinforce a historic knowledge legacy. The shores of Harrison Lake and Harrison River contain a rich archaeological history including 5,000 year-old pit house dwellings and graves as well as rock paintings, petroglyphs, and “signposts” that are woven into the community’s stories and traditional way of life.

The Sts'ailes perspectives on knowledge and wisdom are consistent with those found in the literature. There is a view of culture as a co-creation by people in response to current circumstances and need: “an ongoing construction that is contested from within and without” (Kirmayer, Brass, & Tait, 2000). Community leaders strive for a best-of-both-worlds approach to prevention and health, which balances the medical model with traditional, holistic approaches (Wieman, 2001). In Sts'ailes, notions of well-being, illness, and healing are central to Aboriginal identity. There are many tangible applications of traditional health and wellness concepts, including therapeutic value of place, e.g., Sts'ailes Lhawathet Lalem, Kwikwexwelhp, Kweh-Kwuch-Hum (Mount Woodside), therapeutic authority of traditional healers, therapeutic legitimacy of existing wellness programs, e.g., Timethet we'oyolawtxw.

PARTNERSHIP OUTCOMES

Over time, an intimate, trusting relationship has emerged between members of the HIPP Committee, an essential step for the effective co-production of new knowledge. Within an environment of trust and cultural safety (Smye, 2004), a convergence of different cultural systems becomes possible through the creation of an ethical space

of engagement (Ermine, 2007). Ethical space provides a refuge for engagement encounters, including those aimed at the reconciliation of Indigenous and Western health and wellness worldviews. In the past, scientific research has imposed a heavy toll on Aboriginal communities and eroded trust between researchers and communities. Emphasis on trust is vital to reverse past injustices and create a decolonizing methodology that encourages community engagement, collaboration, and dialogue in order to establish relevant research priorities (Adelson, 2005).

The collaboration partners understand that not all community interests and goals are compatible with or resolvable through conventional scientific research methods. Academic research can record traditional knowledge but it cannot replace how traditional knowledge is taught nor can it replicate the kind of learning that emerges when local knowledge and wisdom is transmitted from Elders to youth or traditional healers to patients. Sts'ailes provides programs for young men and women in transition from childhood to adulthood led by Elders with access to important traditional stories and other knowledge that provide culturally relevant advice and direction. Similar local expertise and support exists through traditional healing activities and ceremonies, e.g., Temxeyeyllt ey sq'ep.

As mentioned, members of the HIPP Committee jointly submitted a successful CIHR Knowledge Synthesis grant application. The Sts'ailes Primary Health Care Project is designed to produce locally relevant knowledge to inform the expansion of community health and wellness services that respond to the needs of Sts'ailes, its neighbours, and the FHA, and is relevant to other Indigenous-driven health initiatives in Canada. It is also a working example of how new knowledge may be used to strengthen the health of the community.

DISCUSSION

Each PbLC is unique; there is no simple formula. Patience and hard work are required to build a long-term trusting relationship between academic and community partners. The story of our collaboration is certainly no exception to this rule. What began as a variety of individual but interconnected initiatives is now becoming a recognizable representation of the special circumstances and vision of the partnership. The distinctiveness of our PbLC is expressed in the emerging research themes (unique to our process) and our willingness to work together toward a common goal. This is an organic process that, as the collaboration



matures, melds individual experiences and narratives into a unique motif that might serve as an example as opposed to a template for future initiatives in other Aboriginal communities.

Members of the HIPP Committee also recognize that each partner has his or her own set of internal alliances; the academic partners cannot validate a community partner's claims among the Elders nor is it easy for community partners to participate in the academic circles that review research proposals and designate funds. In our case, and in response to an initial CIHR funding application, CIHR offered a Sts'ailes Elder a position as a reviewer of the community impact of CIHR grant applications. Although acknowledged as an admirable attempt to bring separate groups together, cultural differences still make it difficult for the intended cross-pollination to occur. Part of the difficulty is the significant time commitment required from community stakeholders who are already over-extended by existing external and internal demands. Academic researchers face similar challenges including the fact that the added effort employed within a participatory action research framework is unlikely to be rewarded by academic institutions that value output in the form of academic papers and grants over process issues (Ervin, 2000).

Specific ethical issues inherent in Aboriginal health research have already been noted. It is worth mentioning, however, that within a PbLC, the ethical principle of beneficence (do good) is equally important as the principle of non-maleficence (do no harm) (Davidson-Hunt & O'Flaherty, 2007). This point is emphasized because university ethics committees are usually more concerned with the latter principle than the former. With respect to the HIPP collaboration, Sts'ailes is committed to supporting research that promotes health and wellness and strengthens the community economically and socially. A strength-based approach to research that seeks to benefit the people involved by giving them voice, insight, and political power (Kana'iaupuni, 2005) is employed and is advocated for by community leaders such as Siyam Chaqwawet (Chief Willie Charlie).

Above all, PbLCs seek to undermine conventional research power relations. The community no longer passively accepts ethnocentric ideas flowing from an academic source or policies and programs that descend from a local health authority. Instead, the community becomes the level playing field where Indigenous knowledge is considered equal to the science-based perspective and where ideas are exchanged freely. As a result, both the context and content of knowledge

becomes richer and less biased. In Sts'ailes, dialogue and co-production of new knowledge occurs in many venues including Semelá:lh sq'eq'ip both on and along the shores of the Harrison River beside protected archaeological treasures, sacred healing sites, and overwhelming natural beauty. In at least one instance, an academic researcher entered into the Sts'ailes collaboration with a preconceived notion of a potential solution to reduce hazardous alcohol use in Aboriginal communities (Anderson, 2007), but has since adopted the approach described in this paper as a means of seeking a culturally appropriate solution (Anderson, 2008).

CONCLUSION

Our final comments are directed to those who ask how PbLCs might benefit academia while at the same time serve the interests of Aboriginal communities. Borrowing from the medical education literature (Gadon & Glasser, 2006), the short answer lies in the concept of social accountability: the idea that universities have a moral and civic duty to respond to the needs of communities that surround the academy when designing and teaching curriculum and conducting research.

Beyond this ethical rationale, there are numerous benefits for academic researchers, including access to avenues of local knowledge and wisdom, an opportunity to correct false personal stereotypes and prejudices, a sense of increased relevance for the academic research agenda including selection of more appropriate research questions and better interpretation of research results, and, as per the social accountability model, an opportunity to give as opposed to extract something from the community, including leaving behind academic concepts and technology deemed useful by the community (Benoit, Jansson, Millar, & Phillips, 2005).

Despite a few promising projects (McKendrick, 2001; Macaulay et al., 1997), there is a lack of research using local Aboriginal knowledge in identifying best practices to address community health and wellness (Anderson et al., 2009). By bringing together scientific methods and Indigenous ways of knowing, PbLCs indigenize research through the promotion of a methodology that engages Aboriginal communities in collaborative research to improve the health and well-being of Aboriginal people (Anderson, 2007). Moreover, PbLCs are a welcome innovative mechanism for generating a cross-cultural understanding of local health and wellness issues, as they are well-adapted to



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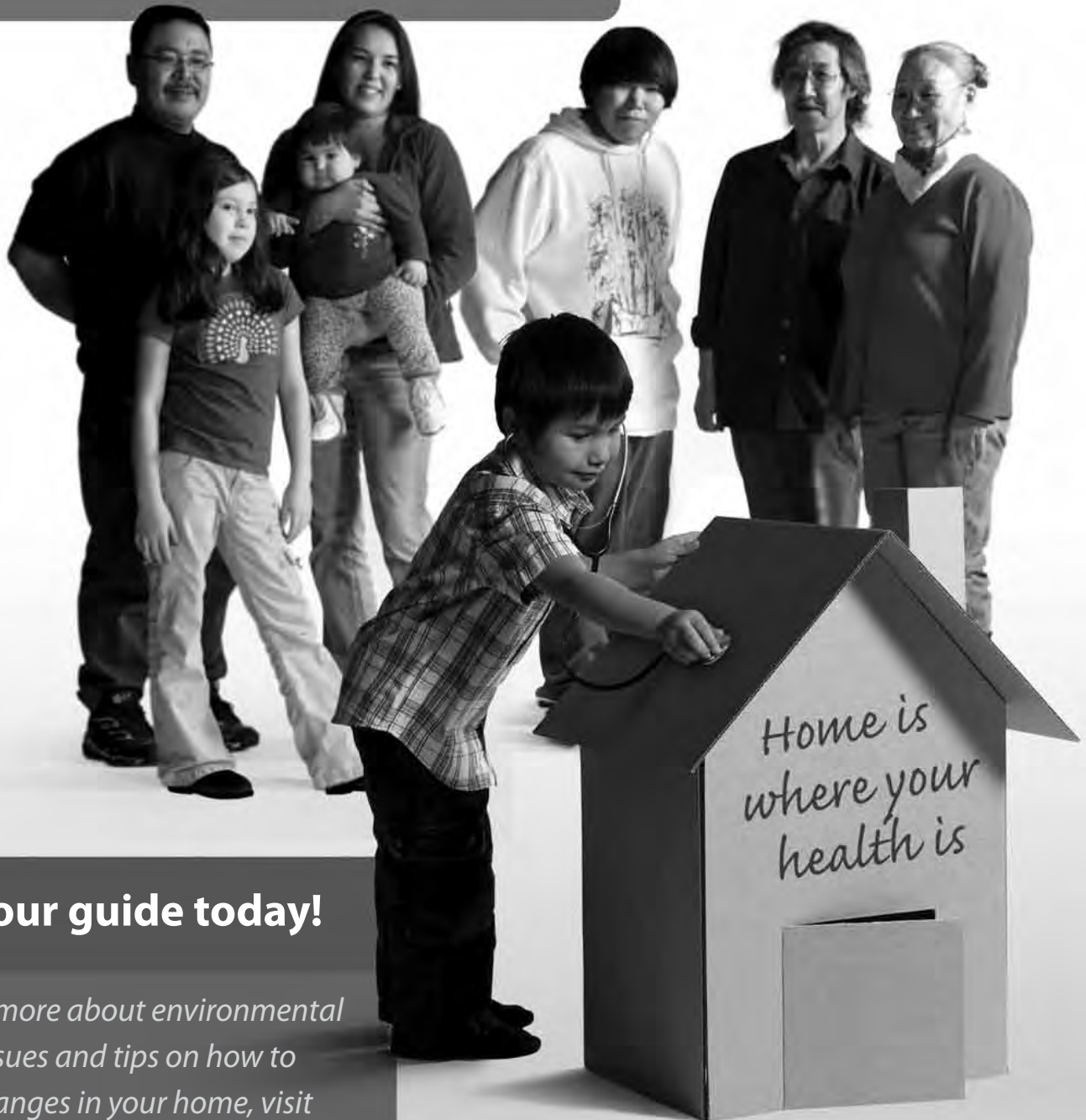




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Alienation and Resilience: The Dynamics of Birth Outside Their Community for Rural First Nations Women

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ABSTRACT

Bella Bella/Waglisla is a small community of 1,250 First Nations residents on British Columbia's Central Coast that has enjoyed a long history of birth within the community. This ended in 2000 when services began to decline, forcing women to travel to distant referral centres before starting labour. This qualitative investigation documents the experiences of First Nations women who gave birth away from their communities. Data were collected through a written survey of women's experiences of birth, locally or away, and through in-depth exploratory interviews of women's stories of their experiences. A community-based research advisory committee guided the study and ethical approval was obtained from both the community band council and the appropriate university research ethics board. Themes from the interviews included the influence of care providers in decision-making, the isolating experience of birth in a referral community, the stress of traveling to access care, the value of emotional and practical support from family and community, and community confusion regarding the decision to close local maternity services. Participants in this study had divergent experiences of childbirth outside of their community; the natures of the experience influenced whether or not they chose or were required to leave after services closed. The experience of leaving the community was difficult for most of the women, precipitating a sense of alienation. For many, the alienation experienced was mitigated by their strong sense of resilience.

KEYWORDS

Rural maternity care, First Nations maternity care, low resource environments, qualitative research interviewing



INTRODUCTION

Canada has a long history of evacuating Aboriginal women from rural and remote communities to give birth (Stonier, 1990; Douglas, 2006; Couchie & Sanderson, 2007; Moffitt, 2004). There is a growing literature on the negative consequences of this strategy (Stonier, 1990; Muggah, Way, Muirhead, & Baskerville, 2004; Chamberlain & Barclay, 2000), particularly drawing on the experiences of women in the far north. More recent literature is emerging that suggests a relationship between stress and negative birth outcomes (Kornelsen, Stoll, & Grzybowski, 2011) for women in rural communities, making an understanding of evacuation imperative in improving maternal and newborn outcomes. This study documents the experiences of birthing women to emphasize the need for alternative strategies when communities are without local maternity services.

BACKGROUND

The majority of Bella Bella/Waglisla's population belongs to the Heiltsuk Nation and, historically, has always birthed in the local community. This began to decline in 2000, and since 2001, local hospital policy has mandated that all pregnant women must leave the community near the time of their delivery to give birth at a larger hospital. In contrast to previous years when only emergency births needed to be evacuated, 53 births to Bella Bella/Waglisla women between 2001–2005 took place in referral communities. A number of factors contributed to this cessation of service, including challenges to recruitment and retention of practitioners with the skills to provide local access to caesarean section and the reluctance of physicians to offer maternity care without the availability of such services.

Existing research on rural women's experiences indicates that Aboriginal women face significant social, cultural, and financial stress as a result of evacuation for maternity care (Douglas, 2006; Couchie & Sanderson, 2007; Chamberlain & Barclay, 2000; Indian and Northern Affairs Canada, 1996a; Kildea, 1999; Moffitt & Vollman, 2006; Kornelsen & Grzybowski, 2005a, 2005b, 2006; Kornelsen, Kotaska, Waterfall, Wille, & Wilson, 2010). Inuit women in the Canadian north report negative experiences of enforced evacuation from their home communities to give birth, citing separation from family, culture, and community as their greatest stressor (Chamberlain & Barclay, 2000). Once in the referral

community, birthing women experience increased anxiety waiting for onset of labour and, for many, stress at being separated from their children (Kornelsen & Grzybowski, 2005a), which in British Columbia has been linked to increased rates of induction of labor for social reasons (Kornelsen, Moola, & Grzybowski, 2009). Aboriginal women in referral centres often do not receive adequate support for their relocation due to lack of continuity of care and lack of established mechanisms of communication between care providers (National Health and Medical Research Council, 1996). Additionally, women experience limited labour support, particularly when their partners and families cannot accompany them (Couchie & Sanderson, 2007; Chamberlain & Barclay, 2000). A birthing woman's community also experiences negative effects from the relocation of birth, including strain on the woman's family left behind (Douglas, 2006; Moffitt, 2004; Indian and Northern Affairs Canada, 1996a) and, for Aboriginal communities in particular, a collective sense of loss of a significant family and community event in the cycle of life (Douglas, 2006; Wilson, 2003).

Although relocation of rural Aboriginal women to referral centres provides them with increased access to specialized services, the quality of care they receive often does not match the level of physical and emotional support found in their home communities. Kildea (1999) found that rural Aboriginal women in Australia who gave birth in regional centers often experience substandard care, feel unsafe in their accommodations, and are unable to look after their basic needs. Aboriginal women in Canada also report that nutritious, traditional foods are unavailable in referral centres and that the diet available to them is unappealing and unhealthy (Couchie & Sanderson, 2007; Chamberlain & Barclay, 2000).

For Aboriginal women, birth is an event linked through the web of kinship ties and relationships to traditional lands that form their identity (Douglas, 2006; Indian and Northern Affairs Canada, 1996b; Kruske, Kildea, & Barclay, 2006). Evidence strongly indicates that women have a strong desire for perinatal care that balances their cultural and social needs with optimal clinical care (Douglas, 2006; Couchie & Sanderson, 2007; Chamberlain & Barclay, 2000). Chamberlain and Barclay (2000) found that the "research suggests that women are often aware of the physical risks but they have an overriding need to have the support of their families and communities at this time. The social consequences of major disruptions to family and



community may, therefore, far out-weigh the risks” (p. 122).

Due to limited health and maternity services in small rural communities, local birth for Aboriginal populations is not universally feasible. Solutions are needed to mitigate the stress of relocation for birth and to involve communities in the decision-making process. This article is part of a community-based, participatory research project that investigated the implications of maternity service closure for Bella Bella/Waglisla women. Findings report on the experiences of women who gave birth away from their community and are discussed within the context of alienation in a theoretical framework.

METHODS

This article presents findings from a larger case study on the implications of maternity services closures in Bella Bella/Waglisla. This paper is the second in a series on the birthing experiences of Heiltsuk women in Bella Bella. The first paper (Kornelsen et al., 2010) recounted the experiences of women who gave birth in their community. Findings were interpreted from within a theoretical context that emphasized the importance of the geographic and historical home for First Nations peoples (Wilson 2003). Beyond geography, findings were placed in the context of the importance of community, social relationships, and networks. Participants made clear how these influences shape Aboriginal identity and are thus a crucial part of planning maternity and all health services. The current paper also focuses on the experiences of Heiltsuk women and findings were from the same data collection process. However, the experiences reported here are of those women who had to leave the community to give birth. Their experiences are interpreted through the Seaman’s (1959) theories of alienation and, perhaps more importantly, the proactive ways in which they tried to exercise their sense of agency in the form of resistance.

Data was collected through (1) a written survey to document women’s experiences of birth, locally or away; and (2) in-depth interviews to document women’s stories of their birth experiences.

This research was undertaken with strict attention to the principles of Ownership, Control, Access, and Possession (OCAP) expressed by the National Aboriginal Health Organization, 2004, and the Canadian Institutes of Health Research (CIHR) Guidelines for Health Research Involving Aboriginal People (2007) This framework involved (1) establishing an advisory council of representatives from

the Heiltsuk Cultural Education Centre, Hailika’as Heiltsuk Health Centre, R. W. Large Memorial Hospital, and Heiltsuk College; (2) writing and signing a research agreement with the community; (3) hiring a community member to contribute to the research process with the researcher’s commitment to continued mentorship and capacity development; and (4) drafting recommendations in the form of a band council resolution that was ratified based on completion of the project. Although the data are held at the University of British Columbia, ownership of the data rests entirely with the community and is overseen by the community advisory council. Likewise, the advisory council exercised the potential to stop the study at any stage or change the way it was being conducted. Upon completion of the study, a presentation was made to community members in easily accessible language, and reports were distributed that presented findings in a way that was meaningful to the participants. (The full community report can be found at <http://www.ruralmatresearch.net/documents/BellaBellaWaglislaFinalReport.pdf>.)

The generous participation of research participants must be acknowledged, as their individual interviews led to the cumulative understanding of the experience for the community. Their efforts benefit their community and other First Nations women who need to leave their territory for care. The research team gratefully acknowledges the time given by the participating women, and the honesty and integrity with which the interviews were approached despite the difficult stories that were told. Sharing these personal and often painful stories was an act of courage that will inspire others who have had the same experience to gain a sense of solidarity. We express our heartfelt appreciation and respect to these participants.

A community research advisory committee guided the study, consisting of representatives from the Heiltsuk Cultural Education Centre, Hailika’as Heiltsuk Health Centre, RW Large Memorial Hospital, and Heiltsuk College, as well as a community-based research assistant. It is of note that the study population was from a fly-in fly-out community, the population was homogeneous, and local maternity services were closed within recent memory of the community.

Written survey

The survey was designed to capture experiences of birth in and away from the community. It was developed from previous interviews in the community and across the province, as well as a review of available literature. Recruitment was initiated by the community-based research



assistant, who contacted potential participants either by phone through local phone book listings or in person at the health centre day care program. As surveys were also left in public places, it is difficult to determine the exact number distributed. A total of 55 surveys were returned. We presented the findings to the Bella Bella/Waglisla research advisory committee, who provided comments and preliminary interpretations of the data tables.

Interviews

Interviews with Bella Bella/Waglisla women were set up by the community-based research assistant, who, when distributing the surveys, asked if women would be interested in participating in an interview. The interviews took place over the course of 3 days at either a community location or the local hospital. In total, twelve open-ended, hour-long interviews were conducted by the lead investigator and members of the research team.

Each interview was tape-recorded and transcribed for analysis. The lead investigator and project coordinator read and coded each transcript separately using open coding methodology (Strauss, 1990), and compiled a list of key themes. A high degree of similarity was found between the separate lists of codes. A research assistant then entered the coded parts of the transcripts into a qualitative analysis program, QSR Nudist. Code reports were presented to the research advisory committee in Bella Bella/Waglisla, who worked with the research team on interpretation and presentation of the findings within a culturally appropriate framework. The principal investigator and project coordinator condensed 53 codes into 23.

Upon completion of the final community report, the Heiltsuk Band Council issued a resolution ratifying the project recommendations.

RESULTS

Overview

The results contained in this paper reflect the experiences of Bella Bella/Waglisla women who gave birth away from their home communities. Of the 12 women we interviewed, nine gave birth in Bella Bella/Waglisla and three gave birth in a referral community. Fifty-five women completed the survey. The average age of women completing the survey was 32. Of the 55 women, 19 indicated that they had lived in Bella Bella/Waglisla all their life, while 32 had lived in the community for over 13 years. Thirty-five of participants surveyed gave birth away from the community and 20 gave

birth in the community. For those who gave birth away ($n = 15, 27\%$), the majority birthed at BC Women's Hospital in Vancouver (403.37 miles away) or other Lower Mainland hospitals, while a few gave birth in small communities closer to their home (although still accessible only by ferry or plane).

Participants' narratives conveyed an overriding belief that women should be able to give birth in Bella Bella/Waglisla and expressed a desire to know why this was no longer possible. Themes emerging from the interviews include the influence of care providers in decision-making, the isolating experience of birth in a referral community, the stress of traveling to access care, the value of emotional and practical support from family and community, and community confusion regarding the decision to close local maternity services. Some participants had delivered children in the community before services closed as well as in referral communities afterward. These participants provided comparisons of services before and after the closing of services.

The decision-making process

Many who chose to leave the community before the closure of services did so when the local maternity service began to decline (1999–2000). Some interview participants described their decision in terms of safety and risks: "I would have preferred [to give birth in the referral centre] in case of complications. I feel safer in there in case of emergency," [010:19–20] and "In the end, I want to be safe" [002:245]. Part of the discussion of risks involved the unpredictability of emergency transport due to variable weather conditions.

[The doctor said,] 'Your baby could die by the time you finally get to the hospital or by the time the Medevac gets here.' And so that's it. I wanted to have my baby somewhere else. [006:254–63]

For others, their sense of safety was linked with confidence in local care providers, so when birth numbers began declining, so did the sense of confidence. One participant said, "You know there was lots of talk in the community about how we didn't have enough experienced doctors to deliver" [003:248–52]. Another woman spoke of her need for reassurance from the medical staff and how she felt when that was not forthcoming:

You know, like when you are pregnant you want to hear that it's going to be safe. I wanted to hear that. And I wasn't hearing the things I wanted to hear so that's



what made me really scared to have my baby here.
[003:533–38]

The influence of care providers on participants' decision-making for location of birth was recorded. A significant majority of women who gave birth in a referral centre before loss of services reported being "strongly influenced" by their physician and family while only one person was "slightly influenced" in her decision-making regarding place of birth. Of those women who gave birth in the community, most stated that they were not at all influenced by their physician's and family's advice.

Experiences of birth in a referral community

For women leaving Bella Bella/Waglisla to give birth, time spent in the referral community included the prenatal period spent waiting for labour and delivery, the delivery itself, and the immediate postpartum period. Women in rural British Columbia who must travel to give birth may plan to go to their destination as early as 36 weeks gestation. Rural care providers often recommend this date for evacuation due to the unpredictability of the onset of labour and the lack of local resources for safe care in the event of preterm or precipitous deliveries. According to our survey, the average total time women spent in a referral community was 2.7 weeks before the closure of services, and 3.7 weeks after services closed. The travel costs of these extended stays included food, accommodation, and travel expenses. For women who had left the community prior to the closure of services or soon afterwards, financial issues were less of a concern as travel subsidies were perceived to be adequate to cover expenses. After 2002, there were significant cuts to funding for subsidized trips.

Data from Heiltsuk Band Council travel records indicate that from 2004–2005, the average cost incurred by a woman giving birth in a referral community was \$3,732.87, with a total cost to the band council of \$115,719 for 31 births outside the community. Although a birthing mother's travel expenses are covered by the Heiltsuk Band through First Nations and Inuit Health (FNIH)'s non-insured health benefits program, the costs for escorts and extended family are not. Financial concerns were paramount to most of the women who gave birth outside the community after 2000. Women spoke of the costs incurred for themselves and their families above the subsidies available through the band office. Many women expressed the tension they felt in trying to find ways to have their husbands or mothers accompany them, sometimes being forced to choose one over the other.

Some women made compromises in their arrangements, such as traveling by ferry instead of air or staying in cheaper accommodations, so that family members could accompany them. This sometimes led to difficult situations for the new mom, one of whom told us of traveling 10 hours by bus and ferry to get home 5 days after hemorrhaging at birth and receiving four blood transfusions. If a woman was transported out of Bella Bella/Waglisla by Medevac during labour, cost-saving strategies were not possible: "[My husband] had to pay his own way down: there wasn't room on the Medevac for him" [11:120–22]. To finance their time in the referral community and cover the travel expenses of extended family, many participants in this study undertook fundraising in the community through bake sales, flea markets, and TV bingo.

Once in the referral community, participants either stayed in hotels/hostels or with extended family and friends. Many women found it helpful when they were able to go to a referral community where relatives lived: "It was a lot more comfortable living with my parents for 6 weeks than going to live in a hotel" [008:90–93]. Others, however, recalled the stress of living with family members, or were acutely aware of the burden their presence placed on them.

Mothers who were unable to travel with their children spoke of the stress of being separated from them for a long time, as well as the stress their children experienced due to the separation (Kornelsen & Grzybowski, 2005b):

One girl, she was in grade six or seven, her mother had recently had a baby, and she came to school and she was feeling really sad. She started crying and her teacher didn't know why. She didn't realize that her mom had left to have the baby. And I told the teacher, 'Ask her if she is lonely for her mom, because her mom went down to have the baby,' and the teacher said, 'I hadn't realized that.' [011:334–40]

Just as several of the women noted a sense of celebration when birth occurred in the community, some women also noted the lack of celebration when birth occurred away:

There are several aspects of it...the celebration has been taken away. Like now, if a baby was being born there would be at least 50 people in this hospital, waiting. And as soon as the baby was born, people would be on the phone, on the radio, celebrating. [007:169–74]

This participant went on to wonder if the high rate of depression in the community was due in part to the



celebration of birth being removed from their lives.

Travel concerns

Although our survey did not find that the time of year was a significant concern, women did voice concerns about travel logistics and the possibility of bad weather. Common concerns included the fear of bad weather keeping them in the community if they needed to leave, or preventing them from returning after the birth. Participants expressed concerns about traveling half-way home and encountering impassable weather conditions, which motivated several women to travel by boat instead of plane:

In January, during the winter, I prefer to come on the ferry, even if it's rough... just because the weather turns on a dime. It's really unpredictable during those months. [004: 264–270]

Travel by bus and boat was nonetheless difficult for some women traveling home after giving birth:

It is a long ride from Vancouver to Port Hardy on the bus. I mean, you're on the ferry for 2 hours from the mainland to the island and then 6 hours up the island, stopping everywhere. And you have a 5-year-old child and a newborn: it is really tiring. ...And then you have the ferry up to Bella Bella. [004:253–260]

The importance of family

The presence and support of family members—either immediate or extended—often mitigated some of the negative aspects of being in a referral community. Survey results indicated that about half of the women who gave birth in a referral centre were able to have family members present during labour and delivery. Several women also noted the benefits of being able to see band members who lived in the referral centre right after they had given birth. As one said,

I love the city and my daughter really loved the city and seeing band members I haven't seen...you know, band members down there are really happy that they're able to see the baby whereas if I was here, they would have to wait. [002:273–76]

For the many women who left Bella Bella/Waglisla to give birth, however, family members remained behind. The

absence of family and friends often gave rise to a profound sense of sadness. As one person told us,

So I really didn't want to leave because my whole family is here and I wanted them to be around. My husband came with me and his mother came with me but I wanted my mom to come. There wasn't enough room and she couldn't afford to come. I was lonely. The hardest part of leaving is the family. [011:20–25]

The desire to be home

Many of the mothers who left the community to give birth spoke of the pull they felt to return home as soon as possible. Sometimes this led to travel immediately postpartum, despite the physical discomfort experienced or the need for medical attention in the referral community. As one mom said,

They were going to keep my baby there because his bilirubin was a bit high, on the high end of normal. But I was just sort of messed up. I was a wreck. It almost felt like postpartum depression, just because I wouldn't stop crying, because I was so worried about him. But they couldn't convince me at all that he was fine. I just couldn't stop crying. I just wanted to be home. [004:244–50]

The draw to familiar and comforting things was strong, as many women spoke of longing for day-to-day routines usually taken for granted. The desire for home-cooked meals and familiar foods was noted by many.

Longing for home gave rise to a sense of exasperation with having to be in the referral centre and difficulty respecting the natural rhythms of the birth process. As one woman said,

You're counting down like, 'I hope it's today I go into labour, I hope it's today, I hope it's today...' Whereas here, it would just be, 'When it happens, it happens.' So to me a good birth [is] just being able to be comfortable in your own surroundings, not having to worry about, 'What am I going to eat today?' 'What's on the menu?' Or having to worry about who is going to be there. Yeah, that's a good birth to me. [007:212–20]

Understanding the change in services

Many women expressed a lack of understanding about why maternity care was no longer available in their community,



particularly when they had birthed children locally. Some evoked the historical context for birth in Bella Bella/Waglisla and the perceived irrationality of the change:

It is documented that people have delivered here over 10,000 years. Why change it now? I'm sure that our community, if given that choice, would say, 'Yeah, we want our babies born here. Yeah, we're willing to take that risk.' [007:154–57]

Services in Bella Bella/Waglisla were revoked 6 years prior to this study. Stories of women who had birthed before and after this time provide a glimpse into a crucial part of the culture of care for Heiltsuk peoples. The positive impacts of local birth extend into the life of the community.

DISCUSSION

Overview

Participants in this study had divergent experiences of childbirth outside of their community. The nature of the experience was influenced by whether they chose or were required to leave. Birthing outside the community was associated for some women with a sense of alienation congruent with Seeman's framework (Seeman, 1959). Seeman identified five components of alienation: powerlessness, meaninglessness, normlessness, isolation, and self-estrangement. Powerlessness or loss of control is a common response in medicine (Fogarty & Cronin, 2008; Giske, Gjengedal, & Artinian, 2009; Cassell, 1998) and a leading cause of anxiety in childbirth (Beck, 2004; Sjogren, 1997; Willmuth, 2006). Not being able to make decisions regarding care, including where to give birth, is common to many rural women (Kornelsen & Grzybowski, 2005b) and an undercurrent of the participants' stories in this study. They articulated this feeling most clearly in questioning why local services had closed and noting that an answer was not forthcoming. Tied closely to this was the sense of meaninglessness, or a lack of clarity in what was to be believed. Instead of internalizing these feelings, however, women in this study sought answers and, more importantly, expressed the belief that they deserved answers.

A sense of isolation (Nettler, 1957) was experienced by many of the women who left behind family members, particularly children, and was the most distressing consequence. The consequence of this separation has been noted in earlier work by the authors (Kornelsen, 2006) and others. In her work on the evacuation of birthing women

from far northern communities, Stonier (1990) documented the consequences of separation as loneliness, worry, anxiety, loss of appetite, and increased smoking among the mothers. She also noted the impact on children and other family members left behind, including school problems and increased rates of illness. Although the immediate consequences of separation can be felt and documented, we have less of an understanding of the long-term consequences at such a critical time in the mother-child relationship, or, if the father has remained behind, his relationship with his new child and the relationship of the child to the rest of the community. Anecdotally, women have told us of differing relationships enjoyed by children born at home compared to those born away, even if those perceptions are held only by the mother. How does this affect the child's integration into the community? More long-term research is needed to understand the psychosocial effects of giving birth outside their home communities for First Nations mothers and also the implications for being born away for First Nations children.

A further sense of isolation was felt through estrangement from larger cultural norms surrounding birth (such as missing the traditional gathering to honour the newborn baby). Seeman (1959) expands on the idea of alienation to include the act of partaking in activities without intrinsic meaning; although the birth of one's child, regardless of the location, will hold meaning in a woman's life (Kornelsen, 2005), it is diminished when it is not shared by family and community (Kornelsen & Grzybowski, 2005b). Geyer (1993) proposes further causes of alienation, one of which is the actual constraints imposed on the individual by the environment, such as the lack of local services. Clearly, when women would like to birth in their home community but do not have the support from the medical infrastructure, the constraints felt may lead to a sense of alienation.

Hobart (1965) suggests that isolation and self-estrangement are two further consequences of alienation, possibly leading to loneliness, anxiety, or even depression. Further complicating this is Seeman's (1959) finding that there is a correlation between levels of alienation and knowledge about health-relevant information of patients. The more alienated the patient the less informed they tend to be. In this way, he suggests, powerlessness is a self-fulfilling prophecy.

However, alienation within a First Nations context should not be discussed without also considering its twin concept of resilience. In her article, "Exploring Resilience and Indigenous Ways of Knowing," McGuire (2010) cites



authors who have described the importance of resilience as a “positive lens through which to view Aboriginal communities.” She directly relates the concept to what she calls “place-based relationships [which requires] understanding the traditions and sustained relationships with the land. Relationships are embedded in the land.” (McGuire, p. 123) She goes on to cite Marker (2004), who states that “knowledge of places is therefore closely linked to knowledge of self, to grasping one’s position in the larger scheme of things, including one’s own community and to securing a confident sense of who one is as a person.” This discussion of land, Marker maintains, is like the concept that Deloria introduced and referred to as a “sacred geography” (McGuire, p. 123). Bringing the concept of resilience to the foreground is a crucial step in uncovering the experiences of women in this study and appropriately reflective of the larger response to domination faced by evacuated First Nations communities. Most importantly, however, it highlights this study’s participants’ ultimate positive response to the challenging historically embedded situations they faced.

CONCLUSION

In this study of First Nations women who had to leave their community to give birth, participants spoke of the powerlessness they felt over their location of birth and the sense of isolation they experienced in the referral community. Since alienation correlates with anxiety and depression, it is possible that negative health outcomes may result (Chamberlain & Barclay, 2000; Jansen, 2007; McGrath, 2007). However, most participants also noted proactive ways to intervene, including assembling a support group in the referral community, bringing family (children) and friends with them when possible, and returning home as soon as possible. Consequently, it is important to carefully consider keeping at least some of these isolated community maternity services open to provide birthing services. If this is not possible, social support services available to birthing women in referral communities should be strengthened. Acknowledging the potential for alienation around the birth experience and working to ameliorate it will lead to better health outcomes.

It was clear from discussions with some of the younger participants that the reality of local birth extends only as far as the collective memory of the community. The longer a community lives with women leaving to give birth, the more the desire and demand for local birth decreases,

foreclosing alternatives. This may be due to changing expectations and desires around birth or simply the lack of awareness of alternatives. Considering the appropriate level of services for rural and remote communities based on population, isolation, and distance to the nearest centre with caesarean section capacity is part of the process of mitigating the negative effects on women who must travel to give birth. Communities unable to support local services must recognize that a comprehensive program of birthing support services must be available in the community for the prenatal and postpartum period. Services must also be integrated with intrapartum care provided at the referral site, including infrastructure to support women in referral communities (housing, facilities for meal preparation, and accommodation for other family members), funding for doulas in referral community or local doulas to accompany mothers out of the community, and identifying Aboriginal liaison support in referral communities.

Viewing experiences of away births as alienating is useful only when we also see the resilience that study participants brought to this experience, which is another chapter in a difficult history of evacuation for medical care, education, and other services that many non-First Nations peoples rely on being local. The implications of travel and geography are seldom considered in equations focused on risk, health outcomes, and fiscal concerns; decisions are made largely outside the local and cultural community. First Nations women in this study and throughout history have demonstrated a remarkably resilient response to conditions that might otherwise have led to more devastating personal and social consequences.

Beyond the theme of resilience, the specific responses of women in this study shed light on the gendered interpretation that Guimond et al. (2008) noted: “Women are the guardians of indigenous traditions, practices and beliefs—and agents of change for their families and nations.” Qualitative methodologies, such as the one used in this study, are appropriate for uncovering the resilience of First Nations women that might otherwise be lost in the more quantitative outcome data that belie these stories. Through narratives, we can begin to understand the power behind the adaptive actions that the women initiated when they left their communities and when they returned. This common characteristic of resilience has been a crucial element of evacuation stories beyond situations involving childbirth, (although it was captured succinctly in the participants’ stories in this study), and deserves a more prominent place in our recognition of the stories of First Nations women.



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The Crisis of Chronic Disease among Aboriginal Peoples: A Challenge for Public Health, Population Health and Social Policy

by J. Reading, PhD

University of Victoria, Centre for Aboriginal Health Research, 2009

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185 pages

A boriginal people in Canada face many challenges in terms of their health and well-being. The rates of diseases such as diabetes, heart disease, HIV/AIDS, and tuberculosis are much higher in the Aboriginal population than in the Canadian population in general.

The Crisis of Chronic Disease among Aboriginal Peoples: A Challenge for Public Health, Population Health and Social Policy explores Aboriginal health and chronic diseases using a life course approach, from the prenatal stage of life to late adulthood. In addition to examining the risk factors for various chronic diseases across each of these life stages, the book discusses the burden of chronic disease for Aboriginal Peoples in Canada.

Health is determined by multiple and interrelated factors. In his section on chronic disease risk factors, Reading begins with a discussion of risk factors at the community-level, such as poverty, housing, and access to health services, and their effects on health. Then, Reading conducts an extensive review of the literature to describe in detail the effects of risk factors throughout each stage of life. He argues that using a life course approach allows us to integrate scientific knowledge with cultural and sociological knowledge in a meaningful way.

The life course approach complements Aboriginal conceptions of health and well-being because it understands health in a holistic way. This approach allows us to follow risk factors throughout the lifespan in a logical way from the prenatal stage of life to late adulthood.

In the section on the burden of chronic disease, Reading examines the impact of diseases such as diabetes, cardiovascular disease, cancer, and musculoskeletal conditions on the Aboriginal population. He also examines

the impact of chronic diseases on mental health. For example, Reading examines the relationship between diabetes and mental health by discussing diabetes-related depression and anxiety, and the impacts of this co-morbidity on an individual. Reading also indicates that there are gaps in the research in this area.

Each section uses specific indicators to describe the risk factors or the burden of disease. Statistics for the Aboriginal population in Canada are compared to general Canadian statistics whenever possible. In addition, population-specific statistics for First Nations, Inuit, and Métis are given whenever possible.

This book is a valuable resource for students, researchers, and policymakers, and an important addition to the chronic disease literature on Aboriginal Peoples. It identifies gaps in research and points to areas where interventions are needed or could be successful.

Jeff Reading is the Director of the Centre for Aboriginal Health Research at the University of Victoria.

Jennifer O'Neill, MSc
Research Officer
National Aboriginal Health Organization





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Journal of Aboriginal Health

Published by the National Aboriginal Health Organization (NAHO), the *Journal of Aboriginal Health* was established with the intention of fostering a dynamic community of people concerned with issues of Aboriginal health. Launched in 2004, the peer-reviewed journal includes articles from leading health scholars, academics and Aboriginal community members. (www.naho.ca)

Journal de la santé autochtone

Publié par l'Organisation nationale de santé autochtone (ONSA), le *Journal de la santé autochtone* a été créé avec l'intention de permettre l'essor d'une communauté dynamique composée de gens qui se préoccupent des questions de santé autochtones. Lancé en 2004, le journal, révisé par un comité de lecture, inclut des articles de spécialistes reconnus du domaine de la santé, d'universitaires et de membres de la communauté autochtone. (www.naho.ca)



National Aboriginal Health Organization (NAHO)
Organisation nationale de la santé autochtone (ONSA)
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