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Enacted Stigma and HIV Risk Behaviours among Sexual Minority Indigenous Youth in Canada, New Zealand, and the United States

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Abstract

Enacted stigma has been linked to increased HIV risk behaviours among sexual minority youth, but despite higher rates of HIV and other STIs, there is very little research with Indigenous youth. In this study, secondary analyses of three population-based, school surveys were conducted to explore the associations between HIV risk and enacted stigma among sexual minority Indigenous youth in Canada, the US, and New Zealand. Data were analyzed and interpreted with guidance from Indigenous and sexual minority research team members, Indigenous advisory groups, and community consultations. In all three countries, Indigenous sexual minority youth were more likely to experience enacted stigma (such as bullying, discrimination, exclusion, harassment, or school-based violence) and report increased HIV risk behaviours (such as lack of condom use, multiple sexual partners, pregnancy involvement, and injection drug use) compared to heterosexual peers. Data were analyzed by age, gender, and sexual orientation, and for some groups, higher levels of enacted stigma was associated with higher HIV risk. The findings highlight the need for more research, including identifying protective factors, and developing interventions that focus on promoting resilience, addressing the levels of stigma and homophobic violence in school, and restoring historical traditions of positive status for Indigenous sexual minority people.

Keywords

Indigenous adolescents; HIV risk behaviours; sexual orientation; stigma; population survey

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Many Aboriginal Canadian, Māori, and Native American communities have cultural traditions and teachings that describe special roles or a positive status for *Two Spirit* [Aboriginal Canadian/Native American], *takatāpui* [New Zealand Māori], *winkte* [Lakota], or other nonheterosexual community members (Jacobs et al., 1997; Williams, 1957; Williams, 1986). But in all three of these countries, similar histories of colonization, including Christian missionary contact, a large influx of European settlers, government-run schools, and other assimilationist strategies have pressured Native peoples into adopting European attitudes and customs. These attitudes have often included negative perceptions and stigma around same-gender or both-gender sexual orientation and behaviour.

During adolescence, when sexual orientation unfolds, research shows that high school environments in most Western countries tend to be hostile toward sexual minority teens, with other students targeting them for “enacted stigma,” i.e., rejection and exclusion, insults and harassment, destruction of their property, threats and even physical violence (Friedman

et al., 2011). The stress that gay, lesbian, bisexual, and questioning teens face as they cope with sexual orientation stigma and violence may partly explain their higher rates of substance use and risky sexual behaviours that can increase their risk for HIV and other sexually transmitted infections (STIs) (Saewyc, 2011). However, although Indigenous young people have disproportionately higher rates of STIs and HIV in Canada (Marshall et al., 2008) and the United States (Kaufman et al., 2007), very little of the research about HIV risk behaviours has focused on Indigenous youth, and even less has explored enacted stigma and the link to these risks for sexual minority Indigenous teens.

Although the research is limited, many of the studies in Canada, the United States, and New Zealand have identified similar risk and protective factors related to sexual risk behaviours among Indigenous adolescents. For example, a population-based study of risk and protective factors for consistent contraceptive behaviours among sexually active Māori students in New Zealand identified depressive symptoms, marijuana use, suicidal ideation and attempts as significant risk factors, while spending enough time with family, having caring teachers and other adults in their lives, and safe neighbourhoods are significantly associated with consistent contraception use (Clark et al., 2006). A similar study of Aboriginal students in Canada identified patterns of risky sexual behaviours and condom use (Devries et al., 2009a), and risk and protective factors associated with pregnancy involvement (as a proxy measure of unprotected sexual risk) and self-reported STIs separately for Aboriginal boys and girls (Devries et al., 2009b). Like the New Zealand studies, Devries and colleagues in Canada found substance use was associated with sexual risk behaviours and STIs, but they also found, for both boys and girls, a history of sexual abuse as a strong risk factor, and both family and school connectedness were associated with lower odds of sexual risks. In five rural American Indian schools in the United States, Chewning and colleagues (2001) also identified a variety of protective factors associated with abstaining from sex or consistent contraception, including strong parental support, having friends who do not engage in risky behaviours, both valuing and having higher academic performance, and higher self-efficacy for safer sex practices.

In addition to these large-scale studies of Indigenous youth in school, a few qualitative studies have explored Indigenous young people’s perspectives about sexual health, HIV and STI risks, and in the process have identified other structural and social determinants of vulnerability to sexual health risks. In Canada, Aboriginal youth described how their sexual health was influenced by gendered stereotypes and as well as less expected patterns of behaviours, such as young men being coerced into sex, and young women sometimes persuading partners not to wear condoms (Devries and Free, 2010). Other studies in Canada identified the legacy of colonialism, and stigma related to HIV and STIs within Indigenous communities, as factors that contribute to youth vulnerability around sexual health (Larkin et al., 2007; Flicker et al., 2008), while in the United States, one study identified social pressures for Native youth to have sex early, often in the context of alcohol or other substance use, and the lack of economic adversity or social disapproval for early childbearing (Kaufman et al., 2007).

None of these studies have included a focus on Two Spirit or sexual minority youth; indeed, there have been very few studies that have examined sexual health and risk behaviours by

sexual orientation among Indigenous youth in any country. More than a decade ago, one of our team published two papers about sexual minority Native American youth and their sexual health from a national survey of Native American adolescents conducted in reservation schools across the US in 1991 (Saewyc et al., 1998a, 1998b), but there have been no similar population-based studies examining these same issues in Canada, New Zealand, or in the United States since that time. There are also very few qualitative studies of Indigenous sexual minority youth; one focus group study from Toronto found that high levels of homophobia in remote or reserve communities in Canada motivated Two Spirit youth to migrate to the city, for example (O'Brien-Teengs and Travers, 2006). However, these young people encountered racism in urban gay/lesbian/bisexual communities, homelessness, and violence exposure, which all contribute to sexual risk among Two Spirit youth; they also said the LGB communities they did connect to were often party scenes, with increased risk for substance use and related risky sexual behaviours.

Therefore, as part of a larger study exploring the links between stigma, substance use, and HIV risk behaviours, the purpose of this analysis was to explore the experiences of enacted stigma among sexual minority Indigenous high school students in Canada, New Zealand, and the US, and to compare the prevalence of their HIV risk behaviours to those of their heterosexual Indigenous peers.

Methods

The study samples included all self-identified Indigenous students answering the sexual orientation questions in three population-based, school surveys of youth. The sample in Canada consisted of First Nations, Inuit, and Metís [Aboriginal] Canadians who participated in the British Columbia Adolescent Health Survey of 2003, a province-wide random cluster stratified survey of more than 30,000 students in grades 7–12. Data were weighted to adjust for differential probability of selection across regions. The US sample included Native American teens in the Minnesota Student Survey of 2001, a state-wide census of 9th and 12th graders. The New Zealand sample included Māori teens in the New Zealand Youth Health Survey of 2001, a national population-based random survey of grades 9–13 (ages 12–17; Adolescent Health Research Group, 2003). All three surveys were administered in public schools during a single class period; the BC and MN surveys were pencil and paper, while the NZ survey was a multimedia computer-assisted survey, completed on individual laptops in classrooms. Each survey had a different measure of sexual orientation. The BC survey asked about self-identity by label, with definitions in parentheses that described being either mostly or 100% attracted to the opposite sex, or both sexes, or mostly or 100% attracted to the same sex. The MN survey asked two questions about the number of female sexual partners and the number of male sexual partners in the past year, recoded as opposite-gender only, same-gender or both genders, or no recent sexual partners. The NZ survey asked whether students were sexually attracted to males, females, both, or neither, with responses recoded as opposite-gender only, same-gender or both genders, or neither. For the purpose of this analysis, all students who indicated same-gender or both gender attractions or behaviours, or those who indicated bisexual or gay/lesbian identity, were considered sexual minority teens who are potentially stigmatized (for brevity, LGB). Students who reported exclusively opposite-gender attractions or sexual partners, or 100% heterosexual self-

identity, were considered heterosexual (HET). Students who indicated they were unsure, did not answer, indicated no attraction or activity, or self-identified as "mostly heterosexual" in BC were excluded from analysis (BC final weighted n=1,664; MN recently sexually active students only, n=1,035; NZ students n=2,063). Brief demographics for these samples are shown in Table 1. This study received approval from the University of Minnesota Institutional Review Board and the University of British Columbia Research Ethics Board, and from the University of Auckland Human Subjects Ethics Committee.

Indigenizing Research Approaches

The research team members included Aboriginal Canadian (Lilloet First Nation and Metís), Māori, and Native American (Ojibway and Lakota) Indigenous researchers; the team also included sexual minority researchers, both Indigenous and non-Indigenous. Prior to developing this study, the team also consulted with other Canadian Aboriginal, New Zealand Māori, and Native American researchers about the purpose, design, sampling, and measurement issues. In New Zealand, the Adolescent Health Research Group's Māori co-investigators, alongside a Māori advisory group for the project, approved the associate research partnership and the project, and were consulted throughout the study about the interpretation and dissemination of the results. In Canada, a research advisory group was convened to provide guidance on analysis, interpretation, and dissemination; the study also included consultation with Aboriginal community groups working on the issues of HIV/AIDS, and results were presented to Aboriginal youth in two focus groups for their comments and suggestions. In Minnesota, the research project was presented to Native American researchers and health care providers. Preliminary results were also presented at a national Indigenous HIV/AIDS conference for additional comments and feedback from Native researchers and Native health care providers.

Measures

For these secondary analyses of existing survey data, measures were chosen for their similarity in the different surveys, but none of the surveys had completely identical measures, so of necessity, there were differences in approaches to create scales. In NZ, the filter question about bullying frequency was used to measure enacted stigma, dichotomized as experiencing bullying at least weekly or more often in the past year. Among those who reported having been bullied, there were 6 specific types of bullying that could be reported, such as being called hurtful names, being kicked or punched, being threatened, or being ignored or left out of things; this was recoded to 0 types, 1–2 types, and 3+ types of bullying experienced. In BC and MN, an enacted stigma scale was developed by combining the various items that focused on discrimination, exclusion, harassment, or violence experienced at school. The enacted stigma index was a summed score of different types of harassment, assault, and discrimination experienced in the past year, and did not measure perceptions but behaviours, which can differ in how severe they are, some of which are quite rare (i.e., being shot or stabbed at school).

For BC and MN, an HIV risk score was a summed score of different types of behaviours known to increase risk for HIV infection. Examples of items included a lack of condom use at last intercourse, multiple sexual partners in the past year, and pregnancy involvement (a

proxy of unprotected intercourse) in both BC and MN, and injected drug use in BC. For NZ, an HIV risk measure was created with 3 major categories: those who had never had sex or used drugs, those who had sex but not unprotected or risky sexual behaviours or who used drugs but did not inject them, and those who either engaged in risky sexual behaviours or used injection drugs.

Analyses

Analyses for each country were conducted based on the type of data collected, adjusting for the sampling strategies, and using the team's standard approaches. Analyses were done separately by gender, except for New Zealand, where analyses first tested for gender interactions, and adjusted for gender only when relevant. Analyses were also adjusted for age (NZ and BC) or grade (MN) to address the wide range of ages in the surveys and normative increases in sexual behaviours with increasing age among adolescents. Mean enacted stigma scores and HIV risk scores for BC and MN were compared between sexual minority and heterosexual peers using ANCOVAs, while for NZ, weekly bullying was compared using age-adjusted logistic regressions, as well as a multinomial logistic regression of the 3-category bullying types and for the 3-category HIV risk measure. As well, the likelihood of the individual enacted stigma items and individual risky sexual behaviours were compared using estimated prevalence and 95% confidence intervals in NZ, while they were compared using age-adjusted logistic regressions in BC and MN. To explore the link between enacted stigma and HIV risk, we performed linear regression analyses, separately by sexual orientation group, for BC and MN, but this was not possible with the categorical NZ measure. All analyses in MN and BC were conducted in SPSS, while analyses for NZ were conducted in SAS.

Results

Experiences of Enacted Stigma

In all three countries, Indigenous LGB boys and girls were more likely to experience enacted stigma than their HET peers. For example, in New Zealand, LGB youth had nearly 3 times the odds of being bullied weekly or more often (AOR=2.8, 95% CI=1.5–5.3); the multinomial regression showed significant age effects (Wald X^2=58.34, df=2, p<.001), gender effects (Wald X^2=13.03, df=2, p<.01) and sexual orientation effects (Wald X^2=12.06, df=2, p<.01). Among those who were bullied, LGB Māori youth and HET youth had nearly similar rates of each type of bullying, with overlapping confidence intervals of the estimates of prevalence, but LGB Māori youth were more likely to experience multiple types of bullying than HET youth, although there were only significant age and sexual orientation effects (age, Wald X^2=56.32, df=2, p<.0001; sexual orientation, Wald X^2=7.12, df=2, p<.05).

In both BC and MN, Indigenous LGB boys and girls had higher mean scores of enacted stigma experienced during the past 12 months than their HET peers (see Table 2). For some types of enacted stigma, the differences were profound (see Table 3). For example, in BC, gay or bisexual Aboriginal boys were 19 times more likely than HET Aboriginal boys to report that they had experienced discrimination because of their orientation. Likewise,

lesbian or bisexual Aboriginal girls were 17 times more likely than their HET peers to report sexual orientation-based discrimination. Compared to HET students of the same gender, LGB Aboriginal boys in BC were more likely to be purposefully excluded at school; LGB Aboriginal girls in BC were more likely to be physically assaulted at school. In MN, LGB Native American boys were 5 times more likely than HET Native American boys to report that another student had stabbed them or fired a gun at them (see Table 4). Among Native American girls in MN, LGB girls were 5 times more likely than HET girls to have been pushed, shoved, or grabbed by another student.

It should be noted that most schools in these surveys included several ethnic groups, not just Indigenous youth, so the enacted stigma may have been from European-heritage or *Pākehā* teens, or from other ethnic minority groups, rather than from Indigenous peers.

Sexual or HIV Risk Behaviours

In terms of HIV risk behaviours, again, Indigenous LGB teens were generally much more likely to report risk behaviours than their HET peers. In New Zealand, Māori LGB youth were significantly more likely to have ever had sex than HET youth (61.7% vs. 45.3%); they also more commonly reported multiple sexual partners (37.8% vs. 23.9%) and that they had not used any contraception at last sex (28.2% vs. 12.5%), and had not used a condom at last sex (26.9% vs. 16.3%). LGB Māori youth were also more likely to report injection drug use than HET youth (13.6% vs. 3.3%).

In BC, Aboriginal LGB boys and girls were also more likely than their HET peers to have ever had sex, and to have had sex before age 14 (see Table 3). In MN, LGB boys and girls were more likely to report ever having or causing a pregnancy (see Table 4). In both countries, Indigenous LGB adolescents were less likely than HET adolescents to use a condom at last intercourse. Additionally, in both BC and MN, Indigenous LGB students had higher mean HIV risk scores than their HET peers (see Table 2 for mean scores).

In BC and MN, we also explored the link between enacted stigma and HIV risk, separately by sexual orientation (see Table 5 for results). In BC, for Aboriginal LGB girls, but not for Aboriginal LGB boys, higher levels of enacted stigma were significantly linked to higher HIV risk. The lack of significant results for Aboriginal boys may be due to insufficient power, as there were only a small number of Aboriginal LGB boys in the BC data. In MN, Native American LGB boys who reported higher enacted stigma engaged in higher levels of HIV risk, but there was no significant association between enacted stigma and sexual risk behaviours for Native American LGB girls, again, potentially due to the smaller number of LGB girls in Minnesota. Among heterosexual students in both countries, higher levels of bullying and discrimination experiences were generally associated with higher HIV risks. Among MN Native American heterosexual boys, however, there was no significant association between enacted stigma and HIV risk, perhaps because the levels of enacted stigma were generally quite low.

Discussion

Despite different national contexts and cultural backgrounds, and different research methods and measures, our findings demonstrate significant consistency among the results. Indigenous sexual minority youth in all three countries reported higher levels of bullying, harassment, and discrimination than their heterosexual peers, and they also reported higher likelihood of sexual violence exposure, and sexual behaviours that put them at risk for HIV.

This research has both limitations and strengths that should be considered. One of the primary limitations is that these are cross-sectional surveys, so all the associations identified are correlational, not causal. As well, only Indigenous students who were in school on the days the surveys were held contributed their information; since in all three countries, Indigenous youth are less likely to complete their secondary education, and LGB youth are also more likely to skip school because they feel unsafe, those who experience the greatest enacted stigma or the highest sexual and HIV risks may not be represented. These surveys were conducted several years ago, and so changing populations, and shifts in programs and practices in schools, may influence the current contexts and experiences of Indigenous young people, although a more recent survey of Aboriginal youth in Canada has documented ongoing inequities, especially among youth who live on reserves (Tsuruda et al., 2012). Yet another limitation is that the measures varied across the countries, in terms of the measure of sexual orientation, enacted stigma, and sexual and HIV risk. Despite this variation, however, the results were quite similar across countries, which argues for the robustness of the findings.

One of the strengths of this study is that each of these were large-scale population-based surveys, drawing representative samples of Indigenous youth; at the same time, it should be noted that these were general population surveys, and so the measures of sexual orientation and enacted stigma were not specific to Aboriginal, Native American, or Māori cultures or experiences. There may be additional types of enacted stigma or other risk factors, such as the legacy of colonization, for example, that may contribute further to Indigenous youth's vulnerability, but which were not captured in these surveys. Another strength was our ability to conduct multivariate analyses, rather than simple bivariate comparisons. However, these analyses focused on exposure to enacted stigma as a risk factor, and did not include potential protective factors that may help buffer that exposure for LGB youth; other studies of sexual risk behaviours among Indigenous youth generally (Clark et al., 2006; Clark et al., 2012; Devries et al., 2009a, 2009b; Chewning et al., 2001; Tsuruda et al., 2012; Saewyc et al., in press), or in general populations of LGB youth (Saewyc et al., 2008), have found protective factors like family or school connectedness can help lower the odds of sexual risk behaviours, even among those who have experienced violence.

Implications for Research and Practice

This appears to be one of the first population-based studies of sexual minority Indigenous youth in more than a decade. More current research among such young people is clearly needed. Intersectional analyses are important additions to the body of knowledge in promoting sexual health: since both sexual minority youth and Indigenous youth appear to be at increased risk for stigma and for HIV individually, sexual minority Indigenous youth

may be doubly at risk, being targeted for stigma both within their Indigenous communities and within LGB communities. Understanding their experiences of stigma and violence, and how they become more vulnerable to HIV and other sexually transmitted infections through the various structural inequities they face is an important step in developing population interventions to address the determinants of sexual health for Indigenous youth around the world.

Beyond vulnerability and risk, however, we also need to identify protective factors that may foster resilience among sexual minority Indigenous youth, despite their experiences of stigma and rejection. The relatively limited research among general populations of Indigenous youth has identified such supportive resources as nurturing family relationships, friendships with caring peers, connectedness to safe and supportive schools, and reconnecting to Indigenous culture (Clark et al., 2006; Devries et al., 2009a, 2009b; Chewning et al., 2001; Tsuruda et al., 2012; Saewyc et al., in press). Whether these same protective factors work for sexual minority Indigenous youth is still unclear. In a grounded theory study of Canadian youth where about half the participants were Indigenous adolescents, Ungar and colleagues (2008) found “adherence to cultural traditions” was an important aspect of resilience, to the extent it was able to help young people develop the capacity to engage with culturally safe health resources, but this was not something measured in our study. Greater sensitivity to culture and context in developing effective sexual health promotion programs for Indigenous sexual minority youth is warranted, but we also need effective measures of cultural connectedness to measure the interplay of culture and health for Indigenous youth.

Interventions to promote sexual health for all Indigenous youth also need to include a focus on reducing violence exposure in school settings, especially for sexual minority youth. Interventions that target both racism and homophobia and address the unique historical inequities Indigenous people face are likely needed. Programs which share traditional knowledge and historical information about sexual minority roles within Indigenous communities, not only with sexual minority youth but throughout the community, may help attenuate the negative legacies of colonization and assimilationist policies, and reduce homophobic attitudes. This in turn may help healthy, holistic, young Two Spirit, *takatāpui*, and LGB Indigenous youth develop positive identities within their communities, balancing their mind, body, and spirit, and thus potentially foster healthy sexual development and reduce risk for HIV and sexually transmitted infections.

Conclusions

Despite historical traditions of positive status for Two Spirit and other sexual minority people within Canada, New Zealand, and US Native communities, Indigenous sexual minority youth in all three countries experience significantly higher levels of enacted stigma in school, including frequent bullying and violence. Whether this enacted stigma is from European heritage or other ethnocultural groups or occurs within Indigenous communities, Indigenous sexual minority youth are more likely to be targeted than their Indigenous heterosexual peers, and they also report higher likelihood of sexual behaviours that put them at risk for HIV or other sexually transmitted or blood-bourne infections. These findings

suggest that sexual orientation stigma influences HIV risk for Indigenous youth in all three countries. Addressing the levels of stigma and homophobic violence in schools and wider community, as well as restoring traditional support for nonheterosexual community members, may help reduce the increased risk of HIV for Two Spirit, *takatāpui,* gay, lesbian, bisexual, and questioning Indigenous young people.

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Finally, we would like to dedicate this paper to one of our original research team members, Roxanne Struthers, PhD, RN, Ojibway of the White Earth Reservation in Minnesota, and Associate Professor at the University of Minnesota School of Nursing; Dr. Struthers passed away of an unexpected illness in November 2005 in the midst of our project. Her ideas and her passion for Indigenous young people continue to inspire us in this work.

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Biographies

Elizabeth Saewyc, PhD, RN, FSAHM, FCAHS is a Professor of Nursing and Adolescent Medicine at the University of British Columbia, where she founded the Stigma and Resilience among Vulnerable Youth Centre (SARAVYC). She has nearly 20 years of experience as a public health nurse and researcher working with Indigenous youth in Seattle, Washington, Minnesota, and western Canada. She lived for 15 years near the Mdewakanton Sioux Prairie Island reservation, and conducted one of the tribe's first community health assessments at their request. As an Assistant Professor at the University of Minnesota School of Nursing, she worked with Ojibway nursing colleague Dr. Roxanne Struthers on Indigenous adolescent health research. Due to this work, Dr. Saewyc was one of two non-

Native researchers nominated by Indigenous colleagues to the scientific committee for the NIH's 2006 Native Peoples of North America HIV/AIDS conference in Alaska. Since moving to Canada in 2004, she also serves as Research Director for the McCreary Centre Society, continues to mentor Indigenous graduate students, and works with Indigenous researchers on a variety of adolescent health studies, including participatory research with Indigenous street-involved youth, and focused analyses of Aboriginal and Métis youth in McCreary's province-wide student surveys.

Terryann Clark, PhD, MPH, RcPN is a registered comprehensive nurse with a range of clinical and academic experience in adolescent health, community health, sexual health, mental health, health promotion and indigenous health. Dr. Clark works part time as a Senior Lecturer at the University of Auckland School of Nursing, and part time as an adolescent nurse specialist, combining her clinical and academic skills. She is currently the principal investigator for the Adolescent Health Research Group in New Zealand, who have undertaken national youth health surveys in schools throughout New Zealand. Dr. Clark completed a fellowship in adolescent health and her PhD at the University of Minnesota School of Nursing, USA, where she also served as a co-investigator on this study. She comes from Taitokerau and has Ngapuhi whakapapa (ancestry Indigenous to New Zealand). Her research interests lie in resilience, youth health, disability, population health, and Māori and Indigenous youth health issues.

Lucy Barney, MSN, RN, is from the Lillooet First Nation in British Columbia. She completed her masters degree in nursing at the University of British Columbia, while at the same time working as the nurse clinician of *Chee Mamuk*, an HIV prevention and outreach program for Aboriginal youth she helped develop within the BC Centre for Disease Control. She also was a research assistant on this study within the Stigma and Resilience among Vulnerable Youth Centre, facilitating the advisory group for Canadian portion of the study, as well as helping to interpret the Canadian results within the local contexts, and to disseminate the results both locally and internationally. She now serves as Nurse Manager of the provincial Aboriginal Health Perinatal Services in British Columbia.

Dana Brunanski, MA, comes from a diverse cultural background including Métis, Czech, Hungarian, British, and Danish ancestors. After completing undergraduate studies in psychology, women's studies and sociology, including a self-reflective thesis on women's bisexual identity development, Dana began working with at-risk and street-involved youth in East Vancouver in 1997. Over the past 15 years she has worked with many Indigenous youth as a lifeskills group facilitator, street outreach worker, addictions counsellor, and, since completing her Master's in Counselling Psychology (University of British Columbia, 2009), an assertive outreach mental health clinician with "hard-to-engage" Indigenous youth. Her current work is an enactment of her master's research which used an indigenizing narrative methodology to explore Indigenous street youths' experiences with counselling. In addition to direct clinical service on the Vancouver Coastal Health Youth Outreach Mental Health Team, Dana is the chair of a committee charged with improving community mental health services for Indigenous children, youth, and their families. She also continues to be involved in research activities, serving as a community research affiliate with the Stigma and

Resilience among Vulnerable Youth Consortium, and as an Aboriginal Advisory Committee member for the McCreary Centre Society's ongoing research on Indigenous youth health in British Columbia.

Yuko Homma, PhD, is a postdoctoral fellow in the Stigma and Resilience among Vulnerable Youth Centre in the School of Nursing at the University of British Columbia, Vancouver, Canada. After working as a nurse-midwife and an instructor in Japan, she came to the United States, and received her master of science in nursing at the University of Minnesota. She then moved to Vancouver, and served as a research assistant on this project at the University of British Columbia during her doctoral education. She completed her PhD in nursing in 2012. Her dissertation examined factors associated with acculturation and sexual initiation among adolescents of East Asian origin in Canada. During her fellowship, she will continue to be involved in research on health inequalities among sexual minority adolescents, compared to their heterosexual peers. Her research interests include health and risk behaviours among various types of minority adolescents (e.g., ethnic, sexual), and social and cultural determinants of health.

Table 1

Select Demographic Characteristics of Indigenous Youth in each Data Source

	British Columbia N [a] =1,664	Minnesota N[b]=1,035	New Zealand N=2,063
Sexual orientation measures	***Self-labeling/attractiocn***	***Sexual partners in the past year***	***Attraction***
Age range	12–19 years	13–18 years	12–17 years
% who are girls	53	52	54
% LGB among boys	2.7	16.1	4.4
% LGB among girls	7.8	8.4	4.5

[a] Weighted to adjust for differential probability of selection, provincial enrollment, and cluster-stratified sampling

[b] Sexually active youth only

Table 2

Estimated Mean Scores[a] of Enacted Stigma and HIV Risk Behaviour, by Sexual Orientation

	BC Boys		BC Girls	
	HET	**LGB**	**HET**	**LGB**
Enacted stigma (0–8)	2.03	3.48**	2.37	3.28***
HIV risk behaviour (0–7)	0.70	1.62**	0.69	1.46***
	MN Boys		**MN Girls**	
	HET	**LGB**	**HET**	**LGB**
Enacted stigma (0–6)	2.77	3.71***	1.93	3.25***
HIV risk behavior (0–5)	1.20	2.54***	1.28	2.47***

Note. Potential score ranges are in parentheses. BC = British Columbia; MN = Minnesota; HET = heterosexual; LGB = lesbian, gay or bisexual.

[a]Adjusted for age (BC) or grade (MN)

** $p < 0.01$.

*** $p < 0.001$.

Table 3

Logistic Regressions of Enacted Stigma and Sexual/HIV Risk Behaviours: British Columbia Adolescent Health Survey

	LGB Boys[a]		LGB Girls[a]	
Outcome	**AOR[b]**	**95% CI**	**AOR[b]**	**95% CI**
Enacted stigma individual items experienced in the past 12 months				
Verbal sexual harassment	1.98	[0.82, 4.79]	1.62	[0.91, 2.87]
Physical fights	0.81	[0.33, 1.97]	1.59	[0.94, 2.69]
Teased at school	1.03	[0.40, 2.66]	1.43	[0.86, 2.39]
Purposefully excluded at school	2.85*	[1.18, 6.92]	1.03	[0.61, 1.73]
Physically assaulted at school	2.45	[0.98, 6.13]	3.00**	[1.60, 5.62]
Discriminated against due to race	1.72	[0.67, 4.42]	0.72	[0.36, 1.44]
Discriminated against due to sexual orientation	18.73***	[6.96, 50.41]	16.62***	[7.99, 34.57]
Discriminated against due to physical appearance	5.70***	[2.30, 14.10]	2.59***	[1.54, 4.35]
Sexual/HIV risk behaviours				
Ever had sexual intercourse	1.12	[0.42, 2.99]	4.53***	[2.50, 8.20]
Early sexual debut, < 14 years	4.26**	[1.60, 11.35]	4.10***	[2.15, 7.84]
3+ sexual partners in the past year	2.09	[0.69, 6.36]	4.39***	[2.34, 8.25]
Substance use before last inter-course	2.63	[0.89, 7.76]	2.29**	[1.27, 4.11]
No condom use at last intercourse	4.76**	[1.56, 14,51]	2.41**	[1.33, 4.35]
Pregnancy involvement	5.00	[0.93, 27.00]	2.50	[1.00, 6.25]

Note. LGB = lesbian, gay or bisexual; CI = confidence interval.

[a] Reference group = heterosexual;

[b] AOR = odds ratio adjusted for age

* $p < 0.05$.

** $p < 0.01$.

*** $p < 0.001$.

Table 4

Logistic Regression Analyses of Enacted Stigma and Sexual/HIV Risk Behaviours: Minnesota Student Survey

	LGB Boys[a]		LGB Girls[a]	
Outcome	**AOR[b]**	**95% CI**	**AOR[b]**	**95% CI**
Enacted stigma individual items experienced in the past 12 months				
Insulted	1.26	[0.73, 2.19]	4.21**	[1.75, 10.15]
Threatened	1.82*	[1.10, 3.02]	2.40**	[1.29, 4.47]
Pushed, shoved, or grabbed	2.67**	[1.50, 4.75]	5.22***	[2.44, 11.19]
Kicked, bitten, or hit	2.74***	[1.63, 4.63]	2.84**	[1.51, 5.34]
Stabbed or fired a gun at	4.64***	[2.65, 8.12]	12.38***	[3.41, 44.87]
Property stolen or deliberately damaged	1.93*	[1.14, 3.27]	1.98*	[1.07, 3.68]
Sexual/HIV risk behaviours				
3+ sexual partners in the past year	6.03***	[3.16, 11.51]	12.54***	[5.68, 27.71]
No condom use at last intercourse	2.10**	[1.27, 3.48]	2.27*	[1.17, 4.42]
Not always used a condom	2.53*	[1.49, 4.31]	2.11*	[1.06, 4.22]
Pregnancy involvement	2.85***	[1.64, 4.94]	2.95**	[1.55, 5.65]

Note. LGB = lesbian, gay or bisexual; CI = confidence interval.

[a]Reference group = heterosexual

[b]AOR = odds ratio adjusted for grade

*$p < 0.05$.

**$p < 0.01$.

***$p < 0.001$.

Table 5

Linear Regression Analyses Predicting HIV Risk Behaviour, by Sexual Orientation

	BC Boys		BC Girls	
	HET	**LGB**	**HET**	**LGB**
Age	0.42***	−0.18	0.38***	0.19
Enacted stigma	0.17***	0.40	0.08*	0.41**

	MN Boys		MN Girls	
	HET	**LGB**	**HET**	**LGB**
Grade 12 (vs. Grade 9)	0.04	0.06	0.28***	0.13
Enacted stigma	0.06	0.26*	0.09*	0.19

Note. Standardized coefficients are presented. BC = British Columbia; MN = Minnesota; HET = heterosexual; LGB = lesbian, gay or bisexual.

* $p < 0.05$.

** $p < 0.01$.

*** $p < 0.001$.