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## *Condom use-related beliefs in adolescents of First Nations communities of Quebec*

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3 Bernard Roy holds a Ph.D. in anthropology. In 1986, at the outset of his career path as a nurse in Aboriginal communities, he became interested in type 2 diabetes. Along the road he has raised many questions, including the following: Why do diabetic Aboriginals adhere so little to the teachings and prescriptions of health professionals? Why is there so much diabetes among First Nations people? His work on diabetes soon became the focus of numerous publications. In 2005, for his work *Sang sucré, pouvoirs codés, médecine amère* (sugared blood, coded powers, bitter medicine), Bernard Roy was awarded the Luc-Lacourcière medal for excellence attributed to an ethnology work published in French in North America. Since 2004, he has been a professor at the Faculty of Nursing of Université Laval, teaching, among other things, the foundations of the community health nursing approach. Alongside his teaching career, Bernard Roy is regularly called upon to work on issues concerning First Nations health.

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## ABSTRACT

**Background:** The First Nations of Quebec and Labrador Health and Social Services Commission, hereafter the Commission, has identified sexually transmitted infections, including HIV/AIDS, as a priority health issue. Drawing on its interest in telemedicine and e-Health, the Commission agreed to a partnership approach aimed at studying the feasibility of interventions using information and communication technologies (ICT) to promote sexual health among adolescents and young adults of Quebec First Nations (FN) communities. As a complement to the feasibility evaluation, this study was conducted in order to formulate exhaustive recommendations for the development of evidence-based interventions that also take into account the characteristics of the target population.

**Purpose:** To identify the factors underlying condom use among 13-18 year olds from FN communities of Quebec.

**Methodology:** A focus group and a questionnaire (Appendix A) were used to document the perceptions of high school students from participant communities with regards to different aspects of sexual and reproductive health, particularly condom use.

**Results:** The modal salient beliefs related to the benefits of condom use were the prevention of sexually transmitted infections/diseases and the prevention of pregnancies, while most of the respondents found no disadvantages. The positive referents mentioned most were parents and boyfriend/girlfriend, while the negative ones were sexual partner and lover/boyfriend. Always having some (condoms) on hand, and having proper information were highlighted as the most important factors facilitating condom use, while not having any condoms, or being drunk/unconscious were mentioned as obstacles to its use.

**Conclusion:** The conception of sexual health by the respondents positioned them as a potentially receptive target for interventions aimed at promoting condom use. Our study has highlighted important beliefs that provide avenues for designing interventions to promote condom use for a healthy sexual life among Aboriginal youth.

## BACKGROUND

Sexual and Reproductive Health (SRH) is an important aspect of human health. According to the World Health Organization (WHO-Regional Office for Africa, 2009), people have the right to a responsible, satisfying and safe sexual life, and the freedom to decide if, when and how often to reproduce (WHO ROA, 2009). SRH is influenced by a complex web of factors ranging from sexual behaviour, attitudes and social factors, to biological risk and genetic predisposition, and includes the problems of HIV and sexually transmitted infections (STIs)/reproductive tract infections, unintended pregnancy and abortion, infertility and cancer resulting from STIs, and sexual dysfunction (Public Health Agency of Canada, 2008). The variability of sexual health issues should be noted here, and as a consequence, their unequal distribution by age as well as by country and socio-cultural and economic contexts.

In Canada, the distribution of HIV/AIDS prevalence shows a great inequality among different socio-cultural groups. In accordance with Article 35 of the Constitution Act of Canada, the definition of the term “Aboriginal people” by the Union of the Municipalities of Quebec refers to all original peoples of Canada and their descendants, including three groups, Métis, Inuit, and First Nations, the latter being a term used since the 1970s to replace the word “Indian” which some people consider offensive (UMQ, 2006). Although representing 3.8% of the total Canadian population (in 2006), Aboriginal people accounted for approximately 8% of all those living with HIV (including AIDS) in Canada and represented 12.5% of all new infections in 2008 (Public Health Agency of Canada 2010). For that same year, the HIV infection rate for Aboriginal people was, overall, 3.6 times higher than among other Canadians (Public Health Agency of Canada 2010). From 1998 to 2006, persons aged between 0-29 years accounted for up to 32.4% of all HIV diagnoses among Aboriginal people, compared to 21% for non-Aboriginal diagnostics (Canadian Aboriginal AIDS Network, 2009).

Canada’s Aboriginal population is also facing higher rates of STI, such as chlamydia and hepatitis C (Health Canada, 2005). According to the portrait of sexually transmitted and blood-borne infections (STBBIs) in Quebec in 2012, chlamydia and gonococcal infections in Nunavik are respectively 9 and 73 times higher than the average rate in the rest of Quebec (Gouvernement-du-Québec, 2013). In Terres-Cries-de-la-Baie-James, these rates were respectively 7 and 11 times higher than in the rest of Quebec (Gouvernement-du-Québec, 2013). Nunavik and Terres-Cries-de-la-Baie-James have high proportions of Aboriginal people and are also areas where the epidemiological situation of STI is most frequently encountered (Gouvernement-du-Québec, 2013). In 2007, The First Nations of Quebec and Labrador Health and Social Services Commission highlighted that the prevalence of genital chlamydia and gonococcal infections was about 10 times higher than the average rate in the rest of Quebec among some indigenous populations (FNQLHSSC, 2007). The Commission has therefore identified STBBIs, including HIV/AIDS, as a priority health issue. The Aboriginal Strategy on HIV/AIDS estimates that to be effective, interventions to prevent HIV/AIDS should target

different groups, including Aboriginal youth (CAAN 2009). In this regard, the familiarity of the younger generation with new technologies positions the use of information and communication technologies (ICT) as a highly promising avenue in the field of STIs and HIV/AIDS prevention among adolescents and young adults. We have recently examined the habits and preferences of adolescents and young adults of Quebec First Nations in relation to ICTs (Djossa, M., Adoun, S., Roy, B., Gros-Louis, N., Caron, M. & Gagnon, M.-P., 2013). That research was part of a feasibility study[1] aimed at analyzing the current context of FN communities in order to consider innovative and effective intervention strategies with youth. To complete this process and enable the formulation of recommendations for the development of interventions, this study focuses on the factors determining condom use among adolescents in Quebec FN communities.

**Literature review**

What do we know about determinants of condom use in FN adolescents?

The high rates of STIs and HIV/AIDS reported above could be attributed to a higher level of sexual risk-taking. Indeed, a survey of Quebec FN adolescents and young adults on sexual behaviour, attitudes and knowledge regarding STBBIs revealed several at-risk behaviours, including sexual precocity, having multiple partners, substance use (alcohol or drugs) before sex, and inconsistent condom use (FNQLHSSC, 2011). According to the report on social determinants of Aboriginal health, Aboriginal youth are more sexually active than other Canadian youth of the same group age and could have a greater potential for indulging in unprotected sex (Reading, 2009). Statistics Canada also indicates that the probability of failing to use a condom is nearly twice as high among Aboriginal male youth as among the non-Aboriginal Canadians (Rotermann, 2005). Nevertheless, very little is known about the factors that influence condom use in the specific population of Aboriginal adolescents and young adults. The report on the survey by the Commission (2011) seems to attribute the non-systematic use of condoms among First Nations adolescents in Quebec to a lack of knowledge regarding STBBIs, among other factors. However, simply increasing knowledge may not reduce such sexual risk-taking among adolescents where several intrapersonal and behavioural factors could be significant predictors of current consistent condom use (Alvarez, Villarruel, Zhou, & Gallegos, 2010; Haley, Puskar, Terhorst, Terry, & Charron-Prochownik, 2013). As such, knowing about the other determinants of condom use among Aboriginal youth could help better promote this behaviour for STI/HIV prevention.

Several studies have addressed the issue of condom use among adolescents and young adults in general. Many authors have studied the determinants of the intention to use condoms

[1] Feasibility study on interventions using Information and Communications Technologies (ICT) for the promotion of sexual health and the prevention of HIV/AIDS among First Nations adolescents. Study funded by the Canadian Institutes of Health Research (CIHR), Catalyst Grant, Fall 2010. (Report in preparation)

(Donald, Lucke, Dunne, O'Toole, Raphael, 1994; Bosompra, 2001); others have focused on predictors of condom use (Harley et. al, 2013; Nuwaha, Faxelid, 1999; Sheeran and Taylor, 1999; Jemmott, Jemmott, Vallarruel, 2002; Villarruel, Jemmott, Ronis, 2007; Alvarez, Villarruel, Zhou, & Gallegos, 2010), or factors associated with that behaviour (Peltzer, 2000; Kanekar and Sharma, 2007); and other authors have explored the beliefs underlying condom use among young people from different contexts (Norris and Ford, 1992; Gillmore, Morrison, Lowery, Baker, 1994; Norris and Ford, 1994; Nicholas, 1998; Oliveira, Abreu, Barroso, & Vieria, 2009). Caron, Godin, Otis, & Lambert (2004) reported the salient modal beliefs underlying the use of condoms among multiethnic adolescents attending an urban high school in Quebec, Canada. However, as highlighted above, Aboriginal adolescents and young adults show greater rates of STIs and HIV/AIDS and participate in higher levels of sexual risk-taking. As such, the beliefs about condom use in this specific population could be different from those in non-Aboriginal populations. Moreover, most of the authors merely explored beliefs about outcomes of using condoms (e.g. study by Gillmore, 1994) or about outcomes and referents (e.g. study by Oliveira, Abreu, Barroso, Vieria, 2009), and very few investigated the beliefs underlying all the psychosocial constructs that we consider in the present research. The study by Gagnon (2010) explored the factors underlying attitude, subjective norm, perceived control, and moral norm with respect to condom use among Aboriginal young adults in Nunavik. However, the participants in the study in Nunavik were older (18-29 years), compared to the population of interest in our study.

To the best of our knowledge, no data was available regarding the salient beliefs related to condom use, specifically among 13-18 year olds of Quebec FN communities. Our study aimed at filling this gap.

**Theoretical framework**

The conceptual framework that guided this study is an adapted model of the Theory of Planned Behaviour (TPB) (Ajzen, 1991; Ajzen, 2006). This theory was chosen because of its relevance to understanding factors underlying the intention to adopt and maintain safe sexual behaviours among Aboriginal young adults, as shown in a previous study conducted in two Nunavik communities (Gagnon, 2010).

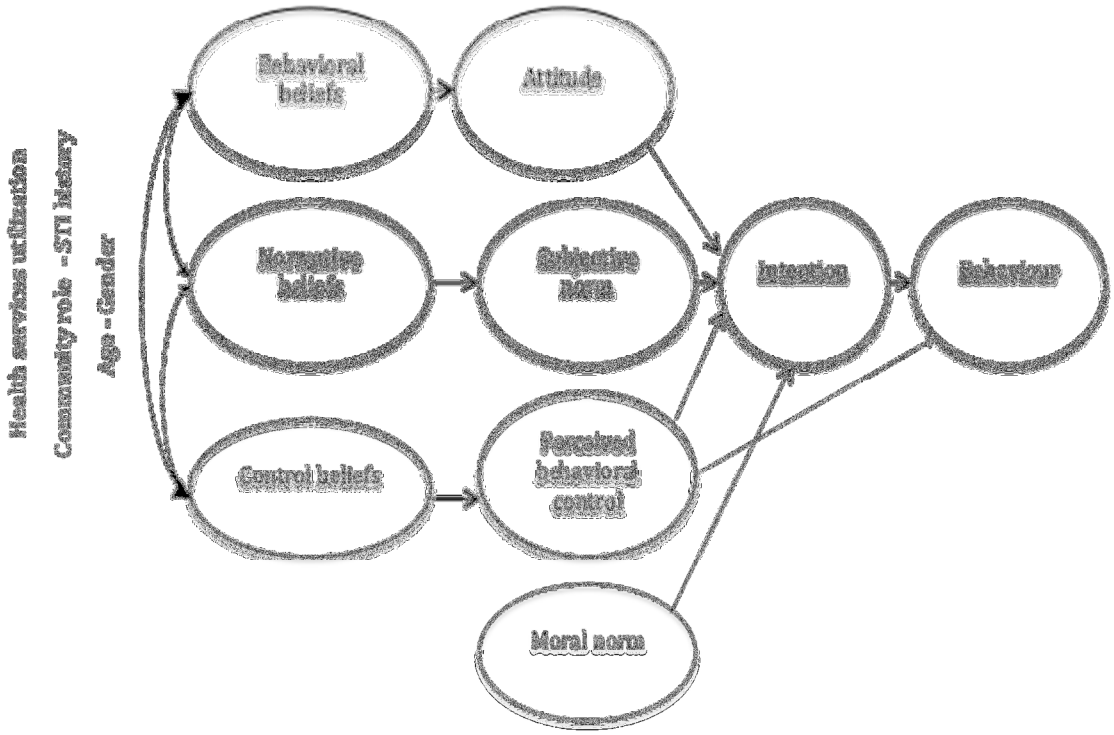



**Figure 1: Adapted model of the theory of planned behavior (Source: Gagnon, 2010, 26)**

According to the TPB (Ajzen, 1991), intention is the immediate determinant of individual behaviour. However, under less volitional conditions, perceived behavioural control is also supposed to add to this prediction. In turn, intention is influenced by three direct constructs, namely attitude, subjective norm, and perceived behavioural control. Attitude reflects the individual's evaluation of the consequences, favorable or not, of adopting a behaviour. Subjective norm is the perception by the individual that particular persons or groups of people who are important to him or her would approve or disapprove of the individual's adoption of the behaviour. Perceived behavioural control is defined as the perceived ease or difficulty of adopting a behaviour (Godin, Gagnon, Lambert, Conner, 2005).

The TPB also posits that each behavioural determinant (attitude, social norm and perceived behavioural control) is based on specific beliefs, which represent indirect constructs. According to Ajzen (2006), behaviour is guided by three considerations: beliefs about the likely consequences of the behaviour (behavioural beliefs); beliefs about the normative expectations of others (normative beliefs); and beliefs about the presence of factors that may facilitate or impede the performance of the behaviour (control beliefs). Beliefs can inform about the reasons that lead individuals to maintain certain behaviours, providing avenues for the development of behavioural interventions. According to Ajzen (1991), all constructs from the TPB should be measured in relation to specific rather than general behaviour. In the model (Figure 1) adapted by Gagnon (2010), the adoption of sexual behaviour not only depends on motivation or intention; it

is also based on internal or external non-motivational factors that interfere with behavioural intention. As such, moral norm, which measures the feeling of personal obligation towards the adoption of a behaviour, was added to the list. Differing from subjective norm, moral norm refers to rules of personal conduct and to the moral principles of an individual (Gagnon, 2010). Moral norm was also identified as an important determinant of intention to use condoms in heterosexual adults from three ethnocultural populations (Godin, Gagnon, Lambert, Conner, 2005). Finally, two types of variables are included in the adapted model. There are socio-demographic variables, such as age and gender, and environment-related variables, namely a history of STIs, use of health services, and role of the community. In fact, decision-making about a sexual behaviour like condom use could be different among men and women, or moreover, involve the cooperation of two sexual partners shaped by power dynamics (Gagnon, 2010). The inclusion of environment-related variables was based on the importance of community norms and of the social environment in determining sexual health in an Aboriginal context (Gagnon, 2010).

## METHODS

The project was developed in close collaboration with the Commission. This collaboration started during a feasibility study[2] that we planned and conducted in partnership with the Commission. To do so, a first draft of the research project was sent to the Commission's administration. The draft was accompanied by a letter explaining our motivations as well as the potential benefits of the project for the Commission and, subsequently, for First Nations communities. The Commission was a key player in refining the proposed research project, as the organization clearly identified STI / HIV / AIDS as a priority health issue in the "*Blueprint Quebec First Nations Health and Social Services 2007-2017" (CSSSPNQL, 2007)*. The interest of the Commission for the proposed project was stemmed from the fact that this organization wanted to develop a strategic framework for the implementation of telemedicine and e-health. Finally, the Commission found in this project the opportunity to eventually tackle other health promotion interventions using ICT, so as to address other issues such as sexual health.

It was clearly stated that the content of the project draft consisted only of the ideas proposed by researchers and that the methodological choices as well as the implementation of the project were to be discussed with the Commission. This organization was the main Aboriginal actor in the participatory process. All decisions were discussed with this partner at all stages of the research.

[2] Feasibility study on interventions using Information and Communications Technologies (ICT) for the promotion of sexual health and the prevention of HIV/Aids among First Nations adolescents. Study funded by the Canadian Institutes of Health Research (CIHR), Catalyst Grant, Fall 2010. (Report in preparation)

## STUDY DESIGN

A mixed-method was used. A qualitative phase was planned in order to elicit salient beliefs among FN young people, following the methods suggested by Ajzen (2006). A qualitative method was also used by Gagnon (2010) in an exploratory study involving youth between 18 and 29 years old from two indigenous communities of Nunivak. However, further to the failure of our initial data-collection technique, a quantitative approach was adopted.

Qualitative Phase

We planned four focus groups in each participating FN community, with each group involving 8 high school students between 13 and 18 years of age. The number of focus groups advocated was meant to ensure homogeneity (one with girls and one with boys in each of the following categories of age: 13 -15 years and 16 -18 years). Indeed, when discussing sensitive issues, such as sexual health, too much heterogeneity can be a threat to participants and can inhibit the disclosure and sharing of personal experiences (Wong, 2008). However, this technique did not produce the expected results. First, despite the involvement of resource persons identified in the community, the research team faced great difficulty in recruiting participants wishing to address the issue of sexuality through a focus group. Thus, of the four focus groups planned (in our first participating community) only one was conducted with female students between 13 and 15 years of age. Moreover, the students who agreed to participate in the focus group were not really involved in the discussions. Basically, there was almost no information collected at the end of the focus group. The situation was analyzed with the Commission. It emerged as an explanatory hypothesis that the focus group would probably not be the best technique to address the issue of sexuality within our target population, making it necessary to find other alternatives to collect information. Thus, it was decided that data would be collected during the First Nations Youth Forum held in Quebec City in August 2012. The Forum provided an opportunity to initiate informal meetings with young people from different FN communities of Quebec and Labrador. Two objectives were targeted through these meetings: 1) To estimate the degree of understanding of the questions used to elicit salient beliefs in the FN youth population in order to know whether this parameter contributed to the non-success of our initial attempt at data collection; and 2) to collect FN youth perspective on the potential means and modes of administration that they considered most relevant to address issues of sexuality with their peers. The young participants in the First Nations Youth Forum contributed significantly to our research, as we adjusted our methodological approach according to their suggestions, adopting a quantitative approach.

Quantitative Phase (questionnaire development)

Past research in Aboriginal communities has revealed significant conceptual difficulties in defining “sexual health” (Gagnon, 2010) and has shown that the popular conception of health

among the Aboriginal population can influence the adoption of health-related behaviours (Roy, 2002). As a result, the first items of our questionnaire (Appendix A) were designed to identify the conception of health and particularly of "sexual health" among our target population. Those items asked the respondent to choose from among 12 (or 14 for sexual health) statements the 5 elements that contribute the most to creating his or her "circle of health" and "circle of sexual health." The statements included different aspects of the World Health Organisation's definition of health (and sexual health) and other conceptions that have emerged from past research in FN communities (Roy, 2002; Gagnon, 2010).

Questionnaire items (Appendix A) were designed to identify salient beliefs underlying attitude (advantages and disadvantages); subjective norms (important people who would approve or disapprove); the perception of control (factors that can make it easy or difficult); and moral norm (coherence with personal values) of FN young people related to using condoms during all instances of sexual intercourse. Our original elicitation questions were reworded in order to offer some choices of responses. Proposed responses were modal salient outcomes, referents, and control factors derived from content analysis of the answers provided by young participants in the First Nations Youth Forum. There were also open-ended questions to allow respondents to express other opinions. A final question documented, from the perspective of respondents, the means that communities could implement to promote the use of condoms during all sexual intercourse among young people. Two teenagers from a non-participant FN community reviewed the questionnaire (Appendix A) to ensure that all questions were well understood.

**Setting and participants**

In the participatory space established with the Commission and the FN communities involved, the expected role of the target population (FN adolescents and young adults) is to provide information on, among other issues, their conception and beliefs with respect to health, sexuality, sexual health, and specific sexual behaviour, such as condom use. The purpose of the information is to develop interventions using ICT to promote sexual health. To do so, two FN communities were pre-identified with our collaborators from the Commission for participation in the feasibility study, based on a number of criteria. The partnership with the Commission was essential to ensure that the research would respect FN communities' reality, values and needs, and would provide knowledge that could be used by FN people. The Commission was seen as a legitimate body empowered to establish first contact between the research team and the communities. Thus a Memorandum of Understanding was sent to the chief of the band council of each of the selected communities, which included a protocol describing the objectives, methodology and impact of the project. All stakeholders signed this document: the project coordinator, the person in charge of the research sector at the Commission, and the Chief of the band council. The signing of the document by the band council finalized the tripartite agreement intended to frame our research in each participating community.

High school students were the population of interest in each participating community. This research was in line with a previous study on sexual behaviours, attitudes and knowledge related to STI (First Nations of Quebec and Labrador Health and Social Services Commission, 2011), in which high school students from selected FN communities participated. Our research was another step towards intervention to improve sexual health in this target population.

The school administration was associated with the research team, which also benefited from the help of resource persons identified in targeted high schools. We presented the project to the students of each school on the first day, making sure that everyone understood the process. We then distributed consent forms to students interested in taking part in the study. Students who were interested in participating were asked to sign the forms, or to get their parents' or guardians' signature if they were minors. The next day, the research team went through the classrooms and collected signed consent forms. The students who had their consent forms signed were then given a questionnaire that they completed in the classroom. Data were collected in the two participating FN communities during fall 2012 and winter 2013 respectively. As an incentive, we held a draw for a participation prize (a Sony headset) among respondents in each participating high school. The Commission also offered condoms and prevention pamphlets.

**Analysis**

Answers to the questionnaire were compiled in order to list the salient beliefs within each category (behavioural, normative or control beliefs). The frequency of mention was calculated for each salient belief. The salient beliefs were placed in descending order of frequency of mention, which allowed us to identify the modal salient beliefs. The modal salient beliefs were identified following the recommendation that the sum of their frequency should reach 75% of all mentions (Gagné & Godin, 1999).

**Ethical considerations**

The involvement of the research sector of the Commission made it possible to ensure the conformity of methodological choices and the application of the First Nations of Quebec and Labrador Research Protocol. The study received approval from Université Laval's Committee of Research Ethics. Given the changes made in the data-collection process, the protocol was re-submitted for amendment. The study also received First Nations approval, which was expressed in the tripartite agreement signed by the Commission and the band council of each participating community. Participation in the research was on a voluntary basis. Each participant signed a consent form and had his or her parents or guardians sign an assent form in the case of minors. Moreover, it was clearly stipulated in the consent form that respondents could stop participating in the research and withdraw their consent at any time, without prejudice.

**Results**

Thirty-two (32) young people participating in the First Nations Youth Forum rather easily

answered the questions that we initially prepared for the focus group. There were no clarification requests or suggestions for reformulation. This suggests that the questions were easily understood and that the focus group technique could indeed be the reason for the failure of our first experience. In addition, the young people whom we met recommended the use of modes of administration offering more anonymity to address issues relating to sexuality. The young First Nations people whom we met during the First Nations Youth Forum were mostly over 18 years of age and could not be representative of the population of interest in our research. It was still necessary to investigate the initially targeted 13-18 year old persons of FN communities of Quebec. We then adjusted our methodological approach accordingly and developed a questionnaire (Appendix A) for the population of interest.

**Sample characteristics**

A total of 129 students were interested in participating in our study and received a consent/assent form. Of these, 51 participants completed the questionnaire, which corresponds to a response rate of 39.5%. Table 1 summarizes the socio-demographic characteristics of respondents. The mean age of the respondents was 16 years (SD=1.8). Girls represented a proportion of 65%, and 55% of respondents had completed their third year of high school.

| | |
|---|---|
| Mean age (standard-deviation) | 16.05 years (1.80) |
| Gender | |
| Female (%) | 64.7 |
| Male (%) | 35.3 |
| Highest level of education completed | |
| Elementary school (%) | 2.0 |
| First year of high school (%) | 7.8 |
| Second year of high school (%) | 21.6 |
| Third year of high school (%) | 54.9 |
| Fourth year of high school (%) | 13.7 |

**Table 1. Socio-demographic characteristics of respondents**

**Conceptions of health and sexual health**

Figure 2 and Figure 3 present the five elements making respectively the circle of health and the circle of sexual health, as chosen by respondents. In each of these two figures, the first graph indicates an overview of all the choices of statements by participants. It shows the percentage of respondents who chose any given statement. The second graph is designed to illustrate the relative importance of each of the five most rated statements in the “circle of health” / “circle of sexual health.”

The five elements most rated by respondents for making their circle of health referred, first, to

their feelings. Some 70% of respondents chose the fact of feeling good about oneself and being capable of taking care of oneself. Then the fact of not having any diseases was rated by more than 60% of respondents, as was being well in one's family. The other element mentioned by over half of respondents was being comfortable in one's community. For almost half of respondents, being able to make decisions was an important element, as was the adoption of healthy behaviours. Referring to the second graph of this figure, the statements related to individual level considerations (feeling good, able, and without diseases) are the ones that contribute most (63.3%) to the respondents' circle of health.

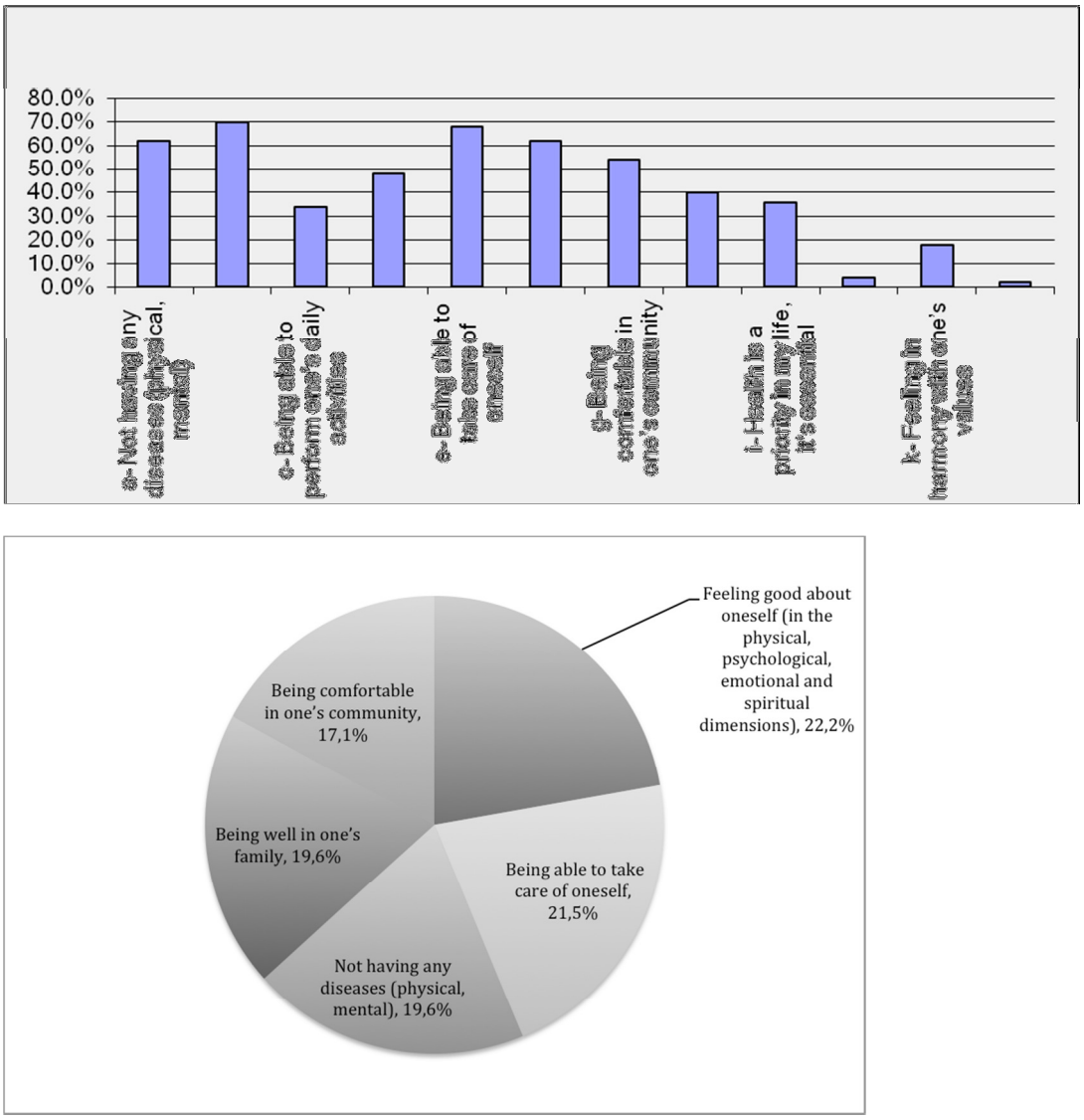
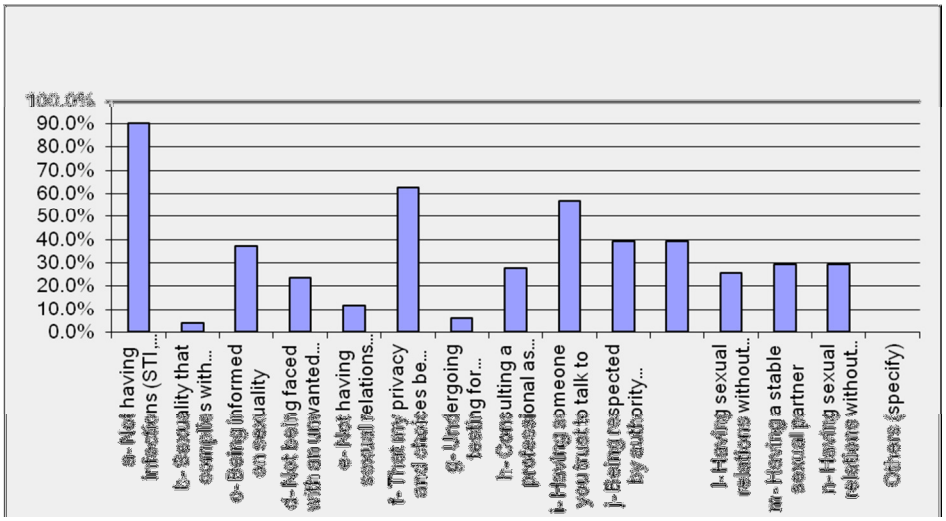



**Figure 2. Elements forming the circle of health among 13-18 year olds of two First Nations communities in Quebec**

Concerning the circle of sexual health, the element chosen by over 90% of respondents was not having sexual infections. The other two elements rated most frequently (by 60% of respondents)

referred to respect of their choices and of their privacy, which they underlined as indicating the desire to talk to someone trustworthy. The fact of being respected by authority figures was also identified as making an important contribution to the circle of sexual health for approximately 40% of respondents. The same proportion mentioned the importance of having sexual relations without fear of contracting diseases and the necessity of being informed on sexuality. Having sexual relations without the risk of unwanted pregnancy and having a stable sexual partner were considered relatively important elements that would contribute, in the respondents' opinion, to making up their circle of sexual health. From the second graph of this figure, it appears that elements related to the absence of sexual infections and the fear of contracting diseases contribute to about half (44.9%) of the sexual health circle.



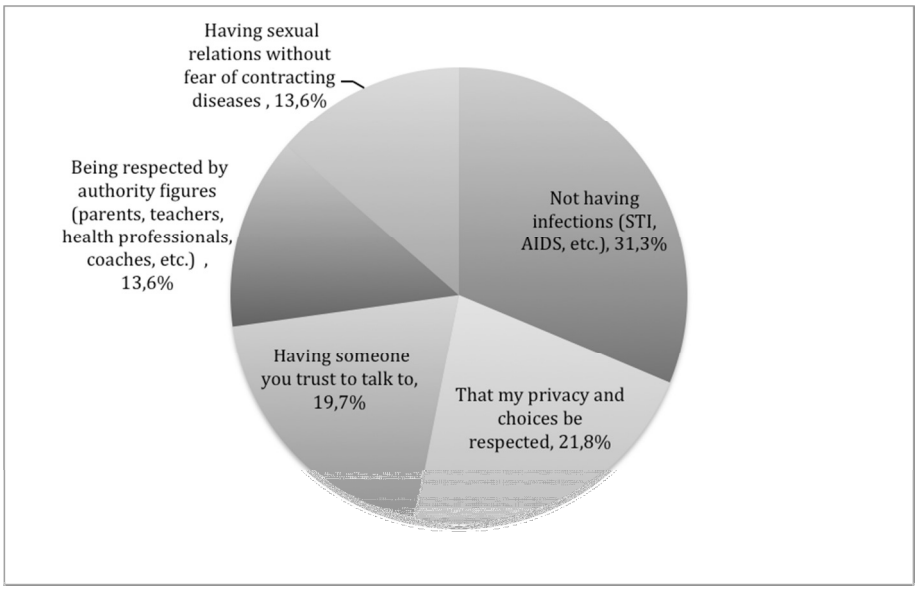




**Figure 3. Elements forming the circle of sexual health among 13-18 year olds of two First Nations communities in Quebec**

Participants were also asked to rate their personal sexual health according to their own definition. Respondents described their own sexual health as being excellent (20% of respondents), good (33%), quite good (43%), and bad (4%).

**Beliefs concerning condom use for all instances of sexual intercourse**

The salient beliefs related to attitude, subjective norm, and perceived control concerning condom use for all instances of sexual intercourse are presented in Table 2. These salient beliefs appear in descending order of frequency of mention. Regarding attitudinal beliefs, the effectiveness of condoms in protecting oneself and one's partner from sexually transmitted infections/diseases and in preventing unwanted pregnancies represented the modal beliefs related to using condoms for all instances of sexual intercourse noted by most respondents. Over half of respondents did not see any disadvantages in this regard. However, some mentioned that condom use reduces sensitivity and is less intimate.

Related to modal normative beliefs, persons or groups having a favorable opinion about condom use at each instance of sexual intercourse were essentially parents, the sexual partner (including boyfriends/girlfriend), family, and health professionals. Some respondents also identified the partner (exclusively male in this case) as an important person who would not be in favour of using a condom for each sexual encounter, while more than half of respondents found none.

Concerning control beliefs, always having condoms in one's possession and worrying about getting pregnant were mostly mentioned as factors facilitating the use of condoms. Having proper information on STI and on condom use, discussion between partners, and partner consent were the statements that completed the modal salient control beliefs mentioned. Not having any condoms on hand was the most important identified barrier to condom use. "Being drunk – having consumed too much alcohol," "The immediate desire to have sex," and "Being unconscious" were the other modal beliefs on the factors that would make it difficult to use a condom each time one had sex. The other perceived barriers were not having money to buy condoms, having used drugs, lack of practice, and not being properly informed. In relation to moral norm, a large majority (89%) of participants stated that using a condom at all times during sexual intercourse is part of their personal values. When asked for explanations, all the arguments that the respondents mentioned related to outcome beliefs. Lastly, the means that communities could implement to promote the use of condoms at all times during sexual intercourse among youth, as suggested by respondents, include the distribution of condoms (by 62% of respondents), and various actions, including workshops on sexual health and STI, prevention (of STI/VIH) in schools, and discussing more about these issues (by about half of respondents).

Table 2: Salient beliefs about condom use

| Perceived advantages | | Perceived disadvantages | |
|---|---|---|---|
| Protecting myself from STI/STD | 38 | None | 29 |
| Protecting myself | 32 | Decreased sensitivity | 99 |
| Avoiding unwanted pregnancies | 31 | Less intimate | 6 |
| Reducing the transmission of STI | 20 | Being frowned upon by friends Allergies | 4 |
| No stress to sexual diseases or unplanned pregnancies | 16 | to latex | 4 |
| Avoiding getting someone pregnant | 16 | Irritation | 4 |
| People approving | | People disapproving | |
| Parents | 34 | None | 13 |
| My boyfriend/girlfriend | 22 | Sexual partner | 12 |
| Family | 20 | My boyfriend (lover) | 12 |
| Health professionals (physicians, nurses) | 17 | Guys in general | 11 |
| Sexual partner | 12 | | |
| Grandparents | 9 | | |
| Other | 3 | | |
| Making easy | | Making difficult | |
| Always having some on hand | 26 | Not having any on hand | 30 |
| Worried about getting pregnant | 25 | Being drunk –having consumed too much alcohol | 24 |
| Having proper information on STI and condom use | 17 | The immediate desire to have sex | 11 |
| Discussion between men and and women – if it was discussed with my partner | 11 | Being unconscious | 6 |
| Having them consented to – if my partner agrees | 10 | Other | 6 |
| Having some within reach | 9 | Having used drugs | 4 |
| Talking about it more | 8 | Not having any money to purchase them | 3 |
| Discussion with parents – if my parents would talk about it with me | 8 | Shyness – when we don't assert ourselves | 3 |
| Friends who practice sexual health – if my friends used them | 4 | Lack of practice (never having used any) | 2 |
| Practice – if I was more used to them | 3 | Not being appropriately informed on how to use a condom | 1 |
| If they were accessible at all times | 3 | | |
| Other | 1 | | |

**Note:** For each question, the participants could choose several answers or even register any unlisted response. The numbers represent the number of times that the belief was mentioned.

## DISCUSSION

This study explored the salient beliefs related to condom use in 13-18 year olds of Quebec First Nations communities. After the failure of the focus group technique, a questionnaire (Appendix A) was used. First, the questionnaire (Appendix A) explored the conception of health and of sexual health among participants, using the symbol of a circle interrupted at five areas. The five elements most chosen by respondents to complete this circle prioritize the feelings of the individual, the absence of disease, and being at ease within one's family and community. Concerning the conception of sexual health, statements regarding the absence of disease and fear of infections were highly rated.

Regarding the conception of health, two major differences can be noted between our findings and those of Roy (2002). Firstly, his results place the family as the fundamental variable in the development of the feeling of "being healthy" in Aboriginal areas (Roy, 2002). In our study, statements referring to the biomedical conception of health were included in the circle of health by more than half of respondents, while these statements were positioned very low in the popular perception of health described in the findings of Roy (2002). These differences are probably due to study populations, as the responses reported by Roy (2002) come from young people, adults and seniors met in three Atikamekw communities and four Innu communities, while our data were collected in a more homogenous sample (13-18 year olds of one Atikamekw community and one Algonquin community). Indeed, as pointed out by Roy (2002), significant variations can be found regarding the conception and perception of health, depending on the study groups, which may reflect economic, political, generational or even gender interests (Roy, 2002). The influence of the biomedical conception of health among participants in our study can also be seen in the choice of elements to build their circle of sexual health.

This conception of sexual health is in line with the one reported by a study of 18-29 year olds of two indigenous communities of Nunavik. The participants in the Nunavik study considered the fact of not having an STI, HIV or cancer as being indicative of sexual health (Gagnon, 2010). They thus associated the avoidance of behaviours involving risk of infection or the adoption of risk-reduction behaviours, namely the use of contraceptive methods and avoidance of multiple sexual partnerships or extramarital sexual relations, with their conception of sexual health. The importance of respect (of their choice and privacy and by those in authority) expressed by many participants in our study was also reported in the Nunavik study, in terms of being careful with oneself and with women (Gagnon, 2010). Finally, the cognitive dimension associated with knowledge and expressed in our study through the importance of being informed about sexuality was also noted in the findings of Gagnon (2010), where respondents mentioned that adolescents should know about sexual risks and reproduction and contraception issues.

Overall, the conception of health appears nuanced depending on groups of interest. The conception of sexual health seems to be similar as regards the young people who participated in

our study and participants in the study conducted in Nunavik. The conception of sexual health that emerges both in our research and in the findings of Gagnon (2010) is quite heavily based on a biomedical model. Apart from the needs for respect and privacy, the elements chosen by the participants in our study lead us to see them as potentially receptive targets for interventions aimed at promoting the use of condoms as a means of both STI/STD protection and contraception.

The modal salient beliefs underlying the use condoms during all sexual intercourse in our research are mostly similar to those reported in other studies. The study among young adults in Nunavik also reported that prevention of diseases and pregnancies represented the salient advantages linked to condom use and that the majority of participants identified no disadvantages (Gagnon, 2010). Caron, Godin, Otis, & Lambert (2004) reported, in a study among multiethnic adolescents attending an urban high school in Quebec, that using condoms was seen as a way of protecting oneself from pregnancy, STDs, and AIDS. This study also mentioned the fact that respondents were afraid of experiencing less pleasure with condom use (Caron, Godin, Otis, & Lambert, 2004). A study among 13-19 year old teenagers attending public schools in Porto, Portugal reported that the advantages of using condoms were the prevention of STDs, pregnancy, and AIDS, whereas the disadvantages found were risk of breaking, decrease of pleasure, and discomfort (Oliveira, Abreu, Barroso, & Vieria, 2009). In the study by Widdice, Cornell, Liang, Halper-Fiesher (2006), the major benefits mentioned for using condoms were also pregnancy prevention and STI/HIV prevention, where 32.5% of adolescents participating in the research project responded that there was no risk in using a condom. Most reported disadvantages from this study involved possible condom malfunction, namely, “can break,” “can come off,” and “might not work” (Widdice, Cornell, et al. 2006). Other studies have shown that condom use among adolescents and young adults is influenced by perceived benefits, namely avoidance of sexually transmitted infections/diseases (STIs/STDs), including AIDS, and prevention of pregnancy, and by beliefs that condoms reduce pleasure, are unromantic, and interrupt sex (Orr & Langefeld, 1993; Gillmore, Morrison, Lowery, & Baker, 1994; Bosompra, 2001).

With respect to normative beliefs, our data revealed that these are mostly related to parents and the partner, referents also reported by the study in Nunavik (Gagnon, 2010) and by other studies on condom use among youth (Caron, Godin, Otis, & Lamber 2004; Heeren, Jemmott, Mandeya, & Tyler, 2009; Oliveira, Abreu, Barroso, Vieria, 2009). Other positive referents highlighted by our analyses are family and health professionals, also mentioned in studies by Oliveira, Abreu, Barroso, Vieria, (2009) and Bosompra (2001) respectively.

In terms of control beliefs, the facilitating factors mostly mentioned by participants in our study were the fact of having a condom on hand and having proper information about it. The unavailability of a condom when intercourse occurs would make its use difficult. The study by

Gagnon (2010) also reported that the availability of condoms would facilitate their use, as would their being free of charge. Other studies have suggested that having a condom on hand would increase the chances of its being used (Maxwell, Bastani, & Warda, 1999; Diclemente, Wingood, Crosby, Sionean, Cobb, Harrington, Davies, Hook, & Oh, 2002). Discussion between partners about condoms is another factor that would facilitate condom use, as highlighted both in our study and the study in Nunavik (Gagnon, 2010). An important factor that would make it difficult to use a condom, as mentioned by participants in our study, is the fact of being drunk (having consumed too much alcohol). Substance use (alcohol and drugs) is associated with unprotected sexual intercourse in different adolescent samples (Hingson, Strunin, Berlin, & Heeren, 1990; Kingree, Braithwaite, Woodring, 2000; Tapert, Aarons, Sediar, & Brown, 2001). Concerning moral norms, our respondents did not mention any morally related element to justify whether the use of a condom at each instance of sexual intercourse is part of their personal values or not. Similarly, Widdice et al. (2006) reported a paucity of morally related outcomes (no responses related to marriage, religion or "it being wrong to have sex, or wrong to use or not use a condom, etc.") in their study (Widdice, et al., 2006).

In summary, there are considerable similarities between the salient beliefs underlying the use of condoms in our First Nations adolescent sample and another Aboriginal sample (Gagnon, 2010), as well as among adolescents from non-Aboriginal samples. Our study provides exploratory data on beliefs related to factors that might influence the use of condoms among 13-18 year olds from FN communities of Quebec. The implications of our findings are to be discussed with the Commission in order to help define practical strategies related to the promotion of condom use and the prevention of STIs and HIV/AIDS among Quebec Aboriginal youth.

**Strengths and limits of this study**

This research was planned and conducted in partnership with the Commission, which facilitated contact between our team and participating communities and helped in adjusting the methodological choices to fit with FN communities' reality and values. Although we did not anticipate the failure of the focus group technique, we were able to find a suitable alternative to collecting data in a particular context of Aboriginal youth. A first possible limitation arises from the fact that a limited number of communities and youth took part in this study; hence our results may not be applicable to young people in all Aboriginal communities. Second, due to time and financial constraints and other restrictions related to the academic schedule of the high schools in participating communities, we were not able to go through the subsequent steps of the study that would have consisted in a survey on the determinants of intention to use a condom at each instance of sexual intercourse among Quebec Aboriginal youth based on the salient beliefs identified in this study.

## DISSEMINATION

Intended as a preparatory step to action, our research aimed to explore the beliefs underlying condom use among Quebec FN youth so as to consider the possible avenues of intervention with these people. As such, our dissemination plan prioritizes key actors in the field of sexual health promotion in FN communities. To do so, the preliminary results of this study have been presented to the Commission's staff in charge of the sexual health, and to members of the Health Executive Office of each of the participating communities. The final report on this research will also be provided and discussed with those actors for a better knowledge translation plan. This paper is also an opportunity to share our findings through the channel provided by the Canadian Aboriginal AIDS Network, so that other Canadian Aboriginal communities can benefit from our research.

## RECOMMENDATIONS

This study is part of a feasibility evaluation, and the findings allow us to formulate a number of recommendations for the development of evidence-based interventions using ICT for promoting sexual health among Quebec FN adolescents and young adults. First, we would recommend to decision-makers in the field of sexual health to provide resources (human, material, and financial) to perform a survey, based on the beliefs identified in this study, on the determinants of intention to use a condom at each sexual intercourse among FN youth. Also, a further study should aim at determining the relationship between beliefs and intentions to use condoms in this population. Such studies would provide a basis for the development of practical strategies to strengthen positive beliefs related to condom use and minimize the negative ones in order to promote this behaviour for a healthier sexual life among the youth of FN communities.

## CONCLUSION

This study allowed us to explore the conception of health and sexual health and the factors underlying condom use among 13-18 year olds of two First Nations communities of Quebec. The conception of sexual health by participants in our study positioned them as a potentially receptive target for interventions aimed at promoting the use of condoms. Our study has highlighted important beliefs that provide avenues for designing interventions to promote condom use for a healthy sexual life in First Nations youth. The implications of our findings are to be discussed with the Commission in order to help define practical strategies related to the promotion of condom use and the prevention of STIs and HIV/AIDS among Quebec First Nations youth. During our research, we faced several challenges that we could not possibly have met without support from the Commission and collaboration from the communities. It is time to act to minimize the burden of sexual diseases in First Nations communities, and we believe that partnership is an approach that can promote the empowerment of these communities to more effectively fight against STIs and HIV/AIDS and reduce inequalities related to sexual and reproductive health.

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## APPENDIX A: QUESTIONNAIRE

**Study on the beliefs associated with using a condom among those ages 13-18 years in the First Nations communities of Quebec**

**INSTRUCTIONS**

1. The estimated time required in order to fill out this questionnaire is approximately 20 minutes. We invite you to record your answers, opinions and experiences in the questionnaire. We also ask that you fill out the "Individual characteristics of the participant" section that can be found at the beginning of the questionnaire.

2. Please note that there are no right or wrong answers. The most important thing is to express your genuine thoughts. The answers you provide will remain anonymous.

Thanks! Your collaboration is our most precious asset in order to gain an understanding.

This project was approved by the Band Council, the community Health Centre and the *Comité d'éthique de la recherche* (free translation: research ethics committee) of the *Université Laval*: **Approval no. 2012-144 A-1 / 22-10-2012**. Any complaints or critiques related to this research project can be addressed, in complete confidentiality, to the office of the Ombudsman of the *Université Laval* using the following contact information:

Pavillon Alphonse-Desjardins
Bureau 3320 Université Laval Québec (Québec)
Canada G1V 0A6 Telephone: (418) 656-3081
Toll free: 1 (866) 323-2271 Email:
info@ombudsman.ulaval.ca

## INDIVIDUAL CHARACTERISTICS OF THE PARTICIPANT

1) What is your gender?
   ☐ Male
   ☐ Female

2) How old are you?
   _____ years old

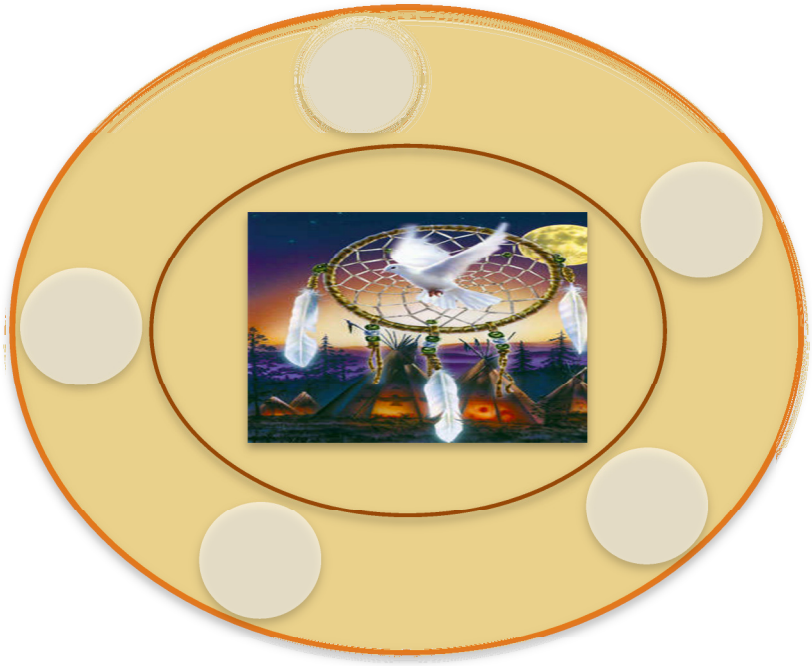
3) What community do you come from?
   ☐ Manawan
   ☐ Kitigan Zibi

4) Which languages do you understand and most often use?
   ☐ French
   ☐ English
   ☐ Algonquin
   ☐ Atikamekw
   ☐ Other (specify): ……

5) What is the highest level of education you have completed?
   ☐ Elementary school
   ☐ Secondary 1
   ☐ Secondary 2
   ☐ Secondary 3
   ☐ Secondary 4
   ☐ Secondary 5
   ☐ Trade school
   ☐ Other (specify): ……

**QUESTIONS**

1- Let's consider that the following circle symbolises health:

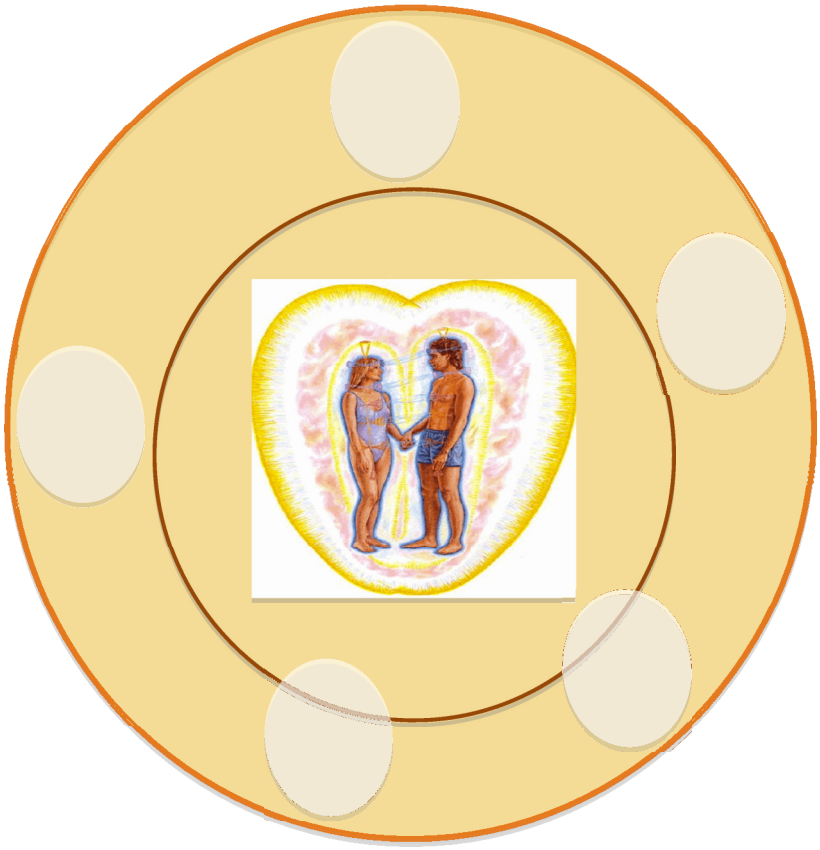


Among the 12 following statements, choose the five elements that, in your opinion, contribute the most to making up your circle of health. In the empty circles within the circle, record the letters corresponding to the selected statements.

**a- Not having any diseases (physical, mental)**
**b- Feeling good about oneself (in the physical, psychological, emotional and spiritual dimensions)**
**c- Being able to perform one's daily activities**
**d- Adopting healthy behaviours (in connection with nutrition, sports activities, smoking, drugs, etc.) according to recommendations made by health professionals (nurses, physicians, etc.)**
**e- Being able to take care of oneself**
**f- Being well in one's family**
**g- Being comfortable in one's community**
**h- Being capable of making decisions (being free to do what I want)**
**i- Health is a priority in my life, it's essential**
**j- Having sexual relations on a regular basis**
**k- Feeling in harmony with one's values**
**l-** Others (specify): ……

**2-** Does "sexual health" mean something to you? ☐ ***YES*** ☐ **NO**

While considering that the following circle symbolises sexual health, among the 14 following statements, choose the five elements that, in your opinion, contribute the most to making up your circle of sexual health. In the empty circles within the circle, record the letters corresponding to the selected statements.



**a- Not having infections (STI, AIDS, etc.)**
**b- Sexuality that complies with one's values**
**c- Being informed on sexuality**
**d- Not being faced with an unwanted pregnancy**
**e- Not having sexual relations against one's will**
**f- That my privacy and choices be respected**
**g- Undergoing testing for cytology on an annual basis (PAP-TEST for women)**
**h- Consulting a professional as soon as a sexual problem appears**
**i- Having someone you trust to talk to**
**j- Being respected by authority figures (parents, teachers, health professionals, coaches, etc.)**
**k- Having sexual relations without fear of contracting diseases**
**l- Having sexual relations without consuming drugs or alcohol**
**m- Having a stable sexual partner**
**n- Having sexual relations without the risk of unwanted pregnancy**
**o-** Others (specify): ……

***3-*** For question 2, you created your definition of sexual health. According to this definition, how would you describe your own sexual health? Circle your choice from the following options:

A- Very bad B- Bad C- Quite good D- Good E- Excellent

**For the following questions, place a checkmark beside the answer choices that are most in line with your point of view. You may check more than one answer.**

4- In your opinion, what are the possible benefits of using a condom each time you have sex?

☐ ***Avoiding unwanted pregnancies***

☐ ***Protecting oneself from STI/STD (sexually transmitted infections/diseases)***

☐ ***No stress related to sexual diseases or unplanned pregnancies***

☐ ***Reducing the transmission of STI***

☐ ***Avoiding getting someone pregnant***

☐ ***Protecting myself and my partner***

☐ Other (specify): ...…….

5- In your opinion, what are the possible disadvantages of using a condom each time you have sex?

☐ ***Decreased sensitivity***

☐ ***Allergies (to latex)***

☐ ***Irritation***

☐ ***Being frowned upon by friends***

☐ ***Less intimate***

☐ ***None***

☐ Other (specify): .....

6 - Who are the important people in your life who would appreciate it if you used a condom each time you had sex?

☐ ***Parents***

☐ ***Health professionals (physicians, nurses)***

☐ ***Sexual partner***

☐ ***Family***

☐ ***My boyfriend/girlfriend***

☐ ***Grandparents***

☐ Other (specify): .....

7 Are there any important people in your life who would not be in favour of you using a condom each time you have sex?

☐ ***Sexual partner***

☐ ***My boyfriend (lover)***

☐ ***Guys in general***

☐ Other (specify): .....

8-

a. What are the factors that could get you to use a condom each time you have sex?

☐ ***Always having some on you***

☐ ***Having some within reach***

☐ ***Having them consented to – if my partner agrees***

☐ ***Worried about getting pregnant***

☐ ***Having proper information on STI and condom use***

☐ ***If they were accessible at all times***

☐ ***Discussion between man and woman – if it was discussed with one's partner***

☐ ***Talking about it more***

☐ ***Discussion with the parents – if my parents would talk about it with me***

☐ ***Friends who practice sexual health – if my friends used them***

☐ ***Practice – if I was more used to them***

☐ Other (specify): .....

b. What are the factors that could prevent you from using a condom each time you have sex?

☐ ***Not having any on me***

☐ ***Being drunk – having consumed too much alcohol***

☐ ***Having used drugs***

☐ ***Lack of practice (never having used any)***

☐ ***The immediate desire to have sex***

☐ ***Being unconscious***

☐ ***Not having any money to purchase them***

☐ ***Not being appropriately informed on how to use a condom***

☐ ***Shyness – when we don't assert ourselves***

☐ Other (specify): .....

9- Is wearing a condom each time you have sex part of your personal values (is it important to you)?

- ***If so, why?***

- ***If not, why not?***

10- What methods could your community implement in order to promote condom use among the youth?

☐ ***Discussing them more***

☐ ***Distribution of condoms (for free)***

☐ ***Workshops on sexual health and STI***

☐ ***Awareness-prevention***

☐ ***Providing information (documentation) on condoms***

☐ ***Prevention at the health centre***

☐ ***Prevention in the schools***

☐ ***Making condoms available to the youth***

☐ ***Setting up kiosks (information along with gifts)***

☐ Other (specify): .....

Thank you very much for your precious cooperation.

This project was approved by the *Comité d'éthique de la recherche de l'Université Laval*:

**Approval no.: 2012-144 A-1 / 22-10-2012**