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Qanuippitaa?
HOW ARE WE?

NUNAVIK INUIT HEALTH SURVEY 2004

SURVEY HIGHLIGHTS



Nunavik Inuit Health Survey 2004
Qanuippitaa? How are we?

Survey Highlights

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BACKGROUND

The Inuit communities of Nunavik have experienced profound change in every aspect of their lives over the last few decades. As contact with more southerly regions increased, the Inuit changed their living habits, adopting a more sedentary lifestyle, modern living conditions and new eating habits. The survey conducted by Santé Québec in 1992 demonstrated that these changes had an impact on the health status of this population. Ten years later, the Nunavik Regional Board of Health and Social Services (NRBHSS) deemed it important to make plans for a new survey in its region to monitor the evolution of the health status and state of well-being of its population.

Thanks to the collaboration of a number of professionals from the health network and the university milieu, 17 theme papers, a nutrition report, and a methodological report were produced in the context of the survey. The information gathered enabled a profile to be compiled of the health status and state of well-being of the Nunavik Inuit at a specific moment in time; it also provided data on a number of health determinants.

This document presents the key results from the Nunavik Inuit Health Survey conducted in 2004 by the Institut national de santé publique du Québec (INSPQ) aboard the Amundsen, a Canadian Coast Guard ship.

1. SOCIO-DEMOGRAPHIC PROFILE

Nunavik is distinguished by a high proportion of young people: 40% of the region's inhabitants are under the age of 15, twice the proportion seen elsewhere in Quebec (17%). Most Inuit live with other family members due to the high birth rate and the limited number of dwellings in the region. Multi-family households represent 31% of Nunavik households. This proportion is less than 1% elsewhere in Quebec.

The level of education is relatively low in Nunavik: 22% of the population aged 15 and over have a high school diploma or more. One positive trend was observed: the level of education among young people is higher than that of their elders and most of them plan to continue their education in the future.

The potential for stable, well-paid work is relatively limited in Nunavik. The Inuit have low incomes (58%, less than \$20 000) with a precarious employment status:

70% of the respondents aged 15 and over had a job at the time of the survey; among them, only 67% had full-time employment.

2. ENVIRONMENT

2.1 PARTICIPATION IN HUNTING, FISHING AND COLLECTING ACTIVITIES

In 2004, close to half (45%) of the Inuit stated they participated in hunting activities once a week or more over the course of at least two seasons. However, fewer people reported participating as frequently in fishing activities (33%). About half of the population (48%) indicated they participated in berry picking at least once a month during berry-picking season. It is interesting to note that older people devote more effort to these traditional activities than young people.

2.2 EXPOSURE TO ENVIRONMENTAL CONTAMINANTS

During the survey, most of the respondents (62%) stated they had previously heard about the contamination of traditional foods by pollutants or chemical products. One person in four had changed certain aspects of his or her diet after having heard about the presence of such contaminants in traditional foods.

In addition to the questions relating to an awareness of contaminants, blood tests permitted an examination of Inuit exposure to environmental contaminants.

☞ Metals

Blood concentrations of metals (cadmium, mercury and lead) observed among the Inuit declined significantly between 1992 and 2004. Nevertheless, a significant proportion of individuals generally, and of women of childbearing age in particular, continue have concentrations exceeding the acceptable level set by Health Canada. In the overall population, 36%, 28% and 9% of individuals had blood concentrations exceeding the recommendations set by Health Canada for cadmium, mercury and lead, respectively. Among women of childbearing age, 35%, 72% and 2% had concentrations of cadmium, mercury and lead exceeding acceptable levels.

The results also reveal that the blood concentrations of mercury observed increased significantly with consumption of marine mammals, whereas

concentrations of cadmium were linked to tobacco smoking.

↳ **Persistent organic pollutants and new contaminants of concern**

Plasma concentrations of all the classical persistent organic pollutants (POPs) among the Inuit declined between 1992 and 2004. As certain studies on the subject suggest, this decrease is likely attributable to a reduction in contaminants in the Arctic environment, combined with changes in Inuit eating habits. Nevertheless, in 2004, 11% of the population overall and 14% of women of childbearing age had total PCB concentrations exceeding the acceptable levels set by Health Canada. The concentrations of new contaminants of concern, measured for the first time in 2004, did not prove to be extremely high. Consumption of traditional foods did not prove to be a source of exposure to these contaminants, except in the case of PFOS (chemical substance used in water, soil and grease repellents, paper, packaging, rugs and carpets, fabrics, etc.).

2.3 DRINKING WATER AND INFECTIOUS DISEASES

Some of the common practices in Nunavik, such as the consumption of untreated water and raw game meat, may favour exposure to disease agents that cause zoonotic diseases, as well as water-borne and food-borne diseases. That being said, about one third of Nunavik households obtained their water mainly from a natural source rather than from a tap, a practice more common among respondents aged 50 and over. However, fewer than half of the households treated their water at home (by boiling or filtering it) before drinking it. With regard to cleaning home water reservoirs, 42% of households cleaned them once a year or less.

In terms of infectious diseases, the results show an overall prevalence of gastroenteritis of 9.6% in Nunavik, with the highest levels among the very youngest and the oldest age groups. Although the manner of preparing meats, promiscuity, the main source of drinking water and the type of water treatment used in the household were not associated with episodes of gastroenteritis, frequent cleaning of the home water reservoir does appear to have a protective effect, which suggests that drinking water may possibly be involved in the transmission of gastro-intestinal infections.

The blood samples taken from adults aged 18 to 74 also enabled a verification of the seroprevalence of antibodies

for eight zoonotic infections (*trichinellosis*, *toxocariasis*, *echinococcus*, *brucellosis*, *leptospirosis*, Q fever, *toxoplasmosis* and *tularemia*). Although it's rare for a case to be reported in Nunavik, the results show that the Inuit are nevertheless exposed to the micro-organisms responsible for some of these infections, *Toxoplasma gondii* in particular. The frequent consumption of meat from marine mammals, feathered game and fish seems to be linked to *T. gondii* infection. On the other hand, individuals who ate cooked seal meat seemed to be infected to a lesser degree.

3. PHYSICAL HEALTH STATUS

3.1 BODY WEIGHT

In 2004, close to six out of ten adults were overweight (30%) or obese (28%). The highest rates were observed among women and among adults aged 50 to 74. The prevalence of obesity and of severe obesity in Nunavik increased significantly between 1992 and 2004. The increase during this period was much more significant among men and young adults aged 18 to 29. More specifically in terms of abdominal obesity, nearly four out of ten Inuit (37%) had a waist circumference indicative of an increased risk of health problems, compared to 23% in 1992. Proportionately more women and older adults had an at-risk waist circumference. However, here once again, the greatest increases from 1992 to 2004 were observed among men and young adults.

Despite having an obesity rate that is higher than that of other Quebecers, there were proportionally fewer Inuit who perceived themselves being overweight. The current survey shows that among overweight Nunavik adults (58%), more than one in two considered themselves to be of normal weight (54%). In terms of efforts undertaken with respect to body weight, the majority of adults (71%) indicated they were doing nothing. These results resemble those obtained regarding physical activities: only two out of ten (18%) adults were active during their spare time in 2004.

3.2 CARDIOVASCULAR DISEASES

Until now, the Inuit have been relatively well-protected against cardiovascular diseases. Few of them had high blood pressure (12% vs. 6% in 1992); their lipid profiles were still satisfactory overall and the assessment of atherosclerosis showed that they were relatively well-

protected against this disease. However, with the alarming increase of cardiovascular disease risk factors (smoking, glucose intolerance, obesity in general and abdominal obesity), we could expect an increase in cardiovascular problems in the future.

3.3 DIABETES

The overall prevalence of diabetes in Nunavik in 2004 was 5%, a proportion comparable to that observed in the Canadian population as a whole. In terms of the risk factors associated with this disease, the results reveal that the majority of the diabetics in this survey were obese (65%) and an additional 23% were overweight. The prevalence of diabetes was higher among women who also had the highest prevalence of diabetes risk factors, which are obesity and hyperinsulinemia, among others.

3.4 HEARING LOSS

Hearing problems are common in Nunavik. In 2004, one quarter of adults (25%) had hearing problems in both ears. These problems are more prevalent among men and increase with age. Frequent hunters were found to have more damage to their hearing in the left ear, probably caused by the use of firearms.

3.5 RESPIRATORY HEALTH

The prevalence of respiratory problems among Inuit children in Nunavik aged 0 to 14 was studied for the first time in 2004. The results show on one hand that the prevalence of asthma among 5-14-year-olds was twice as high as that among younger children (0-4-year-olds). On the other hand, the prevalence of wheezing episodes was three to four times higher among 0-4-year-olds than among older children (5-14-year-olds). Compared to the rest of Quebec and to a number of other countries, the prevalence of wheezing among the youngest Inuit children was relatively high, whereas it was relatively low among older children. The frequent use of asthma medication indicates difficulty controlling respiratory symptoms.

The results also show a lower prevalence of allergies among Nunavik children.

4. NUTRITION AND EATING HABITS

4.1 CONTRIBUTION OF FOOD GROUPS TO THE FOOD INTAKE OF THE INUIT

The survey results reveal that the food intake of the Inuit was particularly low in terms of fruit and vegetables, dairy products and grain products the day preceding the survey. In fact, only 11% of the Inuit met Canada's Food Guide recommendations for fruit and vegetables, while 6% ate the recommended amount of dairy products. Moreover, only 4% of the Inuit ate whole grain products, whereas white bread and white flour represented 60% of their total grain product consumption.

This low consumption of fruit and vegetables, dairy products and whole grain products was reflected in the nutrient intake the day prior to the survey. This intake proved to be low in vitamins and minerals such as Vitamins A, C and D, calcium and dietary fibre.

4.2 CONSUMPTION OF TRADITIONAL FOODS

Consumption of traditional foods, in other words food obtained by hunting and fishing, was still significant in 2004, although lower than in 1992 (16% of energy intake in 2004 vs. 21% in 1992). A reduction in the frequency of eating these foods was also observed over the course of this period (5 times/week in 2004 vs. 8 times/week in 1992). Consumption of traditional foods was higher among the older Inuit, whereas commercial foods contributed to the dietary intake of the younger population to a greater extent.

4.3 CONSUMPTION OF "OTHER FOODS"

In terms of the contribution of each of the food groups to the energy intake of the Inuit the day before the survey, the results reveal that the "other foods" category represented the main source of calories (36%), followed by meat and meat alternatives (30%), grain products (22%), fruit and vegetables (9%) and dairy products (only 3%). The "other foods" category is a grouping of food and drinks that are not part of the four groups in Canada's Food Guide and for which moderate consumption is recommended (ex.: butter, cooking oil, jam, honey, candy, chips, soft drinks, tea, coffee, alcohol, etc.). It should be noted that the consumption of sweets and sweetened beverages was higher in Nunavik in 2004 than in 1992. Sweetened beverages, such as soft drinks and fruit drinks, represented the main source of carbohydrates among respondents the day prior to the

survey; this consumption was found to be much higher among young adults.

4.4 FOOD INSECURITY

Food insecurity was a major problem for a significant number of Inuit households. In 2004, nearly a quarter of individuals (24%) stated they had lacked food during the month prior to the survey.

5. LIFESTYLES

5.1 SMOKING

Smoking is widespread in Nunavik. In 2004, close to three quarters of the population (77%) smoked either daily or occasionally, compared to about one quarter (27%) elsewhere in Quebec. The prevalence of smoking was the highest among young people aged 18 to 29: nearly 90% of them smoked either daily or occasionally in 2004.

Second-hand smoke also presents health risks. In this regard, it is encouraging to note that 84% of Inuit households had restrictions pertaining to smoking inside the home. These restrictions ranged from a full ban on smoking, to a ban on smoking in the presence of young children or limiting smoking to certain rooms only.

5.2 ALCOHOL CONSUMPTION

The proportion of occasional or regular drinkers in Nunavik in 2004 was 77%, which is significantly lower than that observed elsewhere in Quebec (85%) and in Canada as a whole (81%). However, this proportion represents an increase of nearly 17% in the region compared with 1992. The proportion of drinkers was higher among those: under 45 years of age, more highly educated, who had a job and who lived in a community where alcohol sales were permitted.

Although the proportion of current drinkers in Nunavik was lower than elsewhere in the province or the country as a whole, the difference between these regions lies chiefly in the pattern of alcohol consumption. Close to a quarter (24%) of the current drinkers in Nunavik indicated their alcohol consumption was high (five drinks or more on the same occasion) at least once a week over the course of the past year, which is three times higher than elsewhere in Quebec (7.5%) and in Canada as a whole (7.8%). In Nunavik communities where alcohol sales were permitted, there were proportionally more

drinkers (42%) reporting such episodes of high consumption on a weekly basis than in communities where the sale of alcohol was banned (17%).

5.3 DRUG USE

Six respondents in ten (60%) stated they had used drugs in the past year, which is four times higher than that observed elsewhere in Canada. The most frequently used drug by far is cannabis (60%), followed by cocaine (7.5%), solvents (5.9%), hallucinogens (2.7%) and injection drugs (2%). Use of cannabis was higher among men and young people. In the case of solvents, it should be noted that the proportion of users was three and a half times higher on the Hudson's Bay coast than on the Ungava coast and seven times higher in communities where alcohol sales are not permitted.

The survey data also revealed that the use of cannabis, cocaine and solvents increased considerably in Nunavik between 1992 and 2004, going from 38% to 60% for cannabis, from 5.1% to 7.5% for cocaine, and from 3.0% to 5.9% for solvents.

5.4 PARTICIPATION IN GAMBLING ACTIVITIES

In 2004, three out of five people (60%) had participated in gambling activities at least once in the previous year, and one out of three people (31%) gambled at least once a week. Instant lotteries and bingo were the most popular games, women gambling more than men and adults more than young people.

Generally speaking, fewer Inuit engaged in gambling on a yearly basis compared to other Quebecers (Nunavik: 60%, Quebec: 81%). However, their involvement in gambling appears significant as indicated by data on weekly gambling (Nunavik: 31%, Quebec: 35%) and the yearly amounts spent on gambling (62% of the Inuit stated they spent more than \$520 on gambling annually, compared to 9% elsewhere in Quebec).

5.5 TRANSPORTATION-RELATED INJURIES AND SAFETY

Transportation-related injuries (including those resulting from all-terrain vehicles and snowmobiles) were the main types of injuries in Nunavik (43% of all reported injuries). Certain practices, such as wearing a life jacket when in a motorized boat and travelling in a group when snowmobiling outside the village, help reduce the risks of accidents with injuries. However, in Nunavik, three quarters of the respondents (76%) stated they never or rarely wore a personal floatation device when in a

motorized boat, and a quarter (25%) stated they never or rarely travelled in a group on snowmobiling trips.

Other behaviours, such as driving while under the influence of alcohol or drugs, increase the risks of accidents with injuries. In Nunavik, one third of motor vehicle drivers (38%) reported having driven a vehicle while under the influence of a substance at least once in the previous year.

6. PSYCHOSOCIAL HEALTH

6.1 OVERALL LIFE SATISFACTION

Overall, the majority of the Inuit (73%) stated they were satisfied or very satisfied with their lives in general. This proportion was higher, however, among those who considered themselves in good health, as well as among men, married people, more educated people and those with higher incomes.

6.2 PSYCHOLOGICAL DISTRESS

On the other hand, in 2004, 13% of the population experienced a high level of psychological distress and was considered more likely to develop depression or other mental health problems. Women, young people (aged 15-29) and individuals with low incomes reported higher levels of psychological distress. This distress appears to be linked to the consumption of alcohol and drugs, as well as to a history of sexual violence and to exposure to physical violence in a family or conjugal context.

6.3 SUICIDE IDEATION AND SUICIDE ATTEMPTS

The survey data show that in 2004, 14% of the Inuit had seriously considered taking their lives during the course of the previous year and that 6.7% had attempted suicide. In terms of suicide ideation and suicide attempts during one's lifetime, the results reveal that 35% of the Inuit had suicide ideation and 21% had attempted suicide. This prevalence of suicide ideation and suicide attempts during one's lifetime was significantly higher in 2004 than in 1992.

6.4 PHYSICAL VIOLENCE AND PROPERTY OFFENCES

The probability of being a victim of violence was very high in Nunavik: in fact, more than half of the adults (54%) reported having experienced one or more forms of physical violence during their lifetime. In terms of

property offences, 46% of the individuals reported having been the victim of at least one form of violence in the previous year. The reported rates of vandalism, theft, and breaking and entering were very high, much higher than those observed elsewhere in Canada.

6.5 SEXUAL VIOLENCE

Nunavik also faces a significant sexual violence problem. In 2004, one adult in three (32%) stated having been forced or having faced attempts made to force them to perform a sexual act during childhood or adolescence, and one adult in five (20%) stated having encountered the same problem as an adult. The situation is even more of a concern among women: half of them indicated they had been victims of sexual assault or attempts to commit sexual assault when they were a minor (49%), one quarter had encountered the same problem as an adult (27%). Violence against men must not be ignored: 16% had encountered this problem when they were minors and 13% as adults.

7. WOMEN'S HEALTH

7.1 IRON DEFICIENCY AND ANEMIA

Anemia and iron deficiency together affected more than half of the non-pregnant women in Nunavik. For women aged 50 and over, the prevalence of anemia (53%) is likely related to a disruption in iron metabolism, due to the presence of a chronic disease or inflammation. In the case of women of childbearing age, the majority of the cases of anemia were caused by an iron deficiency related to insufficient iron intake to meet the organism's needs.

The prevalence of anemia due to iron deficiency was at a critical level among women of childbearing age (one woman in five), and was even higher among pregnant women (affecting one third of them). The iron status of pregnant women and new mothers thus appeared more fragile than that of other women.

7.2 PREVENTIVE PRACTICES

Pap tests and clinical breast examinations are an integral part of a woman's health routine. The survey results are encouraging in this regard. In 2004, more than four women in five had undergone a Pap test in the two years preceding the survey (82%); however, this practice was less frequent among less educated women. In terms of clinical breast examinations, 30% of the women had one

performed by a health professional within the two years prior to the survey.

7.3 BEHAVIOUR DURING PREGNANCY

Among the women who had given birth, 30% fed their babies through exclusive breast-feeding, compared to 29% who bottle-fed them and 40% who used a combination of the two. During their last pregnancy, 54% of the women had taken medication to prevent iron deficiency and 49% to prevent vitamin deficiencies.

The data on smoking and on alcohol consumption during pregnancy are a concern given the now widely recognized negative effects of these substances on the health of the mother and her child. In Nunavik in 2004, 65% of women indicated they had smoked on a daily basis and 17% occasionally during their last pregnancy (Quebec: 22% and 11%, respectively); 44% reported having consumed alcohol.

7.4 BONE STATUS

An assessment of bone status among women revealed that the bone quality of 33% of the respondents was normal, whereas 57% had osteopenia (a slight reduction in bone quality compared to the results for young adults of the same age and gender) and 10% had osteoporosis.

GENERAL CONCLUSIONS

The results presented above provide a brief profile of the health status of the Inuit of Nunavik in 2004. In terms of the environment, the results reveal a significant reduction in the blood concentrations of heavy metals in the Inuit observed over the last decade. Nonetheless, a substantial proportion of people continue to have concentrations exceeding the acceptable levels established by Health Canada.

With regard to physical health, while the population of the region has, until now, been relatively well protected from certain diseases (especially cardiovascular diseases), the high prevalence of certain risk factors (obesity, glucose intolerance, smoking, psychoactive substance abuse, poor eating habits, lack of physical activity) leads us to fear a deterioration in the health status of this population in the future.

In terms of psychosocial health in Northern Quebec, the situation remains very much a concern; the prevalence of violence there is quite significant. Women require

particular attention: they are more often victims of episodes of violence, and they have a higher prevalence of a certain number of health risk factors (obesity, hyperinsulinemia, iron deficiency).

That being said, Nunavik is in a distinctive situation in that its population is young. This youthfulness represents a catalyst for change for improving the health status of this population that cannot be ignored. However, the challenge is daunting: results from the survey reveal that alcohol consumption and drug use among young people remain high, to say nothing of the prevalence of suicide ideation and suicide attempts, which is higher among this sector of the population.

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