

# THE HEALTH OF THE NOVA SCOTIA MI'KMAQ POPULATION

**A Final Research Report**

Prepared by  
**MI'KMAQ HEALTH  
RESEARCH GROUP**

January 7, 2007



First Nation  
Regional Longitudinal  
Health Survey



The Confederacy of Mainland Mi'kmaq

**THE HEALTH OF THE ON RESERVE MIKMAQ POPULATION IN  
NOVA SCOTIA: DATA FROM 2002-03**

**Research Report on the Health of the On Reserve Mi'kmaq Population  
prepared by Dr. Charlotte Loppie and Dr. Fred Wien on behalf of the  
Mi'kmaq Health Research Group and the Union of Nova Scotia Indians**

**January 7, 2007**

**Confidential. Not for quotation or distribution without permission.**

## **The Mi'kmaq Health Research Group**

The Mi'kmaq Health Research Group (MHRG) was formed at the request of the Union of Nova Scotia Indians in 1996. At the time, the Union had agreed to take responsibility for the Nova Scotia portion of the 1997 First Nation and Inuit Longitudinal Regional Health Survey (FNILRHS) and suggested that the group be formed to advise on and manage the implementation of the FNILRHS.

The MHRG brings together the health policy coordinators and analysts from the Union of Nova Scotia Indians (UNSI), the Confederacy of Mainland Mi'kmaq (CMM), and the Atlantic Policy Congress of First Nation Chiefs (APCFNC). In addition, it includes both Aboriginal and non-Aboriginal faculty members from the health sciences at Dalhousie University. The group operates without a budget, although there are occasional grants to implement specific projects. It meets monthly during the academic year. In addition to the implementation of research projects, the MHRG advises on educational programs and capacity building. It also serves as an informal sounding board on health issues raised either by the First Nation organizations or by university personnel. Faculty and students who wish to undertake research on Aboriginal health issues often turn to the MHRG for advice.

Within a few months of the MHRG formation, a formal agreement to cooperate in health matters was signed by the Executive Directors of the UNSI and CMM, and by the President of Dalhousie University. A copy of the agreement can be found in Appendix A of this report.

### **The current membership of the MHRG is as follows:**

Cheryl Copage, Atlantic Policy Congress of First Nation Chiefs  
Don Cunningham, Faculty of Dentistry  
Sally Johnson, Union of Nova Scotia Indians  
Charlotte Loppie, School of Health and Human Performance  
Richard MacLachlan, Department of Family Medicine  
Nancy MacDonald, School of Social Work  
Carla Moore, Atlantic Aboriginal Health Research Program  
Toni Thompson, Confederacy of Mainland Mi'kmaq  
Fred Wien, School of Social Work

## **The Union of Nova Scotia Indians and the RHS Regional Advisory Committee**

The Union of Nova Scotia Indians is a tribal organization which has been in existence in Nova Scotia for 36 years. It held its first meeting on July 12, 1969 and ratified its constitution on Sept. 13, 1969 during its first annual general assembly. It was formally incorporated under the Nova Scotia's Societies' Act on July 3, 1970.

The Board of Directors for the Union of Nova Scotia Indians is comprised of the chiefs of any Nova Scotia's First Nation communities affiliated with the association. Presently, seven of the 13 First Nation communities are associated with the Union of Nova Scotia Indians. The populations within these communities represent approximately 70 per cent of the registered Indian population in Nova Scotia.

### **The objectives of the Union of Nova Scotia Indians are as follows:**

- To promote the welfare and well-being of the Indians of Nova Scotia
- To improve the economic and social conditions of the Indians of Nova Scotia
- To promote the rights of Indian people, to inform Indians of their rights and to assist Indians of Nova Scotia in their enforcement of their rights
- To promote discussion of Indian problems
- To seek to promote a better understanding between Indians and other people
- To initiate and carry out programs for the advancement of Indian people
- To cooperate with governmental and private agencies for the promoting of the interests of Indian people
- To do all such things as are incidental or conducive to the attainment of the above objectives.

### **To advise on the implementation of the Regional Health Survey, the UNSI formed a Regional Advisory Committee. The membership of the Committee is as follows:**

Elaine Alison, Health Director, Wagmatcook First Nation

Nigel Johnson, Regional Health Survey Coordinator, Union of Nova Scotia Indians

Sally Johnson, Health Coordinator, Union of Nova Scotia Indians

Sharon Rudderham, Health Director, Eskasoni First Nation

Darlene Paul, Health Director, Membertou First Nation

Elizabeth Paul, Director of Health Services, Millbrook First Nation

## Acknowledgements

When one considers the range of methodologies available to the research community, surveys stand out because, on the one hand, they have the potential to generate an enormous amount of useful information. On the other hand, they also require the good will and dedication of a large number of people. The most important group is the survey participants, those who take the time to answer the many questions and who tolerate the fact that some of the questions are quite personal. Despite repeated requests to participate in surveys of this kind – the Canadian census, for example, was conducted in the year before this study went into the field – the on-reserve Mi'kmaq population in all 13 communities responded in large numbers to the health survey. We are extremely grateful to them, as we are to the Chiefs and Band Councils for supporting the study.

The actual interviews were conducted by community-based research assistants who also worked with Band staff to draw the sample from community membership lists. Doing survey interviews is not an easy task. It requires a great deal of skill as well as commitment since repeated visits may be necessary to homes under often adverse conditions. The fact that such a high percentage of those who were approached to participate in the study actually agreed to do so (some 81 per cent overall) is testimony to the good will of the residents as well as to the dedication of the interviewers.

Survey coordination was provided by Nancy McLeod, who played the leading role in the implementation of the survey from its design in the beginning through to the completion of the data gathering phase. We are grateful to her for her contribution. It is so important that the implementation of the survey be accomplished with careful attention to detail, and Nancy ensured that this was the case.

Within Nova Scotia, the Union of Nova Scotia Indians took responsibility for conducting the survey within the province and Sally Johnson, the Health Coordinator for the UNSI, was the key figure in the whole process. She represented our region on the First Nations Information Governance Committee, the group that coordinated the survey nationally. She also dealt with matters such as budgets and the hiring of staff, ensured that there was organizational and community support for the survey, prepared progress reports, hired and supervised staff, and even undertook some data entry work which she swears she will never do again.

Once the data was collected, it was assembled nationally by staff working for the First Nations Information Governance Committee and then returned to the province so that analysis of the data and the preparation of reports for Nova Scotia could proceed. The task of managing the data and undertaking computer-based analysis was entrusted to the Population Health Research Unit at Dalhousie University. Here, the work of data analyst Martha Cox was outstanding and went well beyond the requirements of the contract. Sally Johnson also received much useful advice from the Regional Advisory Committee, whose members were identified above. Finally, we express our appreciation to Health Canada, and especially to the First Nations and Inuit Health Branch, for providing the funding that made both the 1997 and the 2002-03 survey possible.

## Report Summary

### Background and Methodology

When Statistics Canada undertakes national surveys on the health of Canadians, First Nation persons living on reserve are routinely excluded. Over time, this has resulted in a situation where information about the health of on-reserve residents has been inadequate for purposes of identifying health concerns, their change over time and the factors that contribute to poor or good health status.

In the mid-1990's, a national steering committee working under the auspices of the Assembly of First Nations and composed of mostly Aboriginal health experts prevailed upon Health Canada to sponsor the first First Nations and Inuit Longitudinal Regional Health Survey. Data was collected in 1997 on a national basis for residents living on reserve and in some Inuit communities, and the results were reported in both national and regional publications shortly thereafter.

As the name of the survey implies, the intent from the beginning was to repeat the survey over time, optimally every five years. Accordingly, the survey was repeated in 2002-03, again under the direction of a national steering committee (called the First Nations Information Governance Committee or FNIGC) which worked under the umbrella of the National Aboriginal Health Organization (NAHO) with funding again provided by Health Canada.

The First Nations Regional Longitudinal Health Survey (FNRLHS) is important not only because of the rich data base it provides but also because it contributes significantly to First Nations capacity building and self-determination in the health research area. It is firmly under First Nations control, both in terms of the individuals who plan and implement the survey as well as the organizations that are involved. Unlike Statistics Canada, which conducts surveys in a highly centralized manner, the FNRLHS is planned nationally but is implemented regionally. That is, there is a common set of questions that is used in each region and there are national guidelines governing the methodology, but agreements are signed with Aboriginal organizations in each region to actually conduct the sampling, selection and training of interviewers, and data collection. While questionnaire responses are sent to Ottawa for consolidation into a national data base and national reports are derived as a result, each region is responsible for analyzing its own information and producing regional reports.

In Nova Scotia, the Union of Nova Scotia Indians (UNSI) took responsibility for conducting the survey in both 1997 and 2002-03. Through cooperation with the Confederacy of Mainland Mi'kmaq (CMM), it was possible on both occasions to include all 13 Mi'kmaq communities in the Province. Additionally, the Mi'kmaq community of Miawpukek from the island of Newfoundland also asked to be included in 2002-03, and a separate report is being prepared for that community. For both surveys, the UNSI received methodological and other advice from the Mi'kmaq Health Research Group (MHRG) based at Dalhousie University, which also prepared the research reports of the results. The UNSI also contracted with the Population Health Research Unit at Dalhousie University (PHRU) to undertake the data preparation and analysis on which this report is based.

With the permission of each community's Chief, trained Mi'kmaq interviewers worked closely with Band staff to select children, youth and adults on a random basis from up-to-date Band lists of all registered or status Indians living on the reserve at the time of the survey. At that time or later, other individuals were also randomly chosen to replace those who might decline to participate or who might be difficult to reach. Random sampling has been shown to be one of the best ways to achieve a sample that is most representative of the whole population. In total, 1472 names were selected and 1189 persons or 81% completed an interview. This included 482 adults, 282 youth, and 425 children (Chart 2.1). The fact that such a high proportion of the sample target was reached gives confidence to the results, which can be viewed as representative of the on-reserve population of the Mi'kmaq in Nova Scotia.

For children chosen in the sample under 12 years of age, their parents or guardians were approached and interviewed about the health of their child. For the youth sample (ages 12 up to 18 years), it was the youth themselves who completed the questionnaire because of the sensitivity of some of the questions and because of our desire to obtain frank and honest responses. Adults, defined as persons 18 years of age and over, were asked questions by the interviewer. In all cases, responses were entered on laptop computers, using a specially designed software program.

### **The Health of Mi'kmaq Children**

It has been well established in the literature that a child's health is strongly influenced not only by genetic factors but also by their social environment. High levels of poverty and unemployment are considered to be among the social determinants of health, and in this respect Mi'kmaq children are at a disadvantage. Our results indicate that many Mi'kmaq children are growing up in poverty situations, with 69 per cent of their households having a total annual income of less than \$30,000. Using another indicator of social class, their parents also have less than average levels of education with 41 per cent of the males and 48 per cent of the females reporting that they have not completed high school.

The maintenance of culture and language may also contribute to healthy outcomes. While almost all Mi'kmaq parents think it is important for their child to learn a First Nations language, in fact only about a third of the children speak Mi'kmaq and just under half are able to understand the language (Chart 3.7). Parents and grandparents are regarded as being in the best position to help children understand their culture.

One of the most important factors in helping children get a healthy start in life is the behaviour of the child's mother during pregnancy. We see in Chart 3.10 that a very high proportion of Mi'kmaq mothers smoked during pregnancy – some 64 per cent if we include those who smoked throughout as well as those who quit during pregnancy. This figure shows no improvement from the 1997 results and is well above the 22 per cent of Nova Scotia women who smoked during pregnancy. Breast feeding is also an important contributor to early childhood development, and the 38 per cent reported in 2002-03 shows a marked improvement from the 28 per cent reported five years earlier. However, it is well below the level of Nova Scotia women in general, whose rate of breastfeeding is in the order of 76 per cent (Chart 3.12).

Almost all parents rate the health of their child as being excellent or very good (Chart 3.14) but a minority of Mi'kmaq children do have to contend with various chronic health conditions. For the most part, these have to do with breathing problems such as asthma, allergies and chronic bronchitis, as well as chronic ear infections. The story is similar for both girls and boys (Charts 3.15 and 3.16). The good news is that the percentage of children affected by these conditions has in most cases declined since 1997, although the incidence is still typically higher than it is for other Canadian children. Rates of childhood injuries caused by such events as falling or tripping, or riding a bicycle, are also high (Chart 3.17) and indeed the rate of injuries is higher than it was in 1997.

Parents report that a majority of Mi'kmaq children (63 per cent) always or almost always eat a nutritious, balanced diet, and we also report on data showing the extent to which children consume traditional foods. Nevertheless, a high proportion of children are reported to have a body mass index (BMI) in the overweight and obese range, as Chart 3.22 demonstrates. In this respect, it is encouraging that 47 per cent of Mi'kmaq parents report their children to be physically active every day, while an additional 31 per cent reported physical activity between 2 and 6 times per week. However, the children spend lots of time – some 27 to 28 hours per week on sedentary activities such as watching television or playing video games, compared to 16 hours playing outdoors.

With respect to dental health, we found that 18 per cent of Mi'kmaq children had suffered from baby bottle tooth decay but the large majority had been treated for this condition. More than half of the child population requires dental care, especially maintenance (cleaning) and having cavities filled (Chart 3.27).

With respect to education and child care, we learned that about a third of the children were in child care, meaning that someone other than their parent or guardian was looking after them. Usually they were being cared for in their own home, or in the home of a relative. Among those attending school, 16 per cent have already had to repeat a grade. But almost half are active in sports, and a very high proportion – 84 per cent – are reported to read for fun at least once a week. Almost all the children (94 per cent) are said to be getting along well in the context of their families.

### **The Health of Mi'kmaq Youth**

In many respects, Mi'kmaq youth describe themselves as being quite healthy, and we do find some improvements in their health status compared to 1997. However, there continue to be issues of concern. One of them has to do with living arrangements. While more than three quarters of Mi'kmaq youth live with their birth mother, less than half are still with their birth father. Indeed, in only 41 per cent of the cases do the youth's birth parents still live together (Chart 4.5).

Language use is similar to that among Mi'kmaq children with just 28 per cent using Mi'kmaq in daily life but close to half being able to understand and speak the language fluently or relatively well (Chart 4.7). Most Mi'kmaq youth say it is important to speak their First Nation language, but only 45 per cent say that traditional cultural events are important in their lives.



With respect to education, it is interesting that about 80 per cent say that they like school somewhat or very much – the rest are unsure – but a surprisingly high proportion (43 per cent) say they have repeated a grade and a similar percentage are having learning problems at school (Chart 4.14). Male youth are most likely to complain about too many distractions as well as difficulty with reading and math while among female youth problems with mathematics is by far the most frequently mentioned problem (Chart 4.16). Educational aspirations are high, however.

Some 57 per cent of Mi'kmaq youth say their health is excellent or very good -- well below the level for children – and they ascribe their good health to being happy or content, getting regular exercise and following a good diet, among other factors (Chart 4.18). However, about a third of the youth are overweight and an additional number are obese as Chart 4.21 illustrates. Related to this is the fact that only about 21 per cent say they always or almost always eat a balanced, nutritious diet compared to a large majority who regularly consume junk foods such as soft drinks and fast foods. We also report data on eating traditional foods, and the practice of sharing such foods within the community. More than three quarters of the youth are physically active at least two or three times a week, but not always in such a way that it increases their heart rate or breathing.

In terms of chronic health conditions, allergies and asthma top the list for both genders (Charts 4.30 and 4.31), suggesting a continuation of breathing problems encountered in childhood. However, the percentage of youth affected by chronic conditions has, for the most part, declined since 1997. Injuries continue to be important, however, with some 46 per cent of youth experiencing an injury that required professional attention in the previous 12 months. As with children, falling, tripping, sports and bicycle riding were most frequently implicated (Chart 4.34).

Only about 17 per cent of Mi'kmaq youth say they have consulted a traditional healer in the past several years, but 26 per cent have accessed mental health services. The percentage of youth receiving dental care in the previous 12 months is quite high – 87 per cent – but still almost 20 per cent say they have experienced dental problems or pain in the past month. Chart 4.39 describes how many have made use of various kinds of tests and examinations that would provide information about emerging or actual health conditions.

A significant number of youth, and especially male youth, take mood altering drugs (Chart 4.43). Marijuana or hash remains at the top of the list of substances, but we were surprised to find that chewing tobacco has emerged as a popular choice as well for 27 per cent of male youth and 9 per cent of females. On the other hand, female youth are more likely to have consumed alcohol in the previous 12 months (Chart 4.45). Among those who drink, more than half of female youth and over a third of male youth engage in heavy (binge) drinking once a month or more frequently.

Cigarette use is down, however, among both male and female youth compared to 1997 (Chart 4.47) and we are encouraged to find that a large majority of youth have made one or more attempts to stop smoking. They do so, they report, out of respect for loved ones, to choose a healthier lifestyle or because of peer pressure. Forty six per cent of youth now report being in a smoke-free home, compared to only 27 per cent in 1997.

About a third of the youth are sexually active but that percentage goes up to 61 per cent by the time they are 16 years of age or older (Chart 4.56). Most use birth control methods – especially condoms – but a small proportion don't use any protection at all. When it comes to using condoms to prevent contracting sexually transmitted diseases, more than 25 per cent do not always do so. They say they are under the influence of alcohol or drugs, or they have faith in their partner, or they forget.

Large numbers of Mi'kmaq youth work at a job or engage in sports, but as Chart 4.65 reveals, there are strong gender differences. Young Mi'kmaq women are more likely to have chores to do than their male counterparts, while the latter are more likely to be playing video games. There are some differences in self-image, with male youth being more positive on this dimension while female youth are more likely to report stress and loneliness. Gender differences are also evident on the question asking youth whether they have felt sad, blue or depressed for two weeks or more in a row in the past 12 months (Chart 4.76). Female youth are also more likely to talk to someone (typically friends or family members) about their emotional or mental health (Chart 4.71).

Our survey also included several questions about suicide. First, it is not uncommon for youth to think about suicide, with 31 per cent of females and 16 per cent of males having done so. Actual attempts are reported at 11 per cent for females and 5 per cent of males. Almost a quarter of male youth indicate that in the past 12 months, a close friend or family member has committed suicide (Chart 4.75).

### **The Health of Mi'kmaq Adults**

The adult category includes anyone 18 years of age and over, but the age structure of the on reserve population is such that there are a lot of people in the “young adult” range – from 18 to 34 years, which accounts for almost half the adult population (Chart 5.2). Since these are the years when people form families, look for housing and enter the labour market, it helps to explain why there is so much pressure to find jobs and housing and provide related services on reserve. It may also explain the importance of certain health conditions and health behaviours as well. In any event, one indicator that the settling down process is still incomplete is given by the fact that almost half of the adult population is still single (46.2 per cent), and only 28 per cent is married (Chart 5.4).

Adults report still substantial use of the Mi'kmaq language. For example, 44 per cent say it is the language they use most often, and about two-thirds say speak and understand the language fluently or relatively well. In terms of education, just over half of Mi'kmaq women have completed high school or better, while this is the case for just 38 per cent of Mi'kmaq men (Chart 5.10). gender differences also show up in post-secondary education, where adult women are more than twice as likely to have completed a university degree. Mi'kmaq men, however, are making more inroads into trade, technical and vocational education.

The same percentage of men and women – 44 per cent – report that they are working for pay at the time of the survey. Apart from earnings from paid employment (including self-employment) other important sources of income are social assistance (a factor in the incomes of close to half the adult population), employment insurance and child tax benefits. Almost two-thirds of personal incomes are less than \$20,000 per year, while half of all household incomes are less than \$30,000 per year. More than a third of all homes require major repairs (Chart 5.20) and more than half report that there has been mold or mildew in the home in the past year (Chart 5.21).

Less than half of Mi'kmaq adults rate their health as excellent or very good (Chart 5.22). Like Mi'kmaq youth, they ascribe this state of affairs to being content, following a good diet, and getting proper rest and exercise. Substantial numbers, however, report having one or more chronic health conditions (Charts 5.25 and 5.26). The list is similar for men and women, although the percentages for women are higher, and the conditions are similar to those experienced by other Nova Scotians with the exception of diabetes. The latter is reported by 20 per cent of Mi'kmaq men and women, compared to 6 per cent for Nova Scotians. Close to three quarters of the adult population is either overweight or obese (Chart 5.27). Our survey also reports on the steps that are being taken to control diabetes.

The level of injuries is high among Mi'kmaq adults, although not as high as it is for youth (Chart 5.34). The most common causes are, again, falling or tripping, participation in sports, and bicycle accidents. However, physical assaults and domestic violence are also important factors. Close to 10 per cent of Mi'kmaq adults experience activity limitations at home, a number that increases with age (Chart 5.38). While most receive the services they need, there are significant unmet needs in the area of home maintenance, personal care and light housekeeping.

Just under a quarter of Mi'kmaq adults use traditional medicines (Chart 5.40). While some adults are not interested in doing so, others report various barriers to accessing traditional medicines including lack of information about the medicines and where to find them. Barriers to receiving health care more generally are also itemized in Chart 5.43, which shows that the biggest obstacle has to do with long waiting lists, lack of coverage by Non-insured Health Benefits, and various other factors related to poverty such as lack of transportation. Over two-thirds of the adult population has received dental care in the year prior to the survey, but obstacles in accessing dental care are also provided and are similar to those identified in Chart 5.43.

Mi'kmaq adults are more likely than the youth to eat a balanced, nutritious diet – about a third do so always or almost always – and traditional foods such as shellfish and berries continue to be part of the diet. Interestingly, the tradition of sharing traditional foods within the community also continues (Chart 5.51).

In terms of physical activity, walking is a form of exercise in which almost all adults participate. Swimming, fishing and berry picking are also popular. Close to 30 per cent of the adult population engages in physical activities sufficient to raise the heart rate and breathing for at least five or more hours per week.

Unfortunately, there has been no improvement in the proportion of adults who smoked at the time of the survey (Chart 5.55). The percentage is very high – close to two-thirds of the adult population – and way above the Nova Scotia average of 23 per cent. Since the Nova Scotia rate has been declining, the gap has actually increased since 1997. There has been a decrease, however, in the percentage of Mi'kmaq smokers who smoke heavily and we also know that almost two-thirds of the smokers made one or more attempts to stop smoking in the 12 months prior to the survey (Chart 5.58). Those who have quit smoking cite quitting “cold turkey” as by far the most common technique for breaking the addiction.

There has also been little change in the proportion of adults who have consumed alcoholic beverages in the previous 12 months – 65 per cent for males and 59 per cent for females – and we continue to be concerned about the data on binge drinking. About 41 per cent of the adult population took mood altering drugs at least once in the previous 12 months, without a prescription. This is an example of a health behaviour that is particularly common in the young adult population (chart 5.68). Approximately 17 per cent of adults have been reached by an alcohol treatment program (Chart 5.70).

About two-thirds of the adult population is sexually active, and of those, 82 per cent have had sexual intercourse in the 12 months prior to the survey. Among males, 19 per cent have had three or more partners in this time, while this is the case for 12 per cent of females (Chart 5.74). Just over a third of those who have been sexually active have not used any kind of birth control mechanism. When asked why they have not used a condom, most respond that they are with a steady partner and there is an element of trust involved, but others give more questionable reasons from a safe sex standpoint.

More than a third of adults say they have been tested for HIV (Chart 5.81), and fairly large proportions have taken other kinds of preventive care tests as Chart 5.83 reveals. Among women, more than a third say they have never conducted a breast self-examination, and 70 per cent have never had a mammogram. The latter figure varies substantially by age (Chart 5.86).

Not many adults in our sample attended residential schools, but of those who did, two-thirds believe the experience negatively affected their health and well-being (Chart 5.88). Participation in traditional cultural events, spirituality and religion continues to be important for Mi'kmaq adults (Chart 5.92).

With respect to indices of self-esteem, almost 40 per cent of Mi'kmaq adults say they personally experienced racism in the 12 months prior to the survey (Chart 5.94). Of that group, almost 30 per cent say it had at least some effect on their level of self-esteem. Mi'kmaq adults, and especially Mi'kmaq women, are quite likely to seek help for emotional or mental health problems (Chart 5.98) and they turn to friends, family members and their family doctor for this purpose. As with youth, we find a large percentage who have felt sad, blue or depressed in the previous 12 months. Thinking about committing suicide, actually attempting it and dealing with the suicide of a close friend or relative are also issues weighing on adult respondents. On the positive side, most adults report being able to access supports such as companionship, assistance and guidance.

Finally, we asked about the degree of progress that has been made on various issues affecting life in the community. At the high end, indicating a perception of substantial progress, were dimensions such as education and training opportunities, control over health, water and sewage facilities, housing, and increasing cultural awareness in schools. At the other extreme, large numbers said there had been no progress in dealing with alcohol and drug problems. Police services, recreation and leisure, and some cultural issues (such as traditional healing, the renewal of First Nations spirituality, and establishing a renewed relationship with the land) were also areas where many thought there had been no progress made (Chart 5.106).

**THE HEALTH OF THE ON RESERVE MI'KMAQ POPULATION IN NOVA SCOTIA:  
DATA FROM 2002-03**

**Table of Contents**

- i. The Mikmaq Health Research Group*
- ii. The Union of Nova Scotia Indians and the RHS Regional Advisory Committee*
- iii. Acknowledgements*
- iv. Report Summary*

**Chapter One: Introduction**

**Chapter Two: Methodology**

**Chapter Three: The Health of Mi'kmaq Children**

**Chapter Four: The Health of Mi'kmaq Youth**

**Chapter Five: The Health of Mi'kmaq Adults**

**Chapter Six: Conclusions**

**References**

**Appendix A: Mi'kmaq Health Research Group: Agreement of Cooperation**

## Chapter One: Introduction

The First Nations Regional Longitudinal Health Survey (FNRLHS), to give it its formal title, has its origins in the early 1990's. Aboriginal people had long been concerned about the scarcity of data pertaining to the health of their populations, a scarcity that was due to the fact that Statistics Canada does not routinely include Aboriginal people in its surveys. This is especially true of First Nation persons living on reserve, who are not part of national surveys like the Population Health Survey or the National Longitudinal Survey on Children and Youth (NLSCY).

To remedy this gap, a Steering Committee was formed under the auspices of the Assembly of First Nations, and Health Canada was convinced to fund what was then called the First Nations and Inuit Longitudinal Regional Health Survey (FNILRHS). This survey was implemented in 1997 under the direction of the Steering Committee. Unlike Statistics Canada, the FNILRHS was not a highly centralized operation. Instead, the administration of the survey was contracted out to Aboriginal organizations in different parts of the country. Despite its decentralized nature, the Steering Committee managed the process at the national level, and a core set of questions was applied in all regions of the country. Each region had a set of region-specific questions as well.

In Nova Scotia, the survey was implemented by the Union of Nova Scotia Indians with the assistance of the Mi'kmaq Health Research Group based at Dalhousie University. Data collection took place in June-July 1997, and after data analysis, a summary report and final research report were prepared. Meetings to disseminate and discuss the findings took place with the Mi'kmaq leadership and at the community level. A report was also produced nationally by the Steering Committee using all of the data that had been produced in different regions.

From the beginning, the intention has been that the survey would be longitudinal in nature but funding was not committed for more than the initial survey. It wasn't long after the results of the 1997 survey were released (in 1999) that efforts resumed at the national level to conduct a second wave of the survey and thereby to track the changes in health conditions and determinants that had taken place in the intervening years. For the second round, responsibility for the survey was assumed by the National Aboriginal Health Organization (NAHO) and by a national Steering Committee. The new survey was conducted in 2002-2003 with greatly expanded sample and improved methodology, and again implemented through Aboriginal organizations in different parts of the country.

In Nova Scotia, the 2002-03 survey was again conducted by the Union of Nova Scotia Indians, assisted by a Regional Advisory Committee of Health Directors and by the Mi'kmaq Health Research Group. Data analysis was conducted by the Population Health Research Unit of Dalhousie University, and this report was prepared by Charlotte Loppie and Fred Wien on behalf of the UNSI and the MHRG.

This is largely a descriptive report of the results from the survey, organized into chapters focusing on the health of children, youth and adults. It is intended for the general reader who wants to know what the survey "says", and makes extensive use of charts so that the results are easily visible. Along with a summary report, it is intended especially for use by Mi'kmaq communities and related organizations, who may find the results useful for undertaking strategic

planning, for inclusion in funding applications or for other uses. The findings may also be useful for government departments and for teachers and students at the secondary and post-secondary levels.

At a later date, a second report undertaking further data analysis to explore more fully the determinants of health and the implications of the data for health promotion strategy will be undertaken.

## Chapter Two: Methodology

The FNRHS consists of three national questionnaires (adults, youth, and children) that were developed, refined, and scientifically validated by NAHO over a two-year period. These questionnaires were designed to measure a wide range of health issues, wellness, and health determinants. The questionnaires have been described as “the best and most extensive First Nations questionnaires ever.” (NAHO, 2005).

### Sampling of Participants

All 13 Mi’kmaq communities in Nova Scotia agreed to be included in the survey. A sampling strategy was developed to ensure representation by communities that are small (population under 300), medium (population 300 – 1,499), and large (populations over 1,500)<sup>1</sup>. This strategy also ensured equal representation by men and women. As well, attempts were made to ensure that an appropriate number of children (0-11 years), youth (12-17 years) and adults (over 18 years) were included, with special attention paid to ensuring an adequate number of persons 55 years and over.

With the permission of each community’s Chief, trained Mi’kmaq interviewers worked closely with Band staff randomly to select individuals in each age category, from up-to-date band lists of all registered or status Indians living on the reserve at the time of the survey. At that time or later, other individuals were also randomly chosen to replace those who might decline to participate or who might be difficult to reach. A computer-generated table of random numbers was used to sample individuals. Random sampling has been shown to be one of the best ways to achieve a sample that is most representative of the whole population. In total, 1472 names were selected and 1189 persons or 81% completed an interview. This included 482 adults, 282 youth, and 425 children<sup>2</sup>. The fact that such a high proportion of the sample target was reached gives confidence to the results, which can be viewed as representative of the on-reserve population of Mi’kmaq in Nova Scotia. The following chart provides more detail about the sample selected and interviews completed for each age group.

---

<sup>1</sup> More specifically, a sample of 24 was set for small communities, 107 for medium size communities and 520 for the one large community in Nova Scotia. Overall, the sample represents 17.6 per cent of the on reserve population in Nova Scotia. More detail on the sampling strategy is found in NAHO (2005).

<sup>2</sup> We are not using terms such as “completion rate” or “response rate” because persons were added to the sample of 1472 persons for replacement purposes. The original sample represented a target to be reached, and with the use of replacements, a high proportion of the target number was successfully interviewed.



**Chart 2.1**  
**Sample Size and Interview Completion**  
**for the On-Reserve Mi'kmaq Population**

	<b>Children</b>	<b>Youth</b>	<b>Adults</b>	<b>Total</b>
Sample Originally Selected	497	455	520	1472
Number of Interviews Completed	425	282	482	1189
Per cent of Target Reached	86 %	62 %	93 %	81 %

Nova Scotia is the only province to gather information from the same people in both the 1997 and 2002 surveys. Although these individuals' identities are confidential, each of their questionnaires in both 1997 and 2002 was recorded with an identification number, so that the responses could be 'tracked' from one survey to the next. In this way, we have a true longitudinal sample and we are able to measure the health of same Mi'kmaq people over a five-year period of time. The results reported here, however, represent the results for the entire sample interviewed – that is, the original respondents from 1997 to the extent that we were able to re-interview them and the additional persons added to the 2002 sample<sup>3</sup>.

### **Ethics Review**

The Mi'kmaq Health Research Group submitted applications for ethics approval to the Office of Research Services at Dalhousie University, where the application was reviewed by the Social Sciences Ethics Review Board of Dalhousie University. In addition, application was made to the Mi'kmaq Ethics Watch administered through the Mi'kmaq Institute at Cape Breton University. In both cases, approval to conduct the research was granted. (Check information)

### **Data Collection**

Between August 2002 and November 2003, trained Mi'kmaq interviewers undertook in-home, face-to-face interviews to gather information about the health of on-reserve Mi'kmaq people in Nova Scotia. Community interviewers used a customized Computer Assisted Personal Interviewing (CAP) program on laptop computers to record responses to the survey questions.

After the community samples were established, the interviewers began contacting potential participants and explained the study to them. Before each interview, individuals signed a form that indicated their informed consent to participate in the study and to include their information in the regional and national databases.

Although some of the questions are the same for the three age groups, there is a different questionnaire for adults, youth, and children. Also, in addition to questions that were asked of all First Nations people, region-specific questions were also included in the questionnaires. Nationally, the estimated time required to complete the survey ranged from approximately 24

<sup>3</sup> The sample in 1997 was made up of 826 persons of whom 723 or 88 per cent were successfully interviewed. For 2002, an additional 446 persons were added.

minutes for children, 35 minutes for youth, to 44 minutes for adults. However, in Nova Scotia, depending on the individual, some interviews lasted as long as 1.5 hours.

For children under 12, a parent or guardian was asked to respond to the survey questions on behalf of the child. With instruction from the interviewer, youth aged 12 to 17 were permitted to complete the survey themselves on the laptop, in order to give them further security about the confidentiality of the information they were providing. An interviewer was present in case there were any questions. Adults were asked questions by the interviewer, who recorded their responses directly onto the laptop.

### **Interviewers' Training**

First Nation individuals received two days of training as interviewers for the FNRLHS. Interviewers had an opportunity to become familiar with the laptops, with administering and uploading the electronic questionnaires, and with completing consent forms. Interviewers were given an opportunity to practice administering the questionnaires to each other during the training sessions. In addition to conducting the training session, a Regional Coordinator supervised the overall survey and the activities of the interviewers in Nova Scotia.

### **Data Management and Analysis**

After each interview was completed, the interviewer immediately sent the information electronically to a national database at the First Nations Centre, National Aboriginal Health Organization for safe storage and preliminary analysis. Data management and analysis were carried out using software programs (Microsoft Excel, SAS and SPSS), under the direction of the First Nations Information Governance Committee.

The following chapters report the results of this health survey. Whenever it was available and helpful, similar information from other First Nation and non-Aboriginal populations has also been included for the purpose of comparison. However, it is important to note that the cultural, historical, political, and socio-economic backgrounds of groups are not always the same, so conclusions drawn from the comparison should be made with caution. Whenever possible, we have also compared results with those from the 1997 survey of Mi'kmaq people.

With rare exceptions, the results from our survey reported in the following charts represent the weighted results for the entire on-reserve population. That is, we have taken the sample results and weighted them to approximate the population as a whole, correcting for any stratification of the original sample and bias resulting from less than perfect response patterns.

The question of how missing values should be treated is a complex technical issue. In presenting the charts shown in subsequent chapters of this report, we typically exclude missing values in the per cent calculations, as we did in 1997. However, some questions have high missing values because respondents have chosen not to answer, as is the case (for example) when it comes to weight, height or income. When the number of non-responses is large, we usually indicate this in a footnote. Any deviation from this pattern will be noted.

## Chapter Three: The Health of Mi'kmaq Children

### Methodology

As noted in the introduction, using a computer generated table, a representative and proportional number of children aged 0 to 12 years was randomly selected from each of the 13 Mi'kmaq communities in Nova Scotia (Chart 3.1), using up-to-date band lists. Parents or guardians were asked to answer the questions on the child's behalf. Approximately 13 per cent of these individuals required a translator in order to complete the survey. About 97 per cent of those who responded on behalf of a child were their birth parent, about 89 per cent were female, and 87 per cent were between the ages of 20 and 39. Some 425 interviews, representing 86 per cent of the target number of interviews, were successfully completed.

**Chart 3.1**  
**Child Respondents by Community of Residence**  
(Actual Number of Cases)

Acadia	8	Membertou	36
Afton	35	Millbrook	29
Annapolis Valley	9	Pictou Landing	17
Bear River	8	Shubenacadie	31
Chapel Island	41	Wagmatcook	27
Eskasoni	154	Whycocomagh	29
Horton	1		

Ninety-five per cent of the children reside most of the time with their mother, and 54 per cent reside most of the time with their father (either alone or with their mother). Almost 10 per cent of children were residing with grandparents, adoptive parents or stepparents<sup>4</sup>.

If the child was not yet attending school, questions were limited to those related to the child's age and gender, prenatal health behaviours of the child's mother, as well as early childhood illnesses and injuries. For older children who were attending school, the parent or guardian was also asked about education, emotional and mental health issues, nutritional patterns, leisure activities and knowledge of First Nations culture.

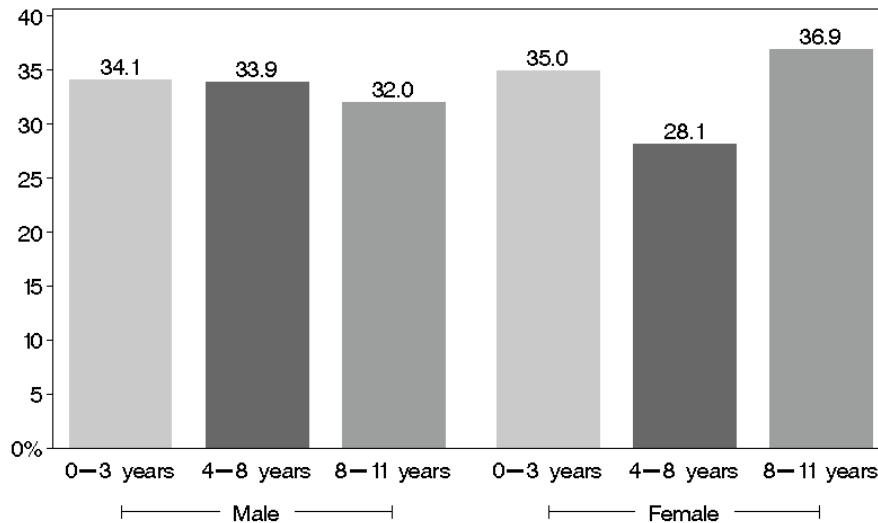
Our results for children show an almost equal proportion of girls (49 per cent) and boys (51 per cent). The age distribution for children is shown in Chart 3.2<sup>5</sup>.

---

<sup>4</sup> Further analysis could determine the degree to which these categories are exclusionary (for example, residing only with grandparents) or additive (for example, grandparents in the same household as the birth parents).

<sup>5</sup> The reader is reminded that, with the exception of Chart 3.1, all other charts in this chapter report weighted results for the Mi'kmaq population as a whole and not results showing sample numbers.

**Chart 3.2**  
**Children's Age by Gender**  
 (Weighted Percentage Within Gender)



**Socio-economic Characteristics**

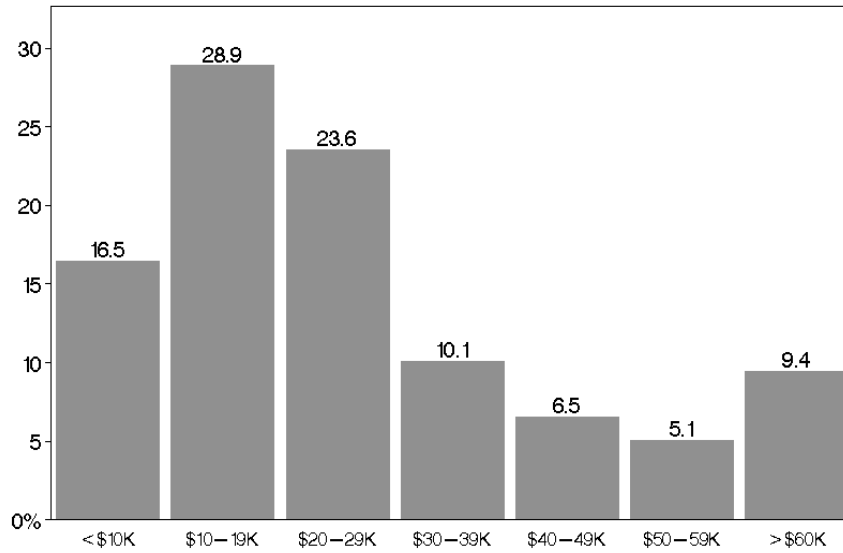
The children in our study come disproportionately from socio-economic backgrounds where poverty and unemployment are prevalent, an important consideration since these factors are known to influence health directly and indirectly. Socio-economic status was measured by total family income and by mother’s and/or father’s highest level of education. The results reveal that many Mi’kmaq children are living in conditions of low-to-modest income, with 69 per cent of their households having a total household income of less than \$30,000 per year (Chart 3.3)<sup>6</sup>.

In addition, Chart 3.4 indicates that between 41 and 48 per cent of Mi’kmaq parents have less than a completed high school education and that Mi’kmaq women generally obtain higher education than Mi’kmaq men<sup>7</sup>.

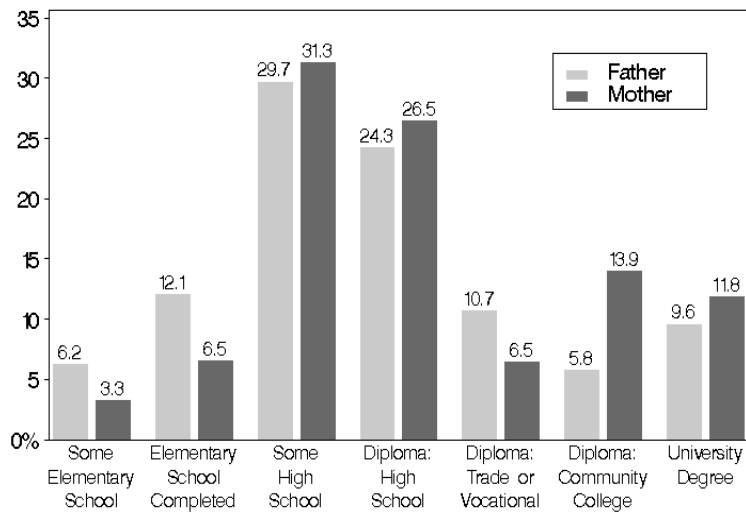
<sup>6</sup> The question on household income yielded a large number of missing data (32 per cent of the total), suggesting that the results reported in Chart 3.3 need to be considered with caution.

<sup>7</sup> Missing cases account for 13 per cent of the total with respect to parents highest level of schooling..

**Chart 3.3**  
**Total Household Income**  
 (Weighted Percentage)



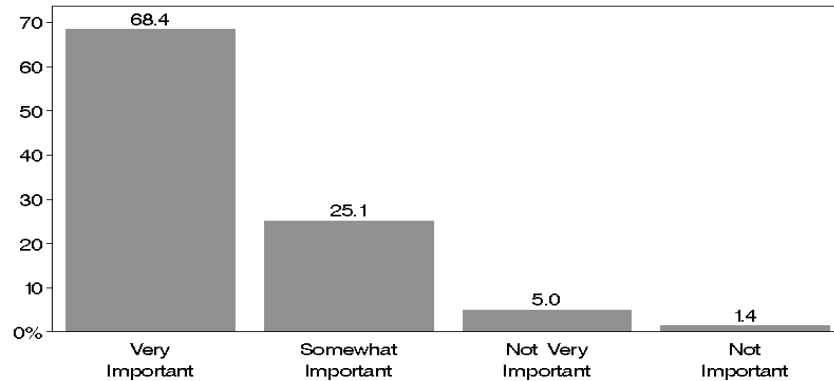
**Chart 3.4**  
**Highest Level of Schooling**  
**Completed by Parent or Guardian**  
 (Weighted Percentage Within Parent)



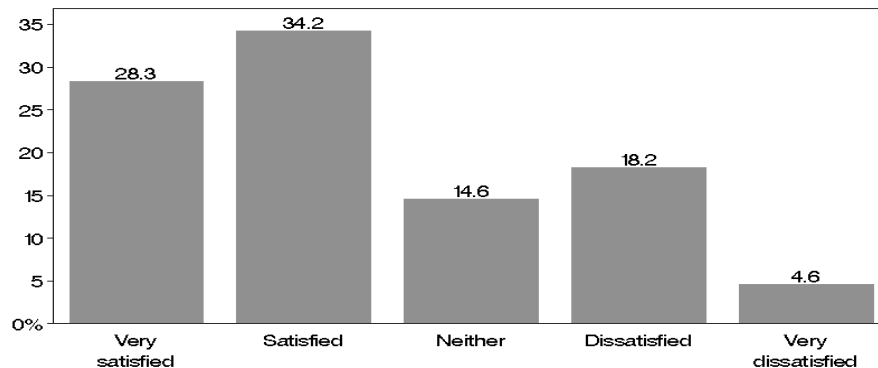
## Language and Culture

The maintenance of culture and language has been shown to provide a buffer against social and economic barriers to health. The extent to which Mi'kmaq children are exposed to their native culture and language and how well they can communicate in that language at home is reported in Chart 3.5, which indicates that 94 per cent of parents and guardians consider it somewhat or very important that Mi'kmaq children learn their First Nation language. However, almost a quarter of the parents or guardians are not very satisfied with their child's actual knowledge of their language (Chart 3.6). Chart 3.7 reveals that 48 per cent of the children involved in this survey *understand* Mi'kmaq either relatively well or fluently, with just 36 per cent able to *speak* their native language relatively well or fluently<sup>8</sup>.

**Chart 3.5**  
**Importance of Child Learning  
a First Nation Language**  
(Weighted Percentage)

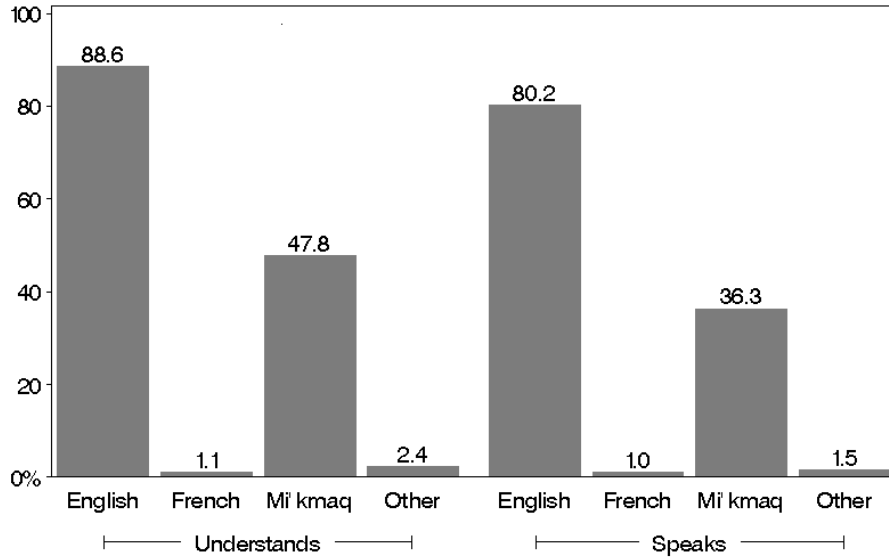


**Chart 3.6**  
**Guardian's Satisfaction with Child's  
Knowledge of First Nation Language**  
(Weighted Percentage)



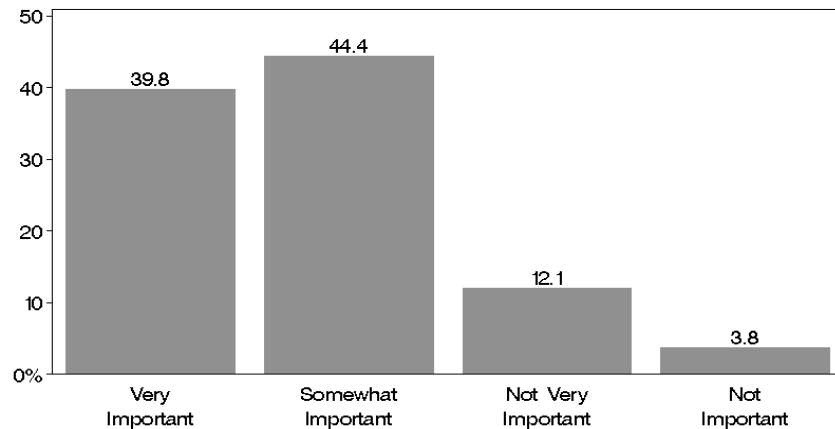
<sup>8</sup> Missing values make up 17 per cent of all cases pertaining to Chart 3.6, and 14 per cent of all cases with respect to Chart 3.7.

**Chart 3.7**  
**Languages the Child Understands or Speaks**  
 (Weighted Percentage)

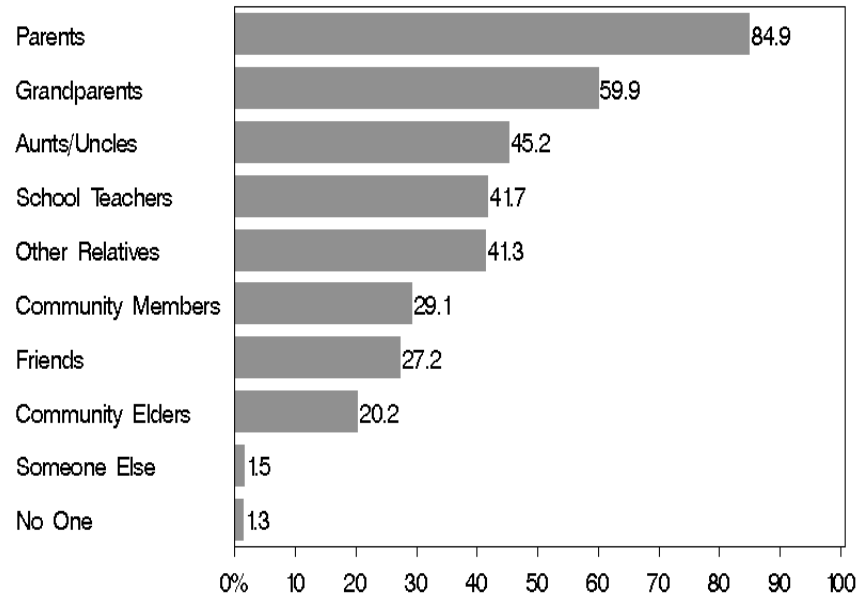


According to the parents and guardians who participated in the survey, traditional cultural events are somewhat or very important to more than 80 per cent of Mi'kmaq children's lives (Chart 3.8). Chart 3.9 illustrates the important role played by family and community members in helping children understand their culture.

**Chart 3.8**  
**Importance of Traditional Cultural Events**  
**in the Child's Life**  
 (Weighted Percentage)



**Chart 3.9**  
**Who Helps the Child Understand**  
**His or Her Culture?**  
 (Weighted Percentage)



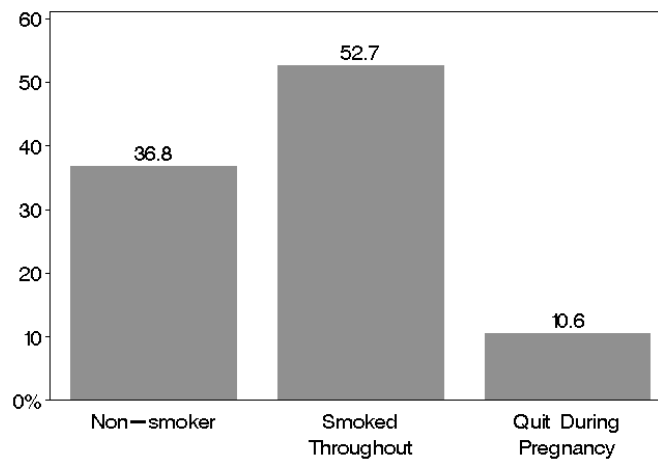
There are a number of events that occur during pregnancy and the early months of life that may impact children’s health through the first few years of development. These events include pre-natal smoking, birth weight, and breastfeeding (Alexander and Korenbrot, 1995; Barker, 1998).



### Smoking During Pregnancy

The results shown in Chart 3.10 indicate that 53 per cent of Mi'kmaq women smoked throughout their last pregnancy, 37 per cent did not smoke, and 11 per cent quit during their pregnancy. The proportion of women who smoked throughout their last pregnancy has remained the same since the 1997 survey and is much higher than it is for other First Nations in Canada (where the figure stood at 37 per cent) as well as 22 per cent among Nova Scotia women<sup>9</sup>.

**Chart 3.10**  
**Did the Child's Mother**  
**Smoke During Pregnancy?**  
(Weighted Percentage)



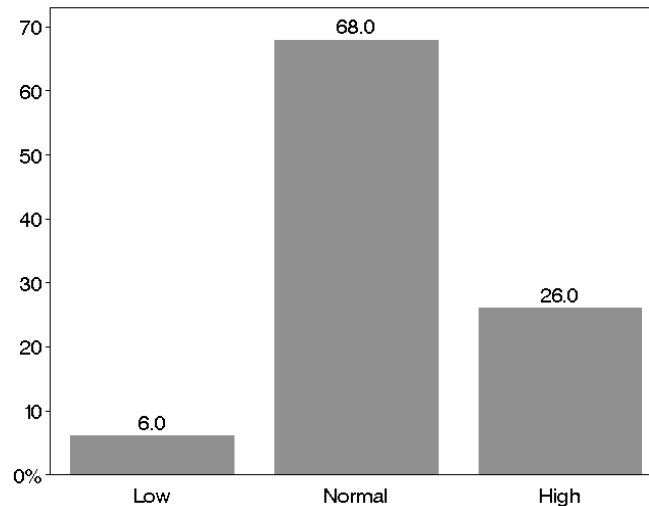
### Birth Weight

Although actual birth weights were not reported for the children in this study, parents and guardians were asked to report whether the child's birth weight was low, average, or high. Chart 3.11 indicates that low birth weight does not appear frequently among Mi'kmaq children, while high birth weight is a more common occurrence. In many cases, low birth weight can be attributed to pre-natal smoking and high birth weight can be linked to gestational diabetes, with the latter occurring more frequently among First Nations women (NAHO, 2005).

---

<sup>9</sup> Unless otherwise noted in this chapter, figures comparing our results with First Nations in Canada are taken from the First Nations Regional Longitudinal Health Survey 2002/03 compiled by the National Aboriginal Health Organization (2005). Figures for the Nova Scotia population were collected in 2003 by the Canadian Community Health Survey, Cycle 2.1, and compiled by the Nova Scotia Department of Health (2005). In this and other chapters, data on the health of the Nova Scotia Mi'kmaq population in 1997 is taken from the Mi'kmaq Health Research Group (1999).

**Chart 3.11**  
**Children's Birth Weight**  
(Weighted Percentage)

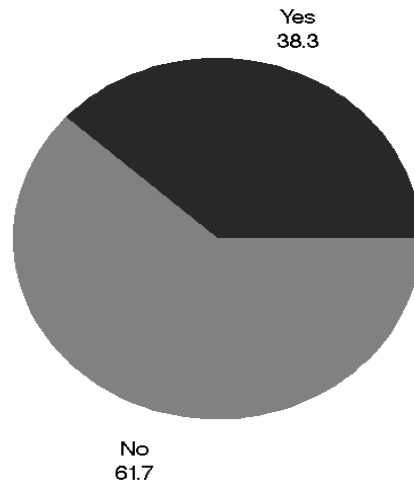


### **Breast Feeding**

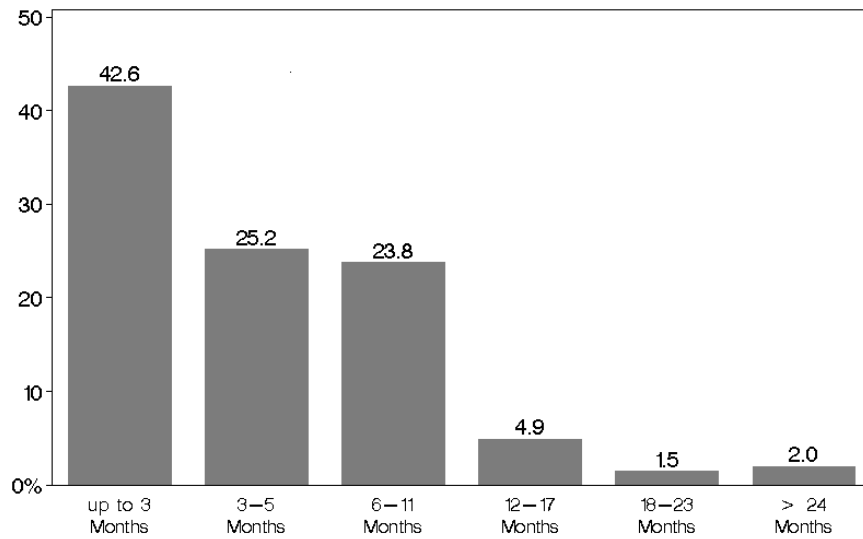
The initiation and continuation of breastfeeding is an important part of early child development, particularly as it relates to children's immune function, which is important when we consider the number of allergies and asthma cases among Mi'kmaq children (see in Charts 3.15 and 3.16). Many studies have found that prolonged breastfeeding provides many health benefits to both mother and child (Health Canada, 1999). As Chart 3.12 reveals, breastfeeding rates among Mi'kmaq women (38 per cent) are higher compared to the 1997 survey (when rates were at 28 per cent) but lower than other First Nations (over 60 per cent). The rate of breastfeeding among Nova Scotia women is even higher (76 per cent).

It is widely recommended that women breastfeed for at least six months so that children receive all of the long-term benefits (Health Canada, 1999). Unfortunately, the duration of breastfeeding among Mi'kmaq women does not usually reach this optimum. As indicated in Chart 3.13, only 32 per cent of Mi'kmaq women who breastfed, did so for 6 months or more. This compares to more than 40 per cent for other First Nations women but slightly exceeds the percentage for Nova Scotia women which stood at 30 per cent.

**Chart 3.12**  
**Was the child breastfed?**  
(Weighted Percentage)



**Chart 3.13**  
**Duration of Breast-feeding**  
(Weighted Percentage)



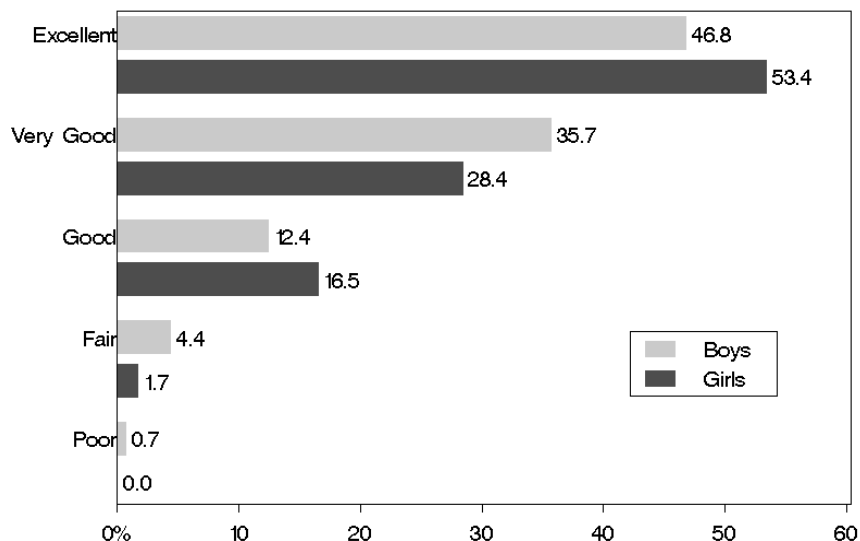
## Health and Well Being

In this survey, childrens' well being was measured through a variety of questions related to their overall health, illnesses and injuries, as well as physical and leisure activities, dental health, nutrition, emotional and behavioural problems, and barriers to receiving health care. As Chart 3.14 indicates, parents and guardians rated their boy's or girl's health as excellent or very good in over 80 per cent of the cases.

**Chart 3.14**

### Parent's Rating of Child's Health

(Weighted Percentage Within Gender)



## Chronic Health Conditions

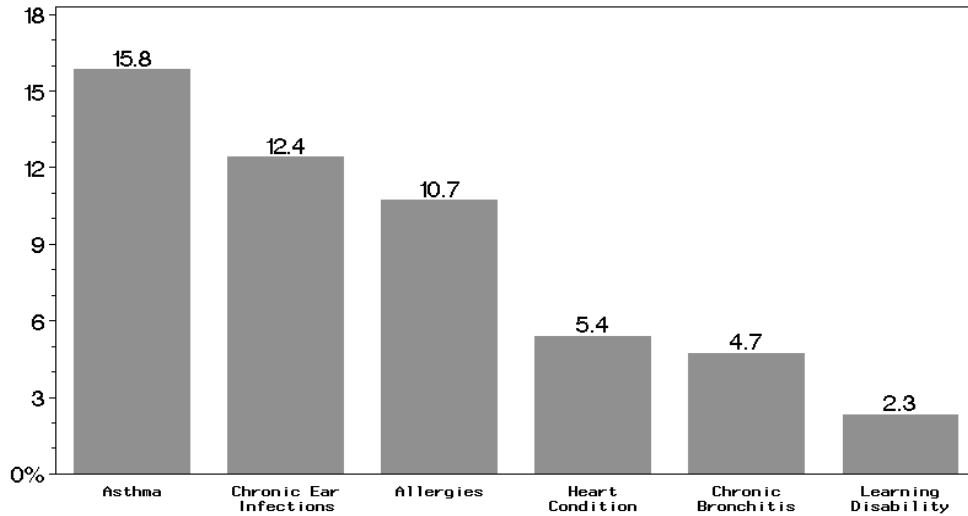
Parents and guardians were offered a long list of health conditions, from which to select those that affect their child. The six most frequently reported health conditions are reported in Chart 3.15 and 3.16. They include asthma, chronic ear infections, allergies, heart condition, chronic bronchitis, and learning disabilities or blindness. Asthma appears to be of particular concern, especially among male children who give evidence of having higher levels of chronic health conditions than females at this age. Among the children who were reported to have had asthma, 42 per cent had an asthma attack in the past 12 months. Although other conditions such as diabetes, vision and hearing problems and ADD/ADHD were identified, in total they accounted for only a small proportion of all cases. Rates of allergies, ear infections and bronchitis have decreased substantially among Mi'kmaq children since the 1997 survey, yet the rate of asthma has increased marginally from 11 to 13 per cent since that time (both genders taken together).

Rates of the most common chronic health conditions are similar to other First Nations children in Canada but are higher than the rates for other Canadian children. With respect to asthma, for example, the rate for Mi'kmaq children is 13 per cent, compared to less than 9 per cent for Canadian children. Chronic ear infections or ear problems, which probably refers to *otitis media* and which can cause hearing loss, stands at 11 per cent for Mi'kmaq children and is much higher than for Canadian children generally.

**Chart 3.15**

**Chronic Health Conditions: Male**

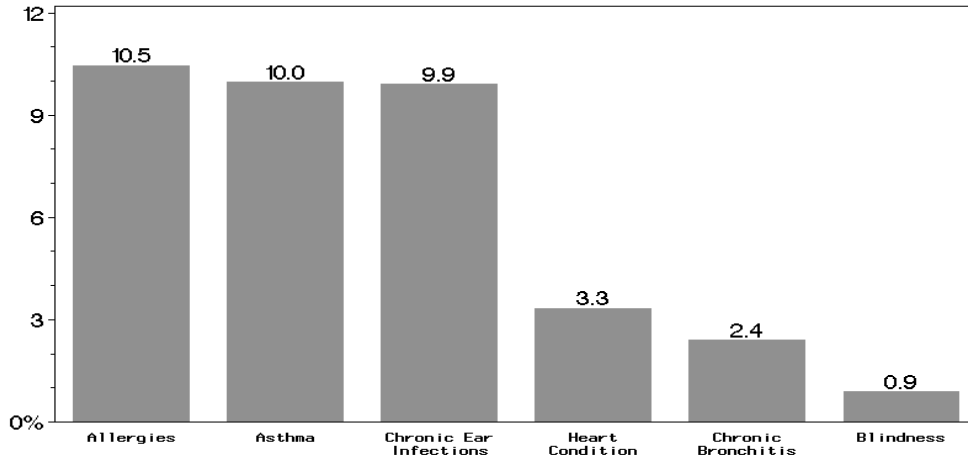
(Weighted Percentage for the Six Most Frequently Reported Conditions)



**Chart 3.16**

**Chronic Health Conditions: Female**

(Weighted Percentage for the Six Most Frequently Reported Conditions)



**Childhood Injuries**

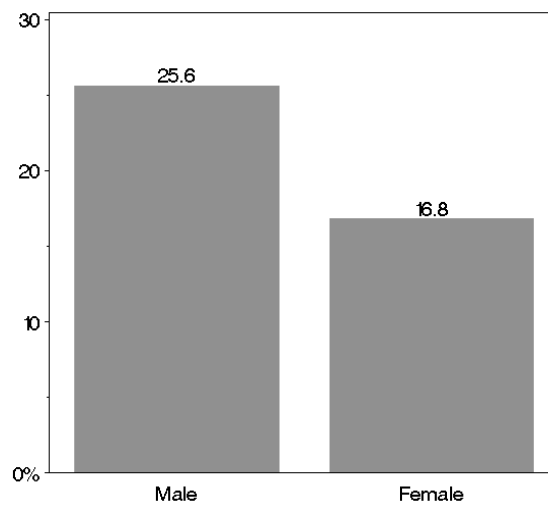
Parents and guardians were asked to report on the extent and types of injuries experienced by their children in the past 12 months. As Chart 3.17 reveals, 26 per cent of the boys and 17 per cent of the girls were reported to have been injured at least once in the past 12 months. Broken or fractured bones, sprains or/strains, major cuts/scrapes/bruises, burns and scalds, and dental

injuries are the five most common types of injuries reported for Mi'kmaq children. In all cases except scalds and burns, rates of injuries tend to be higher among boys than girls (Charts 3.18 and 3.19).

Of the cases where the cause of injury was reported, the majority were related to falling or tripping while at play, riding a bicycle, or general play-related accidents, with a small number caused by a motorized water or land vehicle accident, or accident in the home. Overall, the rate of injuries among Mi'kmaq children has increased since the 1997 survey.

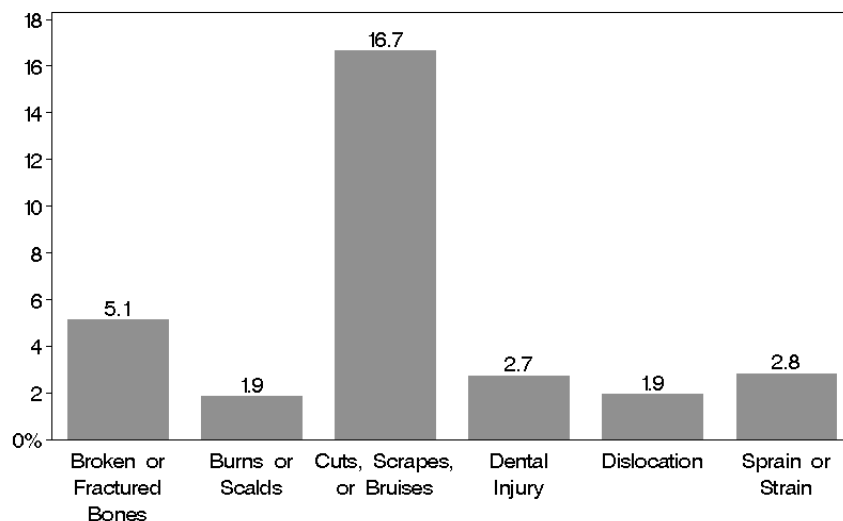
**Chart 3.17**

**Injured At Least Once in Past 12 Months**  
(Weighted Percentage Within Gender)

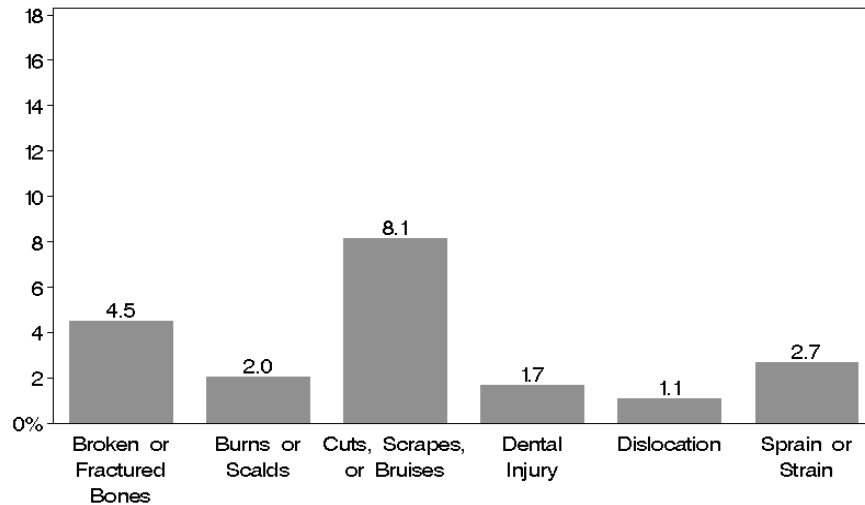


**Chart 3.18**

**Injuries in Past 12 Months — Boys**  
(Weighted Percentage)



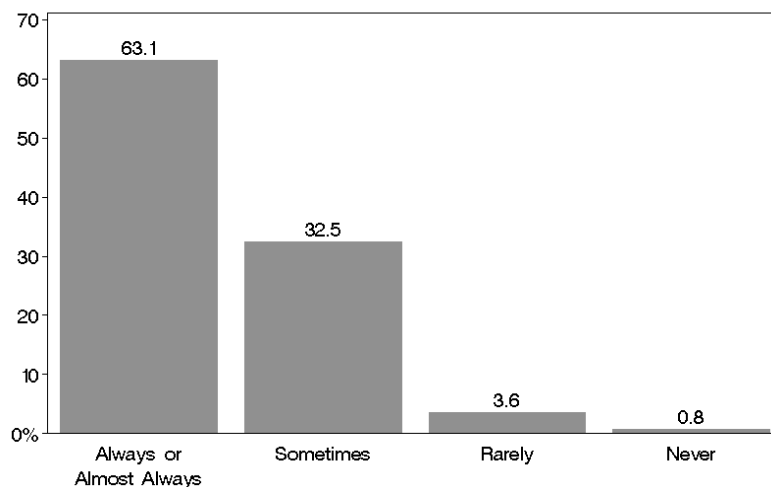
**Chart 3.19**  
**Injuries in Past 12 Months – Girls**  
 (Weighted Percentage)



**Nutrition**

Parents and guardians were asked to comment on a number of aspects related to their child’s nutrition, including whether or not they eat a balanced diet and the extent to which they consume traditional food and ‘junk food’. The results shown in Chart 3.20, indicate that 63 per cent of Mi’kmaq children always or almost always eat a nutritious, balanced diet, with many children consuming traditional foods in the past year (Chart 3.21). The percentage of Mi’kmaq children consuming a healthy diet appears to be lower than the 77 per cent reported for other First Nations children in Canada. The four most prominent ‘junk foods’ consumed by Mi’kmaq children on a daily basis include pop (25 per cent), sweets (17 per cent), added sugar (16 per cent), and fried food (15 per cent).

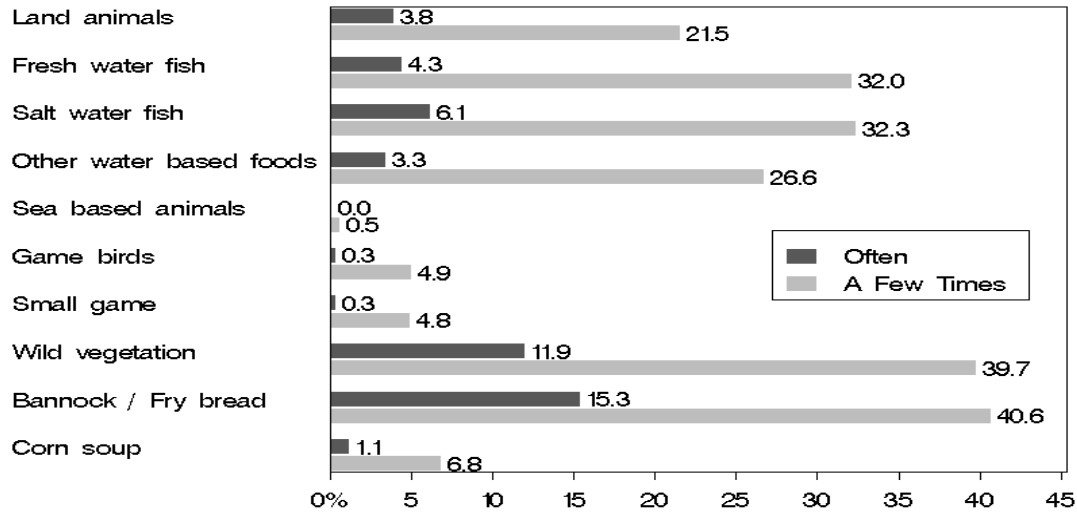
**Chart 3.20**  
**Child Eats a Nutritious Balanced Diet**  
 (Weighted Percentage)



**Chart 3.21**

**Eating Traditional Foods**

(Weighted Percentage Within Each Food)



**Body Mass Index**

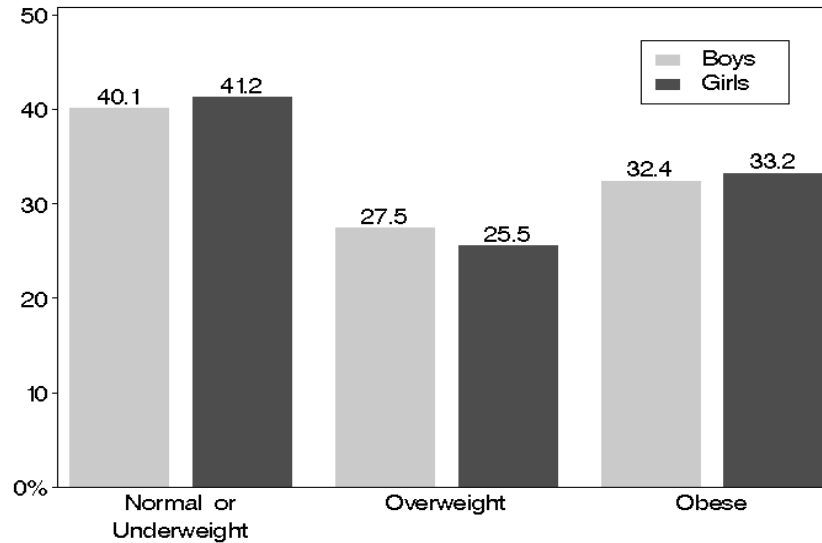
Body mass index (BMI) is a number that represents a person’s height in relation to their weight. It is often used to determine whether a person is within the range of healthy weights for their height. A body mass index that is either significantly below or above what is considered average may have significant health implications and may be an indication that nutrition, physical activity, and underlying conditions should be examined.

Because children are still growing, body mass index measures are not as accurate a measure as they are for adults, so the results below should be treated with caution. Following the practice at the National Aboriginal Health Organization, the BMI ranges shown in Charts 3.22 and 3.23 are age and gender specific. Children below age 2 are excluded, as are all records with missing values for BMI. The number of missing values is substantial, with the result that the charts below are based on a relatively small number of responses (161 children, ages 2-12, out of 425 children in the sample overall).

Chart 3.22 reveals that about 40 per cent of Mi’kmaq boys and girls have a BMI in the underweight or normal range. Just over a quarter are overweight while an additional one-third are in the obese range. As a result of this risk factor for developing diabetes as well as the prevalence of diabetes among First Nations people, 13 per cent of parents reported having their children’s blood sugar tested for diabetes in the past 12 months.

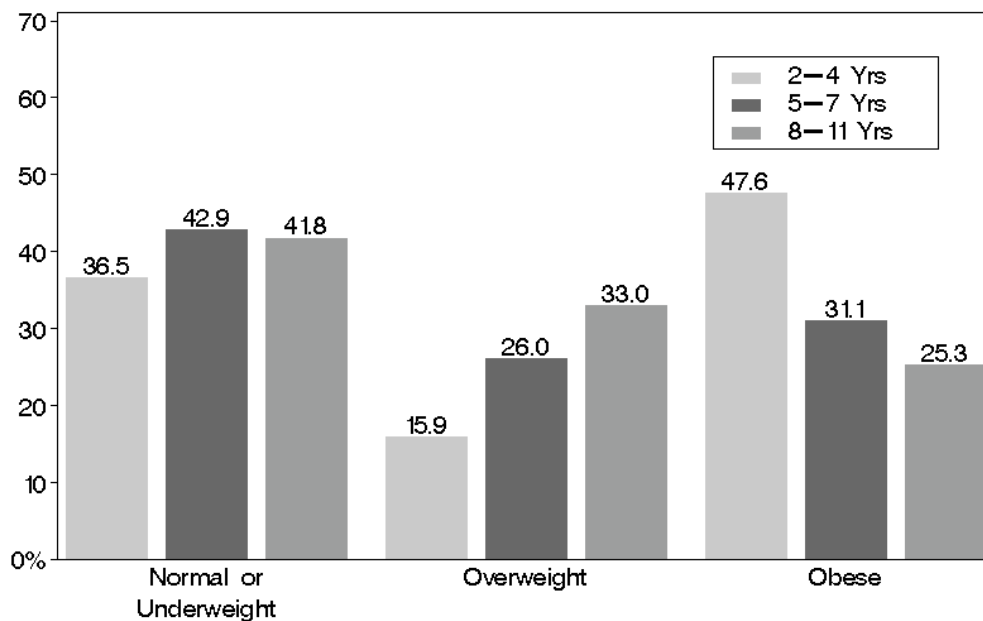


**Chart 3.22**  
**Body Mass Index**  
 (Weighted Percentage Within Gender)



In Chart 3.23, we report body mass index data by age group. It appears that the proportion of children who are overweight increases with age, but the reverse holds true for obesity.

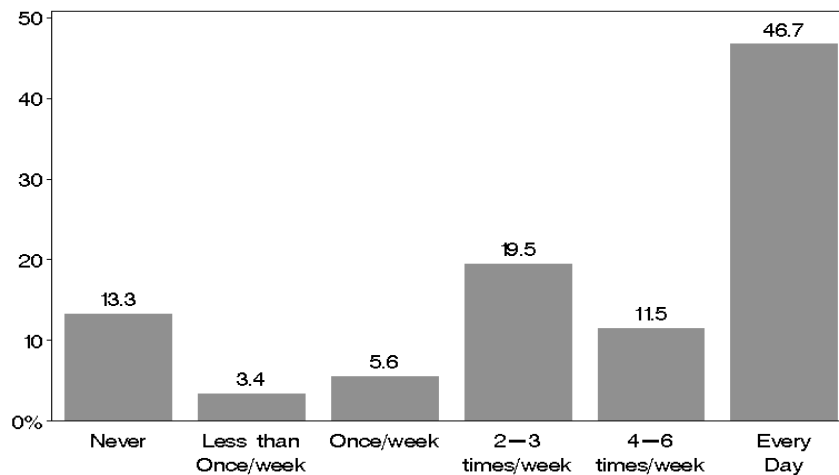
**Chart 3.23**  
**Body Mass Index**  
 (Weighted Percentage Within Age Group)



## Physical Activity

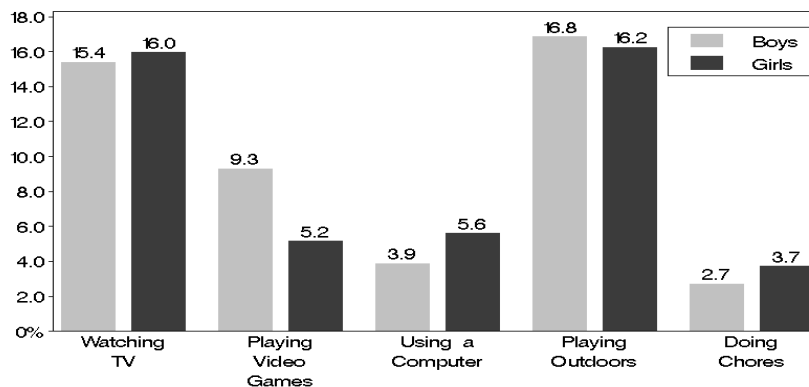
Current research provides overwhelming evidence of the health benefits of physical activity, particularly during childhood (Health Canada, 2004). This is especially important for First Nations children, many of whom have a body mass index which places them at risk for health conditions like diabetes. When asked, 47 per cent of Mi'kmaq parents and guardians indicated that their children are physically active every day, with an additional 31 per cent reporting physical activity between 2 – 6 times per week (Chart 3.24).

**Chart 3.24**  
**Participation in Physical Activity**  
 (Weighted Percentage)



Playing outdoors takes up the most hours each week, on average, but it is followed closely by watching television and other sedentary activities like playing video games or using a computer, Chart 3.25 reveals that Mi'kmaq children engage in these activities an average of 27 to 28 hours per week. There are also some gender differences

**CHART 3.25**  
**Time Spent on Selected Activities**  
 (Weighted Mean Hours/Week Within Gender)

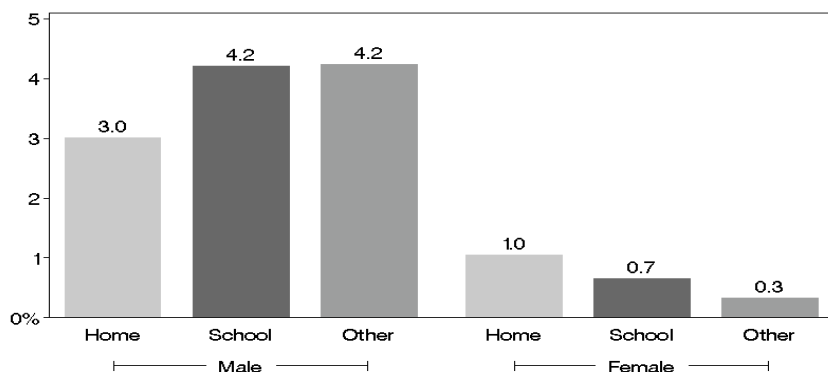


The survey also provides some data on activity limitations due to a physical or mental condition or health problem. While the cause is unclear, Chart 3.26 reveals that boys are much more likely to experience activity limitations at school, home and other situations than girls. The numbers may reflect the higher incidence of injuries and chronic health conditions which boys experience.

**Chart 3.26**

**Activity Limitations at Home, School, and Other Situations**

(Weighted Percentage Within Gender)



**Dental Health**

Dental health among First Nations people has become an area of focus within the past few years. When asked to comment on the dental health of their children, the parents and guardians in this survey indicated that baby bottle tooth decay is or has been a concern for 18 per cent of Mi’kmaq children, 81 per cent of whom have been treated for this condition. At the time of the survey, almost half of the children had received dental care within the past six months, yet many still required a variety of dental treatments, as revealed in Chart 3.27

**Chart 3.27**

**Type of Dental Care Needed**

(Weighted Percentage)

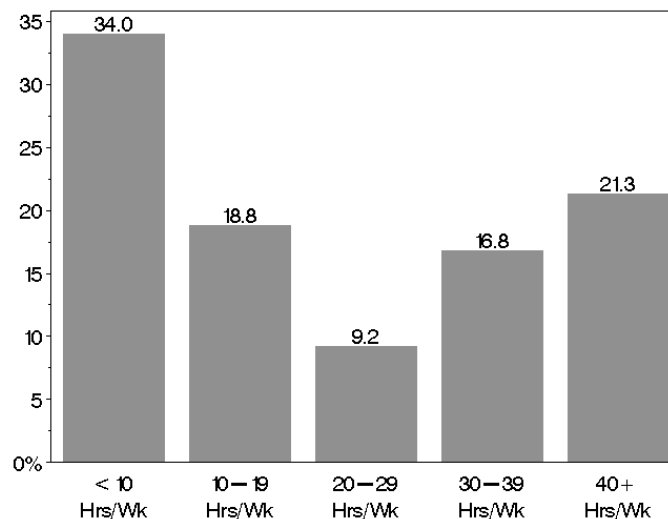
Type of Work Needed	Weighted Percentage
Maintenance	46.0%
Cavities Filled	20.9%
Fluoride Treatment	9.4%
Extractions	5.2%
Orthodontic Work	2.4%
Urgent	2.1%
Prosthetics	0.1%

A holistic view of health includes social well being as well as physical, mental, emotional and spiritual health. Parents and guardians were asked a number of questions that relate to children’s social well being and relationships.

## Child Care

Child care can have an important influence on children’s social development, particularly if they have an opportunity to interact with other children and build social skills (Howes & James, 2002). Parents and guardians were asked to describe how many hours children spent in child care as well as who cared for their child or children. With about 44 per cent of parents working outside the home (as indicated in Chart 5.13 in the chapter on adult health), approximately 33 per cent of Mi’kmaq children currently attend child care (meaning someone other than their parent or guardian is looking after them). Of these children, 47 per cent are spending 20 hours or more per week in the care of someone other than their parent or guardian (Chart 3.28)<sup>10</sup>. The majority of children are cared for in their own home or in the home of a relative, which may have additional benefits (Rusby, Taylor, & Marquez, 2004). Maintaining a close connection to family is an important part of Mi’kmaq culture and benefits children’s social well being (Paul, 2000).

**Chart 3.28**  
**Time Spent in Childcare**  
(Weighted Percentage)



## Academic Activities

The Aboriginal Head Start Program began in 1995 and, provides early educational opportunities to 3,000 – 4,000 Aboriginal children every year on a national basis (Pearson, 2005). According to the parents and guardians of the children in our Nova Scotia study, 37 per cent of their children had attended or were attending Aboriginal Head Start at the time of the survey.

Along with physical and social activities, children benefit from academic activities that contribute to their intellectual development. This component of mental health was measured by asking parents and guardians questions about children’s attendance and performance in school, as well as the extent to which they read for fun (84 per cent read for fun at least once a week –

<sup>10</sup> Chart 3.26 reports on the time spent in child care among children receiving child care. Of the latter group, missing cases account for 16 per cent of the total.

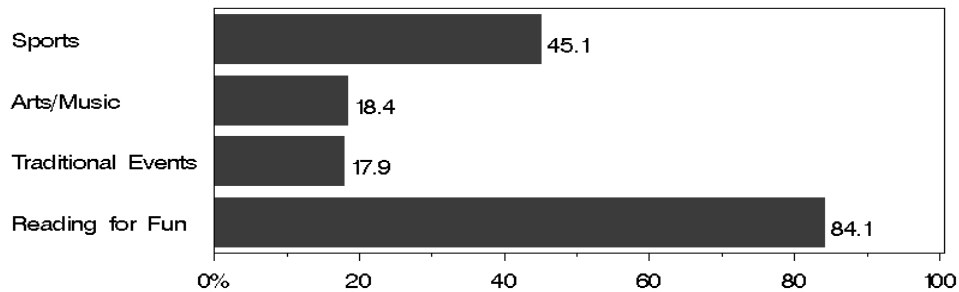
Chart 3.29). These questions were only asked for children who are old enough to attend school. The findings also revealed that 16 per cent of Mi'kmaq children currently attending school have had to repeat a grade.

### Social Activities

Participation in social activities has been shown to positively influence emotional well-being and enhance children's social skills and development (Kinard, 2002). According to the survey results, Mi'kmaq children engage in a variety of social activities, including sports, arts/music, and traditional events (Chart 3.29). Many children spend a considerable amount of time in these activities.<sup>11</sup>

**Chart 3.29**

**Participation in Social Activity**  
(Weighted Percentage)



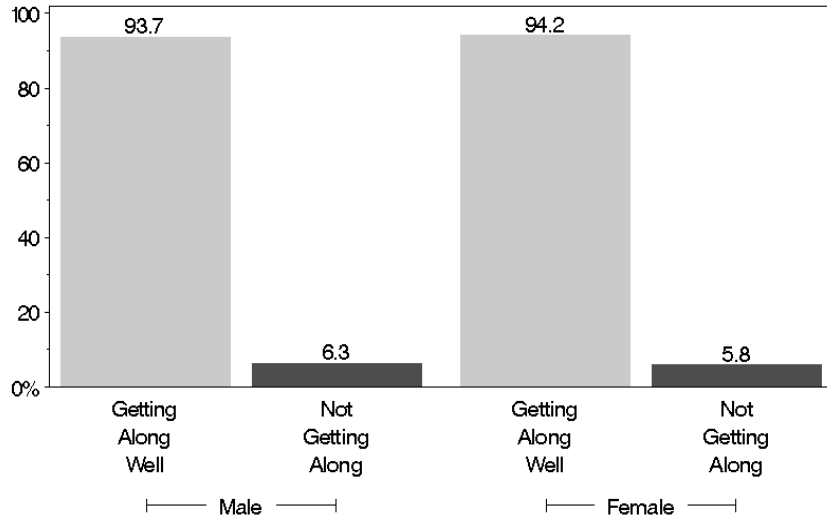
### Getting Along with Family

Emotional and social well being was also measured by asking parents and guardians how well children were getting along with others. As indicated in Chart 3.30, there is a no difference in the degree to which boys and girls get along with their family. However, more boys than girls are reported to experience emotional or behavioural problems (17 per cent versus 11 per cent).

---

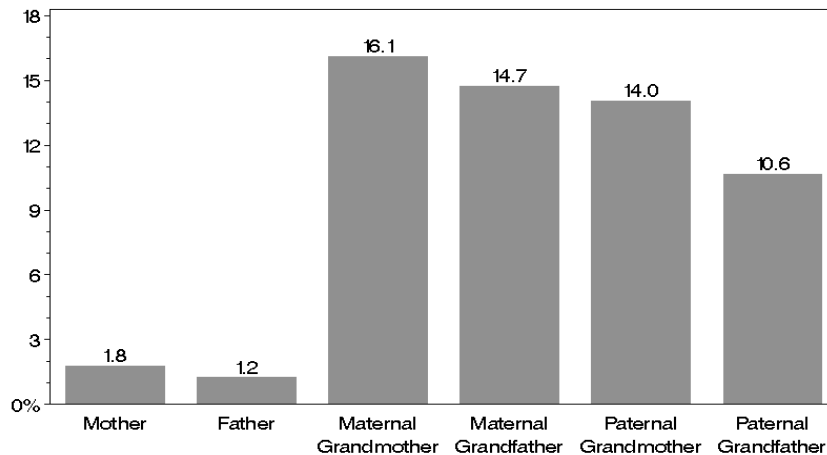
<sup>11</sup> The percentages reveal any amount of participation by the children, from “less than once a week” to “4+ times per week.”

**Chart 3.30**  
**Getting Along With Family**  
 (Weighted Percentage Within Gender)



It has been well documented that historic trauma, caused by attendance at residential school, can have a profound impact on the emotional well being of entire families for many generations (Knockwood, 1992). In order to gauge the extent to which these experiences might have influenced the lives of Mi'kmaq children, parents and guardians were asked if anyone in the child's family had attended residential school. Chart 3.31 reveals that few of the children had mothers or fathers who have attended residential school (because the parents would have been too young) but between 11 and 16 per cent of Mi'kmaq children have one or more grandparents who have attended residential school.

**Chart 3.31**  
**Parent or Guardian Attended Residential Schools**  
 (Weighted Percentage Within Each Category)



### Issues Affecting Well-Being and Access Barriers

Parents and guardians were asked to identify some of the issues affecting their children's well-being as well as some of the barriers they face in obtaining health care for their children. Chart 3.32 reveals a number of issues related to individual, community, and social determinants that affect the well being of Mi'kmaq children<sup>12</sup>. The most prominent issues appear to be the lack of activities for children, the misuse of drugs and alcohol, and insufficient exposure to traditional knowledge and activities.

**Chart 3.32**  
**Issues Affecting Child's Well-Being**  
(Weighted Percentage)

<b>Issue</b>	<b>Weighted Percentage</b>
Activities for Children	14.1%
Drugs and Alcohol	10.3%
Traditional Knowledge and Activities	4.7%
Bullying	3.3%
Nutrition and Food Security	2.4%
Recreation Facilities	2.4%
Behavioural Issues	1.8%

When asked to identify the barriers they face in obtaining health care for their children, parents and guardians revealed that long waiting lists, transportation issues, lack of health professionals and health services, and lack of coverage by Non-Insured Health Benefits are the most common barriers (Chart 3.33). A smaller proportion of people identified barriers related to inadequate or culturally inappropriate health care, among other barriers.

---

<sup>12</sup> This was the last question in the child's questionnaire and took the form of providing an opportunity to write in a response about any other issues affecting the well-being of children in the community. Fifty-six per cent chose to take advantage of this opportunity.

**Chart 3.33**  
**Barriers to Receiving Health Care**  
 (Weighted Percentage)

Type of Barrier	Weighted Percentage
Waiting List Too Long	37.7%
No Transportation	15.9%
Transportation Costs	11.7%
Doctor/Nurse Not Available	10.6%
Health Facility Not Available	8.8%
Not Covered By NIHB	8.7%
Health Care Inadequate	7.8%
Culturally Inappropriate	7.4%
Childcare Costs	7.2%
Service Was Not Available	7.0%
No Access to Traditional Care	6.1%
Chose Not To Seek Healthcare	5.7%
Cost Of Care, Service	5.6%
NIHB Approval Denied	4.5%

**Conclusion to the Chapter on Children**

Socio-economic status is among the most important determinants of health (Bartley, 2004), and these results confirm other statistics, which reveal the disparities in socio-economic status between First Nations and non-Aboriginal children (National Aboriginal Health Organization, 2005). The literature indicates that these disparities have a dramatic impact on the health of Mi’kmaq children and influence many other aspects of their lives.

Prenatal smoking, birth weight, and breastfeeding are important components of early child development and the maintenance of good health throughout life. The evidence is clear that smoking during pregnancy affects fetal growth by constricting fetal blood flow, reducing nutrient and oxygen transfer, and reducing nutrient metabolism (Health Canada, 1999). Unfortunately, prenatal smoking rates have not decreased among Mi’kmaq women over the past five years and they remain higher than other First Nations and non-Aboriginal women. In the absence of actual birth weights, it is difficult to determine whether parents’ or guardians’ perceptions of birth weight are accurate. However, compared to other First Nations and non-Aboriginal children, Mi’kmaq children appear to be born with higher birth weights, indicating that gestational diabetes may be an issue of some concern for Mi’kmaq women. Although the percentage of Mi’kmaq women who are



breastfeeding has increased since 1997, still breastfeeding rates and duration among Mi'kmaq women remain well below national averages for non-Aboriginal women.

Overall, Mi'kmaq children's health is rated as very good or excellent by their parents or guardians. However, there are a number of situations and events that might contribute to the health conditions most frequently affecting Mi'kmaq children. For example, high rates of mould and mildew in on-reserve homes, as well as smoking in the home, are reported in the adults section of this report. These situations have been shown to increase the risk that children will develop and suffer more from asthma, allergies, bronchitis, and ear infections (Livingston, Thomson, & Chalmers, 2005; Dales, Burnett, & Zwanenburg, 1991)). Although these health conditions are not always severe or debilitating, they do impact children's nutritional health, their physical and leisure activities, and their learning, all of which directly influence their overall health (Brunekreef and Forsberg, 2005).

High body mass, poor nutrition and dental health, sedentary leisure activities, and limitations to physical activities among Mi'kmaq children appear to be areas of concern. Obesity and limited physical activity have implications for the additional risk that obesity in childhood presents for developing diabetes during adolescence or adulthood.

Academic activities, getting along with family, and involvement in traditional events appear to represent resources that enhance the social well being and emotional health of Mi'kmaq children. However, limited resources and barriers exist that create challenges for parents and guardians to support the health and development of their children.

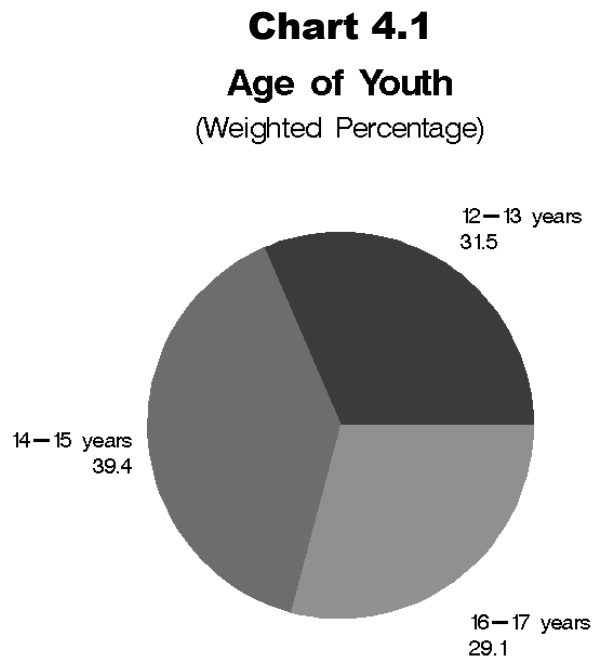
## Chapter Four: The Health of Mi'kmaq Youth

As with children and adults, the sample of youth was drawn randomly from the Band membership lists. In the 13 communities taken together, this resulted in a sample of 455 youth. We were successful in having 282 complete the questionnaire, thereby reaching 62 per cent of the target. Our definition of “youth” included those 12 years of age and over, up to but not including 18 years of age.

Our methodology for having participants respond to the questionnaires differed somewhat for each of the age groups. For children under 12 years of age, as we noted in the last chapter, we had their parent or guardian complete the questionnaire on behalf of the child. For youth, we encouraged them to complete the questionnaire themselves on the laptop rather than being interviewed by someone else. We took this approach because of the sensitivity of some of the questions that were being asked, wanting to provide an environment of security so that they would feel comfortable in providing frank and honest answers. The interviewer was, however, available to answer questions when needed. Once the questionnaire was completed, it was uploaded electronically to Ottawa for integration into the Nova Scotia and national data bases.

### Personal Background Information

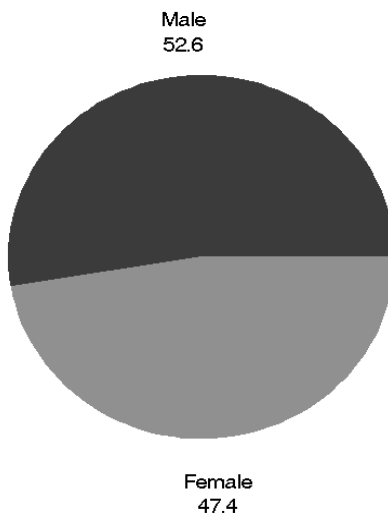
As the following chart reveals, we have a good representation of youth in all the ages between 12 and 18 (Chart 4.1)<sup>13</sup>.



<sup>13</sup> The reader is reminded that, with the exception of Chart 4.3, all other charts in this chapter report weighted results for the Mi'kmaq population as a whole and not simply results based on sample numbers.

There is also a good balance between male and female youth, with the chart showing a somewhat higher proportion of males on reserve compared to females (Chart 4.2). This is consistent with the results for adults as we shall see in the next chapter.

**Chart 4.2**  
**Gender**  
 (Weighted Percentage)



As with the children, all 13 communities are represented in the youth sample with the largest number coming from Eskasoni (Chart 4.3).

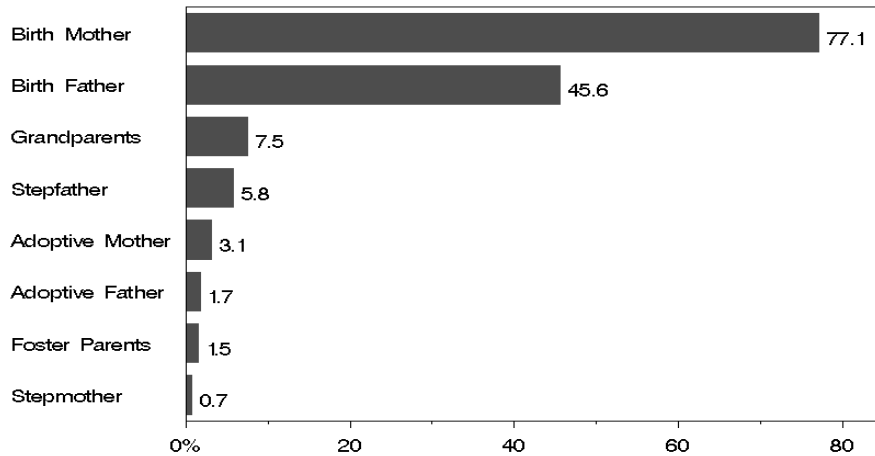
**Chart 4.3**  
**Youth Respondents by Community of Residence**  
 (Actual Number of Cases)

Acadia	4	Membertou	34
Afton	33	Millbrook	30
Annapolis Valley	2	Pictou Landing	6
Bear River	6	Shubenacadie	23
Chapel Island	27	Wagmatcook	16
Eskasoni	65	Whycocomagh	35
Horton	1		

Youth were asked who they lived with most of the time, and were given a long list of possibilities. They could also choose more than one option, which explains why the percentages in the following chart exceed 100 per cent. While it is a bit difficult to interpret this table, it is clear that more than three-quarters of the youth say they live with their biological (birth) mother,

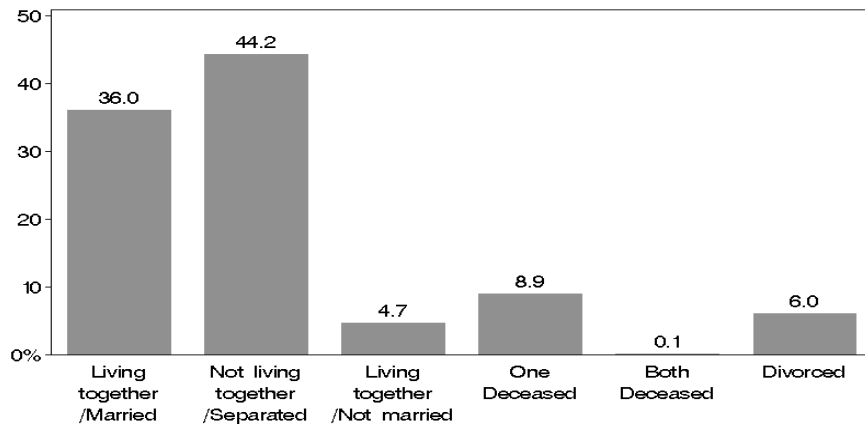
and just under a half with their biological father. These categories are not mutually exclusive, so one presumes that most of those who live with their father are also living with their mothers. What is also interesting is the fairly high proportion of youth who live most of the time with others, such as grandparents, stepfathers, and adoptive parents (Chart 4.4).

**Chart 4.4**  
**Who the Youth Resides With**  
 (Weighted Percentage)



More clarity about the status of the birth parents is found in the following chart, which suggests that just over 40 per cent of the youth report that their biological parents are living together and typically are married. This leaves a majority of the youth with birth parents who are not living together or who may be deceased or divorced (Chart 4.5).

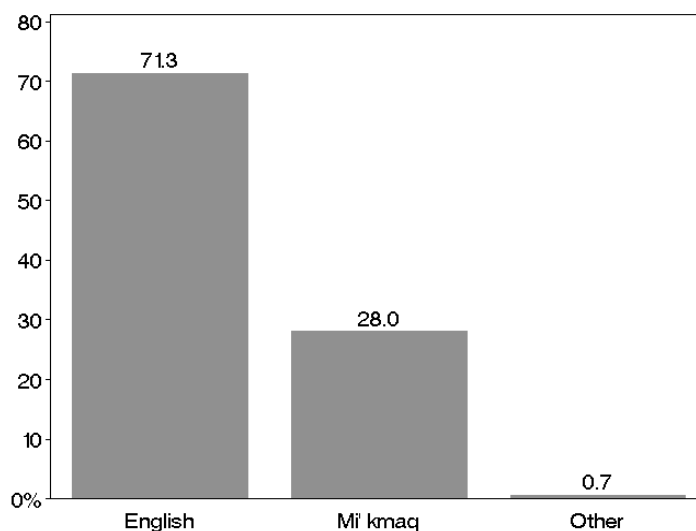
**Chart 4.5**  
**Status of Birth Parents**  
 (Weighted Percentage)



**Language and Traditional Culture**

Almost three-quarters of Mi'kmaq youth living on reserve use the English language most often in daily life, with only 28 per cent using Mi'kmaq (Chart 4.6). This stands in contrast to Mi'kmaq adults, as we shall see in the next chapter, among whom 44 per cent claim to use Mi'kmaq most often. The drop-off in Mi'kmaq language use among youth adds additional fuel to the concern about the loss of the traditional language, although it should be noted that in our 1997 survey, only 22 per cent of youth gave Mi'kmaq as the language they used most often in daily life<sup>14</sup>. Perhaps the language programs that have been introduced in schools, especially in on-reserve schools, are having an impact.

**Chart 4.6**  
**Language Used Most Often**  
(Weighted Percentage)

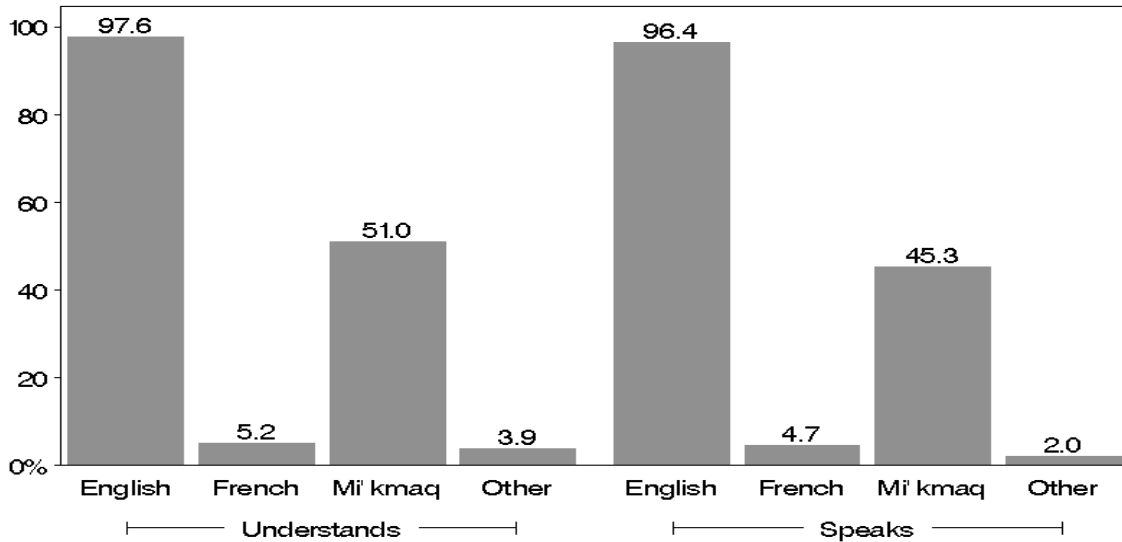


Consistent with this finding is the result that virtually all Mi'kmaq youth understand and speak English fluently or relatively well (Chart 4.7). About half say they understand the Mi'kmaq language and some 45 per cent say they are able to speak it, fluently or relatively well. These averages for the province as a whole hide considerable variation in Mi'kmaq language competence, especially between Cape Breton, where levels are relatively high, and the Mainland.

---

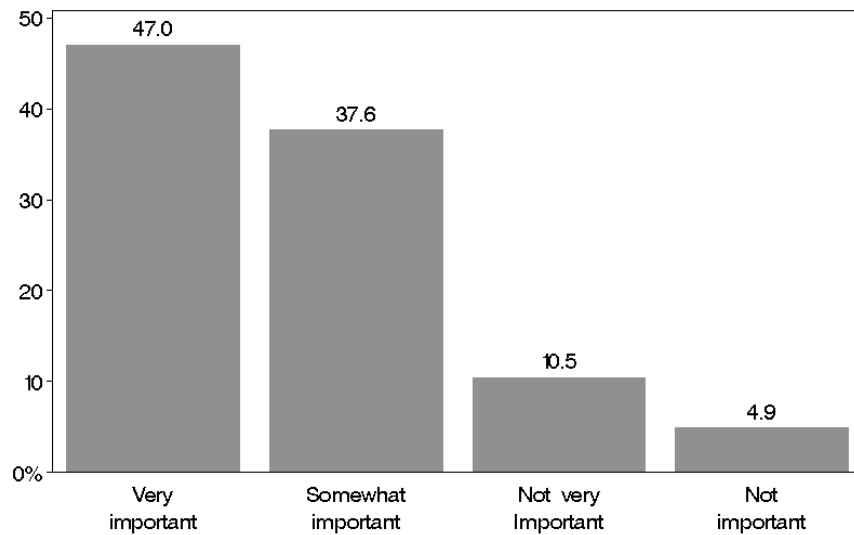
<sup>14</sup> Unless otherwise noted in this chapter, figures comparing our results with First Nations in Canada are taken from the First Nations Regional Longitudinal Health Survey 2002/03 compiled by the National Aboriginal Health Organization (2005). Figures for the Nova Scotia population were collected in 2003 by the Canadian Community Health Survey, Cycle 2.1, and compiled by the Nova Scotia Department of Health (2005). In this and other chapters, data on the health of the Nova Scotia Mi'kmaq population in 1997 is taken from the Mi'kmaq Health Research Group (1999).

**Chart 4.7**  
**Languages the Youth Understands or Speaks**  
 (Weighted Percentage)

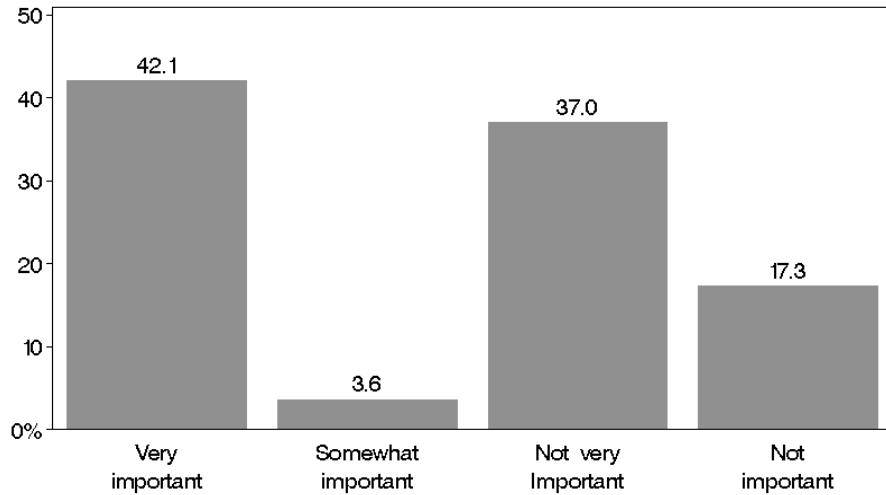


A large majority of youth – some 85 per cent -- indicate that it is either very or somewhat important for them to speak their own language (Chart 4.8). Just under half (46 per cent) are of the view that traditional cultural events are either very or somewhat important in their lives (Chart 4.9).

**Chart 4.8**  
**Importance Of Speaking First Nations Language**  
 (Weighted Percentage)

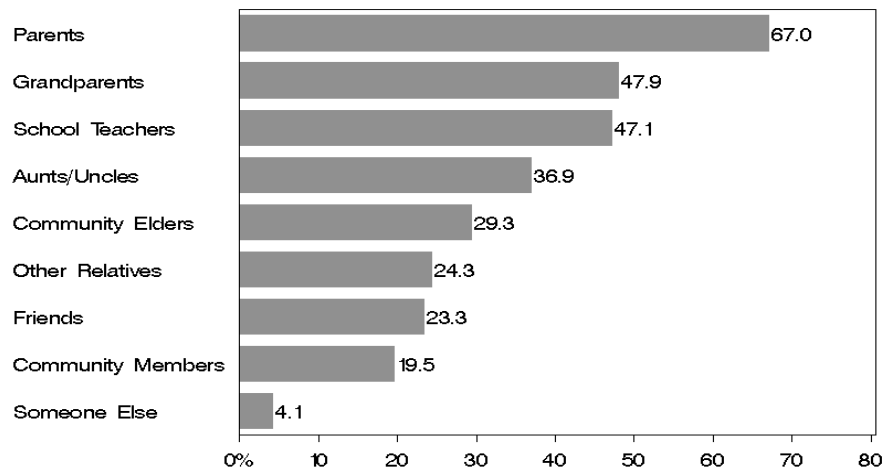


**Chart 4.9**  
**Importance of Traditional Cultural Events**  
**in the Youth's Life**  
 (Weighted Percentage)



Parents are most frequently mentioned among those who help youth understand their culture, but grandparents, schoolteachers, aunts and uncles, and community elders are also important in this regard (Chart 4.10).

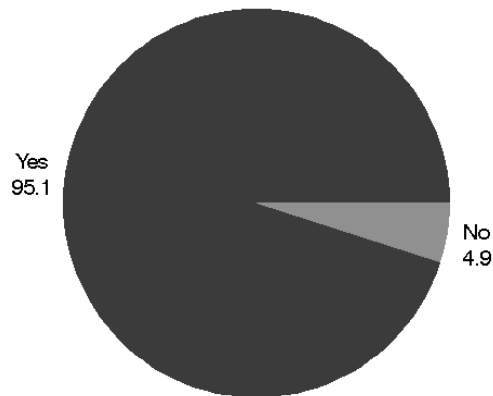
**Chart 4.10**  
**Who Helps the Youth Understand His/Her Culture?**  
 (Weighted Percentage)



## Education

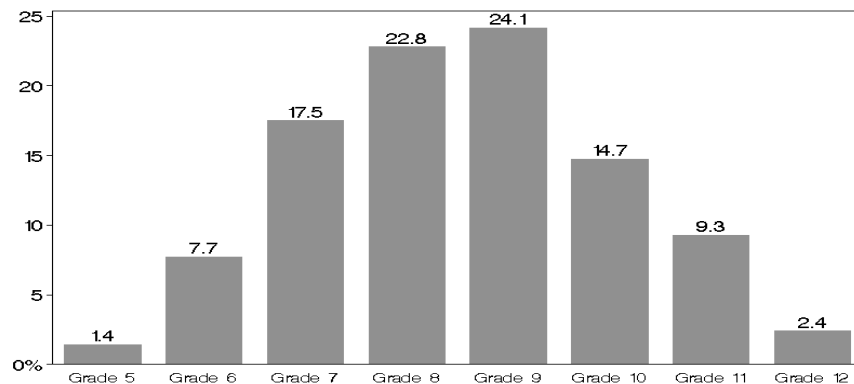
Not surprisingly, virtually all of the youth were attending school at the time of the survey although there were a few, presumably among the older youth, who were no longer doing so (Chart 4.11).

**Chart 4.11**  
**Currently Attending School**  
(Weighted Percentage)



The chart describing their current school grade is interesting and needs to be considered in relation to the ages of the youth represented in the study. There are few youth in the early grades (5 and 6) because the youth sample begins with children aged 12 or higher, and many of these young persons would have reached higher grades in school. At the other end, part of the explanation for few of the youth being found in grades 11 and 12 probably has to do with early school leaving as students get closer to 18 years of age (Chart 4.12). Some of the youth may in fact have graduated by the time they reach 18 years of age. The chart showing age distribution (chart 4.1) also shows that there are slightly more 14-15 year olds in the population and this would also swell the numbers in the middle grades.

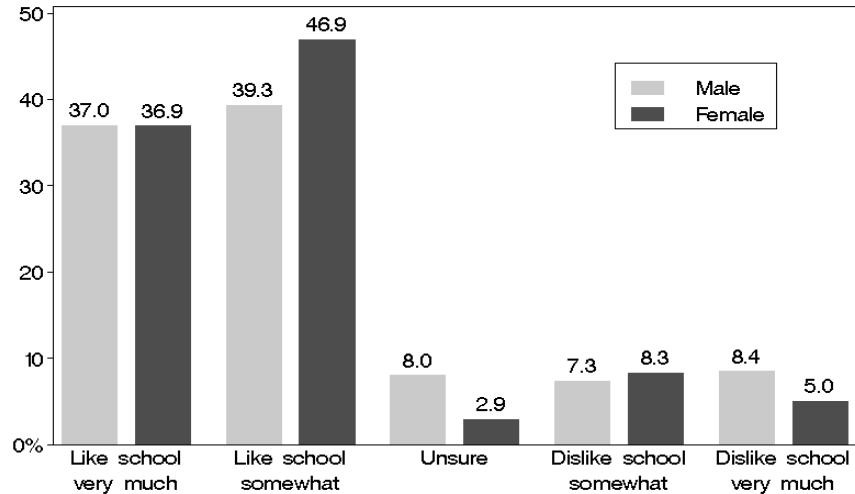
**Chart 4.12**  
**School Grades Currently Attending**  
(Weighted Percentage)





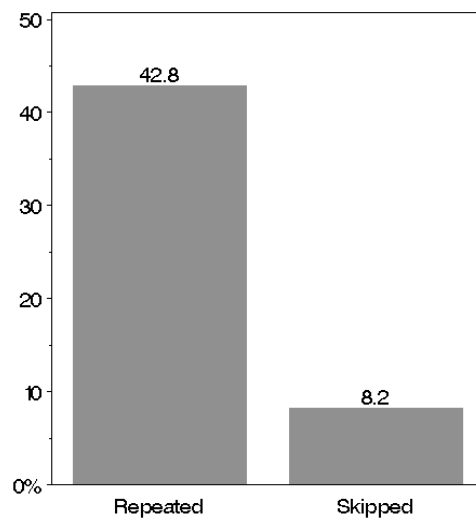
In any event, about 80 per cent of the students say they like school very much or somewhat, with young women tending to be more positive. The rest are unsure about school or have varying degrees of dislike for the experience (Chart 4.13).

**Chart 4.13**  
**Feelings about School**  
 (Weighted Percentage Within Gender)



A surprisingly high percentage of the youth say they have repeated a grade – some 43 per cent are in this category – while 8 per cent say they have skipped a grade (Chart 4.14).

**Chart 4.14**  
**Grades Skipped or Repeated**  
 (Weighted Percentage)

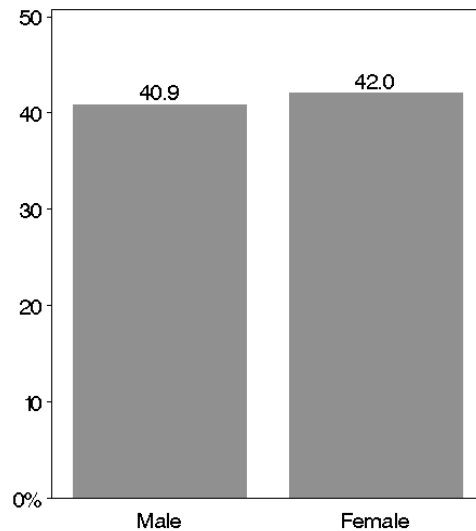


The high proportion of youth having to repeat a grade is made more understandable by data presented in the following two charts. The first shows that a percentage similar to those who have repeated a grade (that is, around 41 per cent) of the youth say that they are having learning problems at school (Chart 4.15), and they go on to specify just what kinds of problems they are experiencing (Chart 4.16).

**Chart 4.15**

**Youth Having Problems Learning in School**

(Weighted Percentage Within Gender)



There are strong gender differences here. Among male youth, problems with too many distractions, reading, math, writing and having a short attention span are the most prominent difficulties raised. Among female youth, by far the most frequent issue arises with mathematics, followed by distractions and difficulty understanding the teacher<sup>15</sup>. For both males and females, the latter category may in part be a result of hearing difficulties brought about by chronic health conditions such as allergies and asthma.

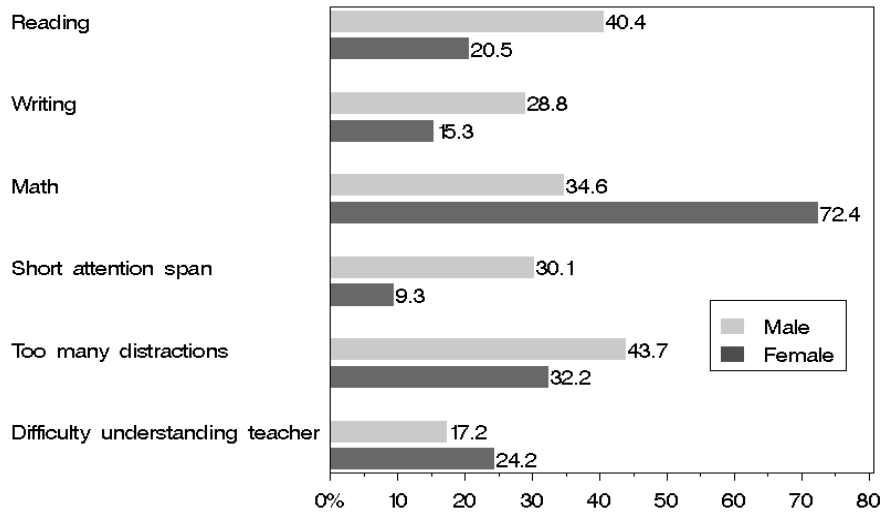
---

<sup>15</sup> These results are broadly similar to the findings of a study completed for Mi'kmaq Kina'matnewey, which assembled data from the vantage point of teachers and guidance counsellors in kindergarten, elementary and high schools. See Isabel den Heyer and Fred Wien (2001).

**Chart 4.16**

**Types of Problems Youth Have Learning**

(Weighted Percentage Within Gender)

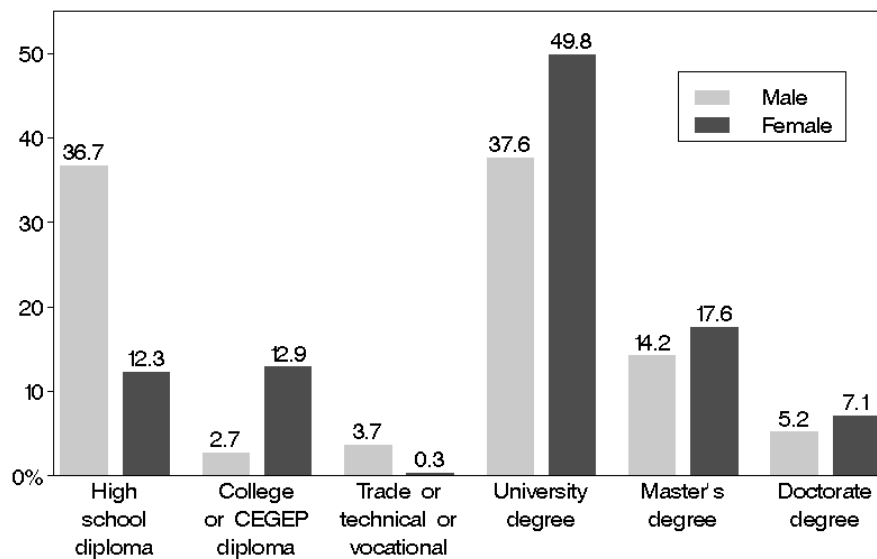


While some Mi'kmaq youth are struggling in school, there is nothing wrong with their educational aspirations. When asked what is the highest level of schooling they would like to complete, from 57 per cent of the male youth to 75 per cent of female youth aspire to complete at least a university degree or higher. At the other end of the spectrum, more than a third of male youth are prepared to settle for a high school diploma, compared to only 12 per cent of the females (Chart 4.17).

**Chart 4.17**

**Educational Aspirations**

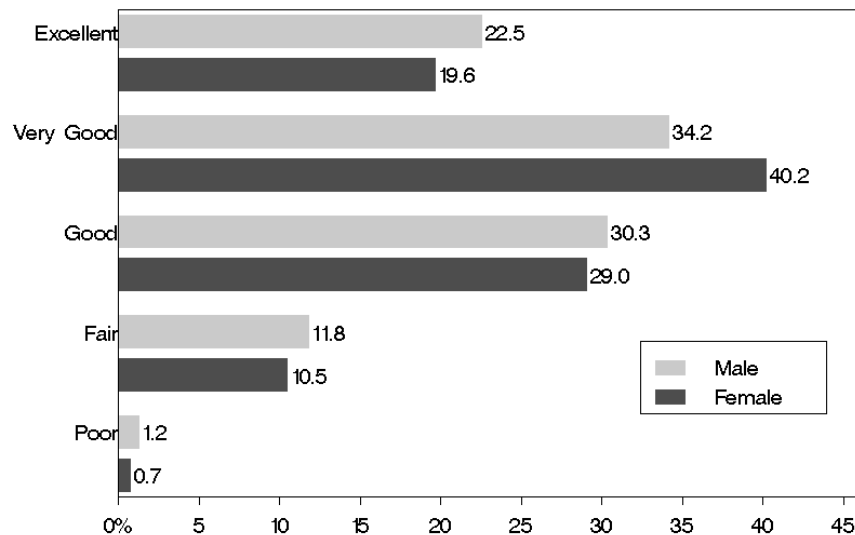
(Weighted Percentage Within Gender)



## General Health

We turn now to some results that are more specifically in the health domain. Short of a full-scale clinical examination, a question asking respondents to rate their own health is regarded as a reasonable proxy for describing health status. In answer to the question “In general, would you say that your health is...”, around 57 per cent of male and female youth claimed that their health was either in excellent or very good shape. This is a lower proportion than for children (reported at 82 per cent in the previous chapter) but higher than for adults, which is in the 41 to 46 per cent range. Most of the remaining youth said their health was good, but 11 to 13 per cent described it as being only fair or poor (Chart 4.18)<sup>16</sup>.

**Chart 4.18**  
**Self-Rating of Health**  
(Weighted Percentage Within Gender)



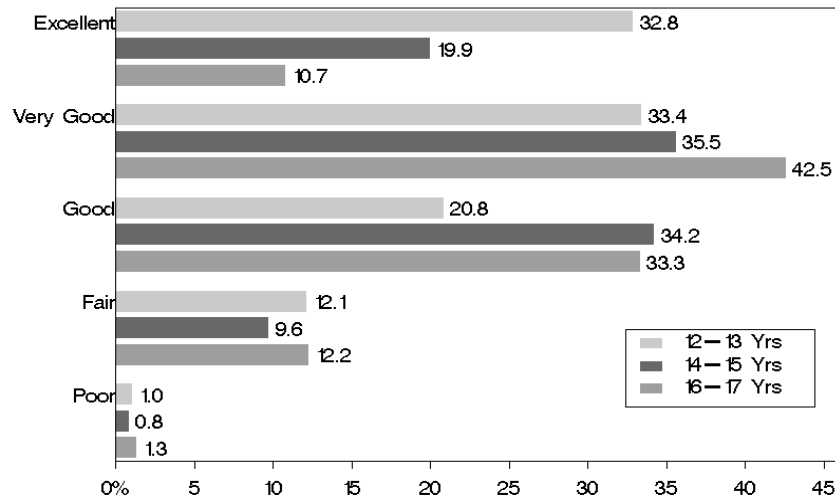
<sup>16</sup> This question was asked in 1997, but unfortunately did not use exactly the same response categories, making a comparison with 2002/03 hazardous.

Within the youth category, there is a slight tendency for those in the younger age grouping to report better health than do those in the middle and older youth ages, as shown in Chart 4.19.

**Chart 4.19**

**Self-Rating of Health**

(Weighted Percentage Within Age Group)

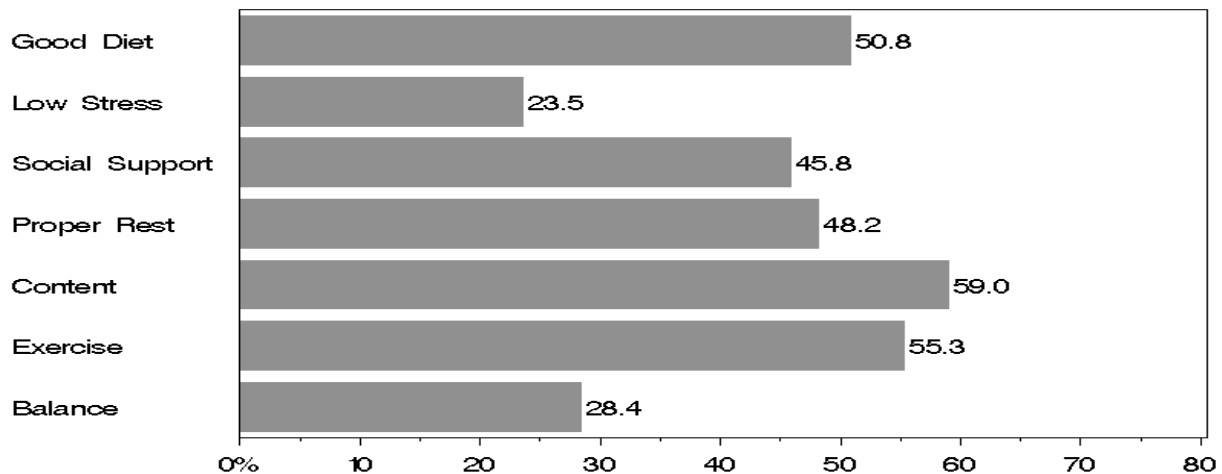


If youth responded that their health was either excellent or very good, they were then asked what things make them so healthy. Being happy or content and regular exercise (being active in sports) garnered the most responses, followed by having a good diet, getting proper rest and having good social supports (Chart 4.20). Differences by gender are not substantial except in the case of “being happy, content” which is a category more likely to be chosen by female youth.

**Chart 4.20**

**What Makes You So Healthy?**

(Weighted Percentage)

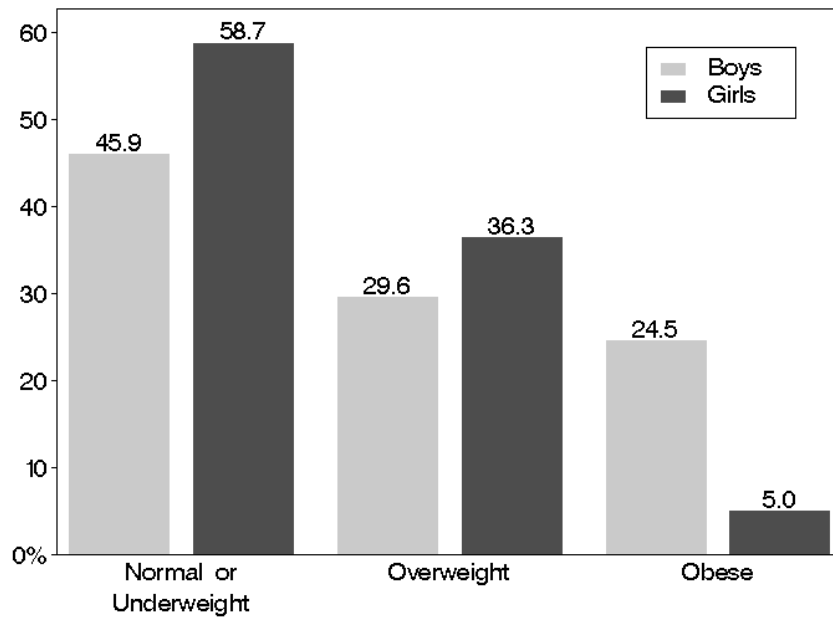


## Body Mass Index

As we did with children, we can use the body mass index to relate the height and weight of youth in a ratio that can be used to measure whether a person is within a normal weight range or not. The following are youth BMI charts based on ranges that are age and gender specific, as established by the National Aboriginal Health Organization (NAHO). All records with missing values for BMI are excluded. The charts are based on a sample of 201 youth ages 11-18<sup>17</sup>.

Table 4.21 shows that most Mi'kmaq youth are in the underweight or normal range, but around a third are overweight and an additional number – 25 per cent of boys and 5 per cent of girls -- are considered to be obese.

**Chart 4.21**  
**Body Mass Index**  
(Weighted Percentage Within Gender)

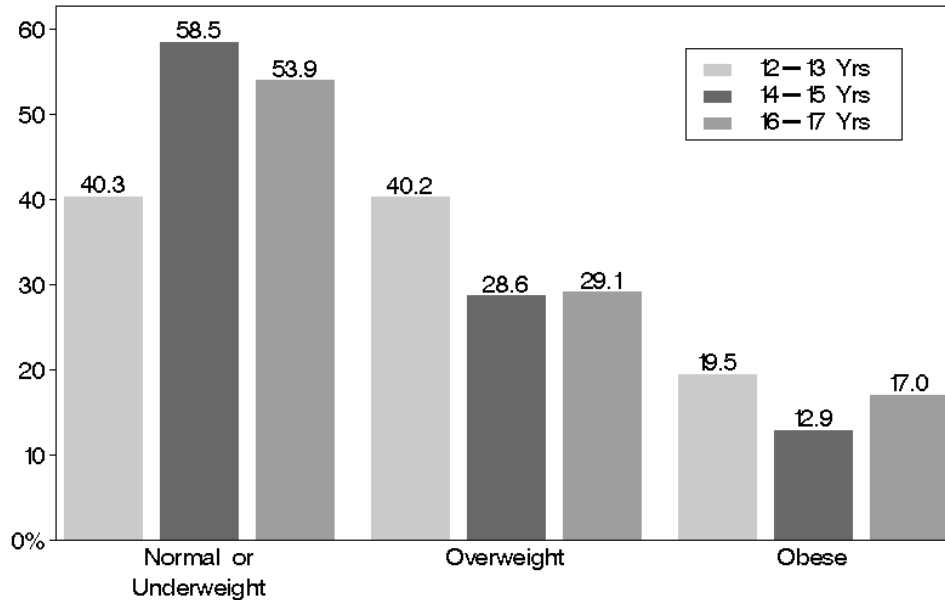


<sup>17</sup> The proportion of missing values is high at close to 30 per cent in both Chart 4.21 and 4.22.

When looking at BMI scores by age group (Chart 4.22), we note with concern that it is the youngest age group, those between 12-13 years, that seems to have the most difficulty with their weight. In this age group, 60 per cent are deemed to be overweight or obese.

**Chart 4.22**  
**Body Mass Index**

(Weighted Percentage Within Age Group)

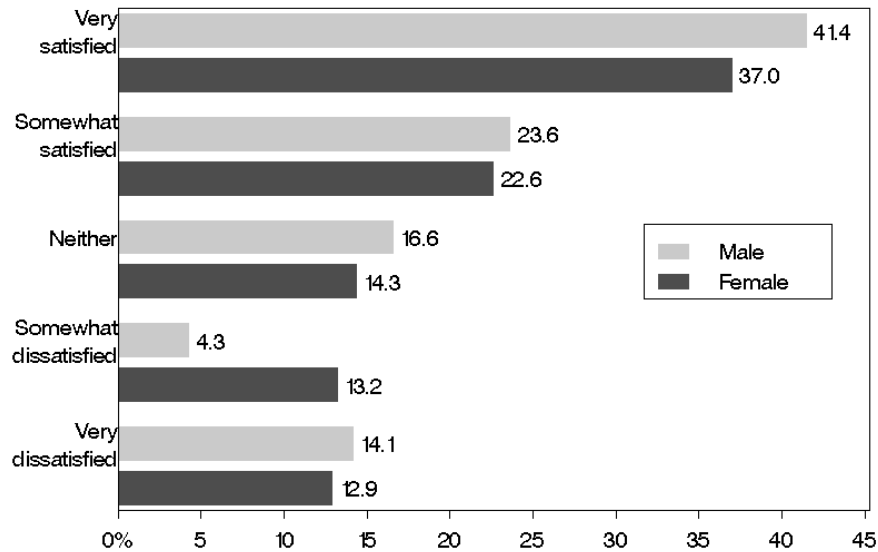


Most Mi'kmaq youth are satisfied with their weight, and this is more likely to be the case for males than for females although the difference by gender is not large. Between 18 and 26 per cent, and more likely female youth rather than males, express some measure of dissatisfaction with their weight (Chart 4.23).

**Chart 4.23**

**Satisfaction with Weight**

(Weighted Percentage Within Gender)



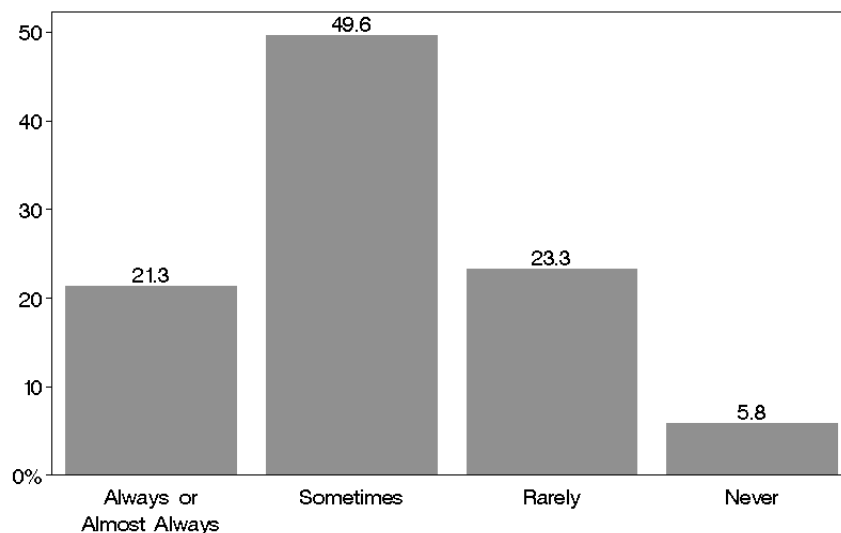
**Food and Nutrition**

Only 21 per cent of Mi'kmaq youth say that they eat a balanced, nutritious diet always or almost always. Another 50 per cent say this is sometimes the case, and the remainder (close to 30 per cent) are in the “rarely” or “never” category (Chart 4.24).

**Chart 4.24**

**Eating a Nutritious Balanced Diet**

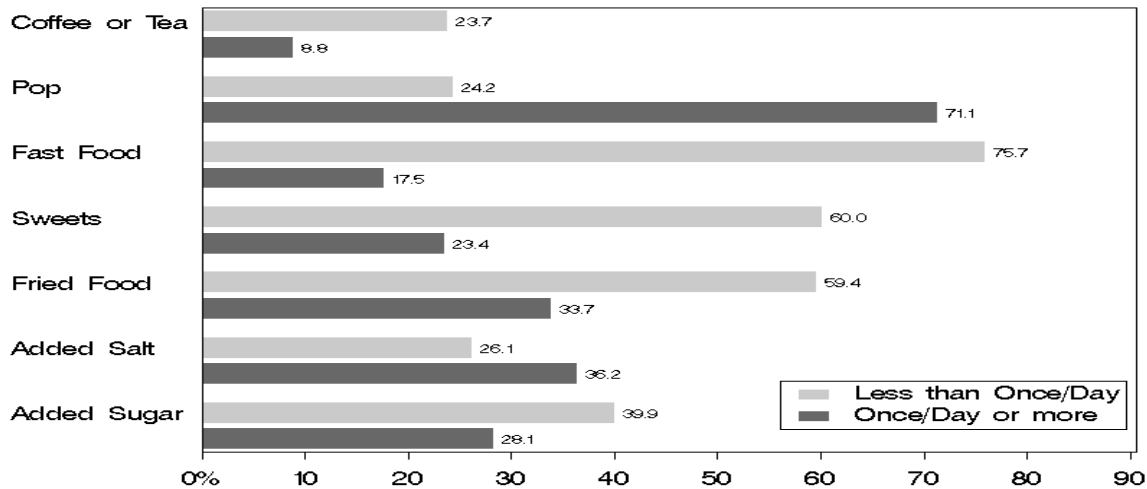
(Weighted Percentage)





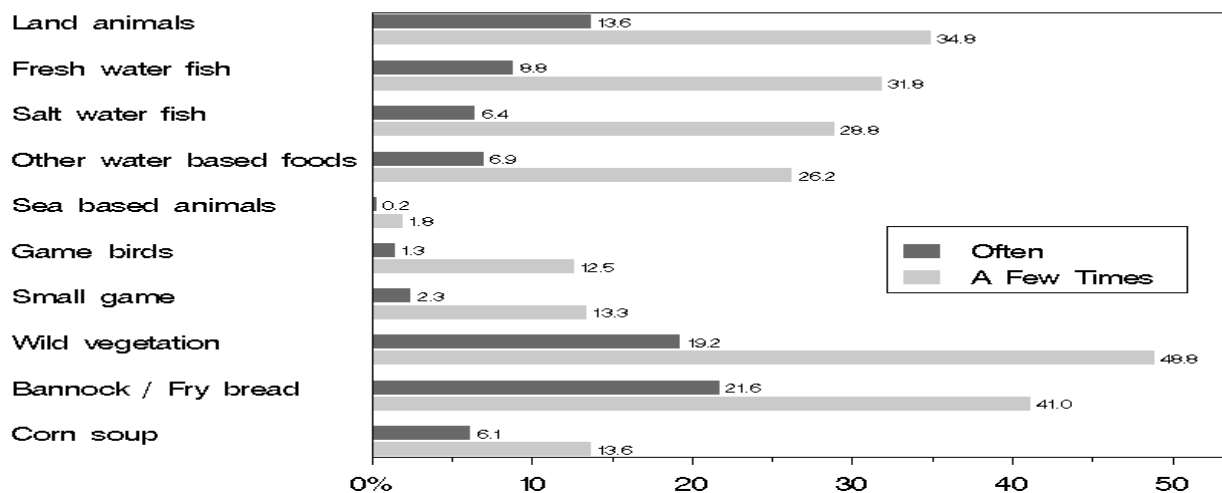
The main dietary culprits are soft drinks or pop, which 70 per cent take at least on a daily basis. Fast food, sweets and fried food are also consumed regularly by a large majority of the youth although not necessarily every day (Chart 4.25).

**Chart 4.25**  
**Eating Junk Foods**  
 (Weighted Percentage within Each Food)



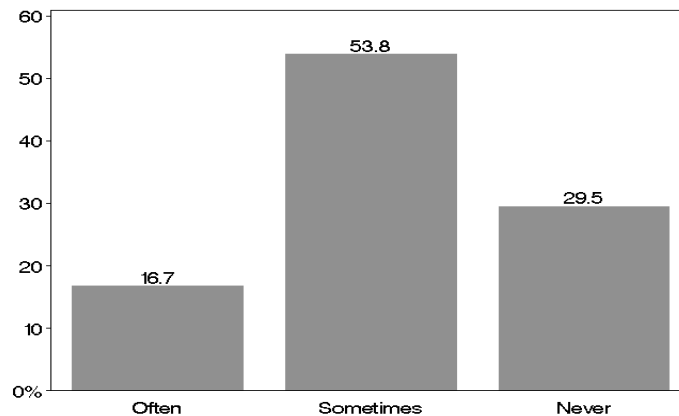
With respect to traditional foods, on the other hand, between half and two-thirds of the youth consume certain kinds of traditional foods at least a few times a year. Berries or other kinds of wild vegetation are the most common choice, followed by bannock or fry bread and land-based animals such as moose, caribou, bear or deer. Fresh and salt water fish, and other water-based foods such as eels or shell fish, are also mentioned fairly frequently (Chart 4.26).

**Chart 4.26**  
**Eating Traditional Foods**  
 (Weighted Percentage within Each Food)



The traditional custom of sharing traditional foods within the community is still alive. Seventeen per cent of the youth indicate that someone has shared traditional food with their household on a frequent basis in the past 12 months, and another 54 per cent indicate that this has occurred sometimes in the previous year (Chart 4.27)<sup>18</sup>.

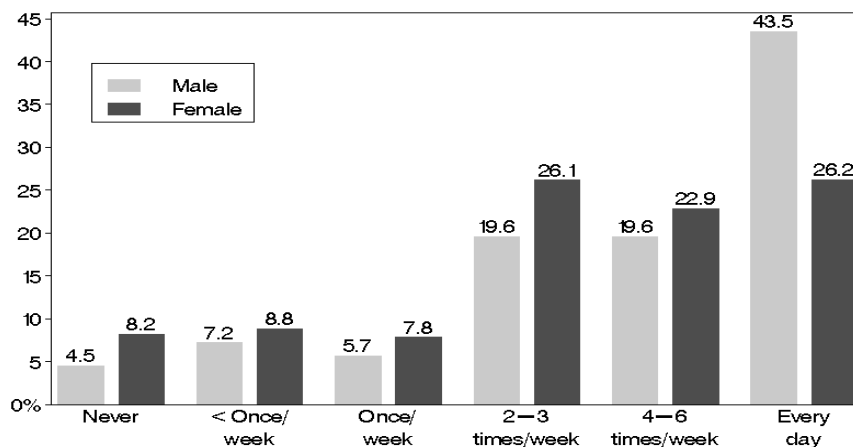
**Chart 4.27**  
**Sharing Traditional Food**  
 (Weighted Percentage)



**Physical Activity**

Quite a high percentage of youth, and especially males, say that they participate regularly in physical activity either at school, at home or in their free time. For males, the figures add up to over 80 per cent taking part in physical activities two or three times a week or more, compared to 75 per cent of the females (Chart 4.28).

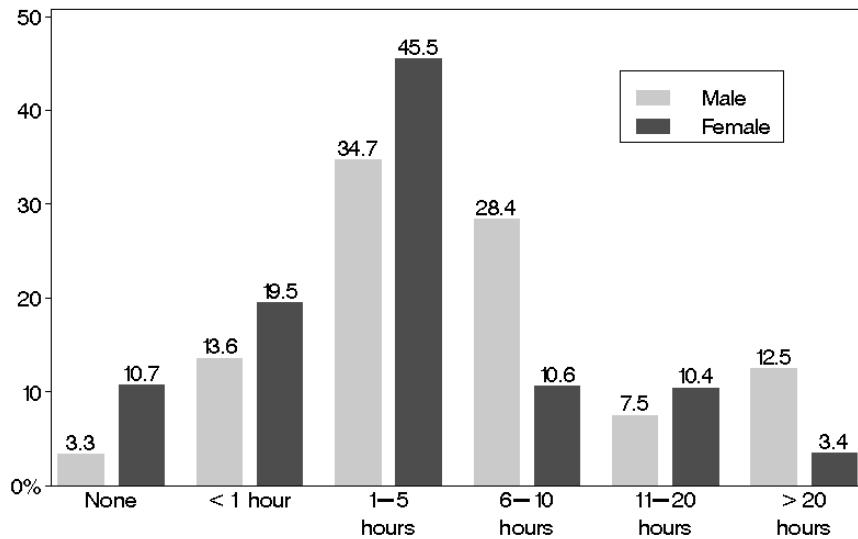
**Chart 4.28**  
**Participation in Physical Activity**  
 (Weighted Percentage Within Gender)



<sup>18</sup> The proportion of missing cases is 19 per cent.

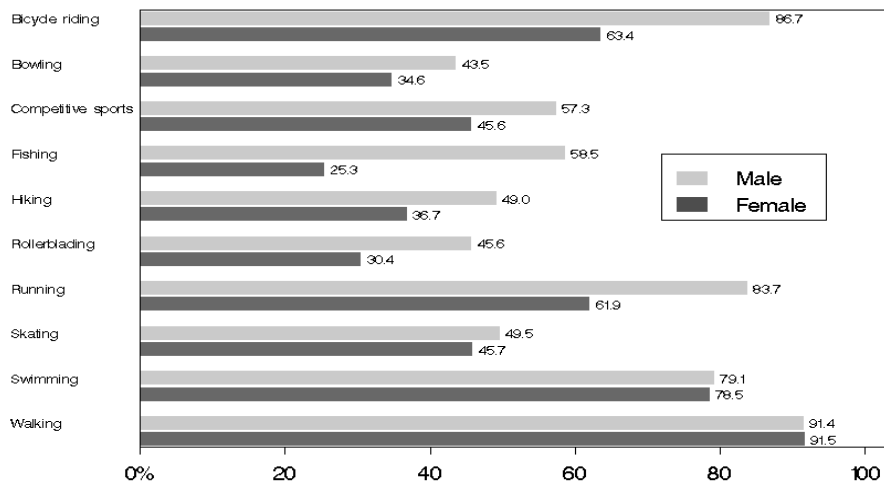
Male youth are also more likely than females to devote more time to physical activity, with almost half saying they spend 6-10 hours or more in physical activity that results in an increase in their heart rate or breathing. This compares to only 24 per cent of female youth (Chart 4.29).

**Chart 4.29**  
**Time Spent Doing Physical Activity**  
 (Weighted Percentage Within Gender)



An indication of the most common types of exercise in which youth participate is given in the following chart. Walking, swimming, running and bicycle riding are the most frequently mentioned categories, followed by fishing and competitive or group sports. The chart also reveals some gender differences, with female youth less active in almost all categories (Chart 4.30).

**Chart 4.30**  
**Types of Physical Activities**  
 (Top Ten Activities, Weighted Percentage Within Gender)



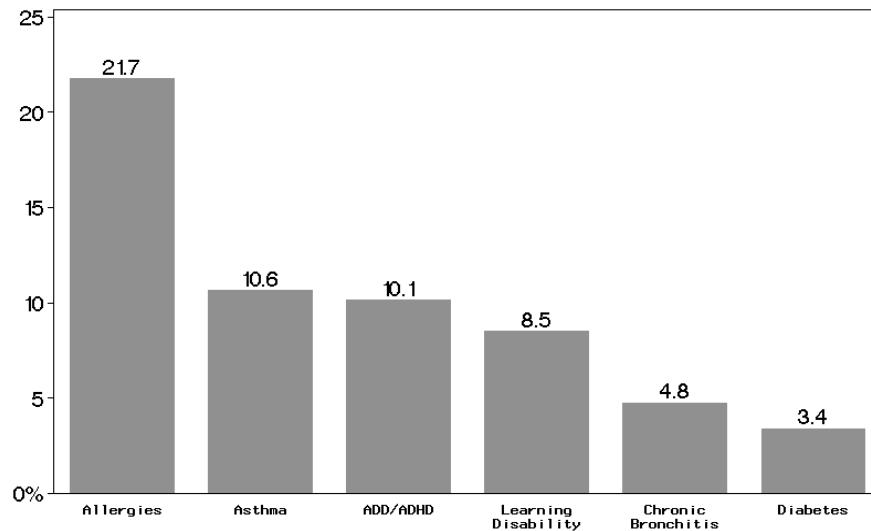
## Health Conditions

In the survey, Mi'kmaq youth were asked if they have been told by a health care professional that they have any of a long list of health conditions. Among male youth, allergies are most frequently mentioned, followed by asthma, attention deficit disorder, learning disabilities, chronic bronchitis and diabetes. In 1997, a similar proportion of male youth mentioned allergies, and asthma also figured prominently (more so than in 2002/03) but the high proportion of male youth with ear problems is not in evidence in the most recent survey. The 1997 survey also showed 29 per cent of the youth mentioning "learning difficulties" but in 2002/03 the wording of the condition changed to "learning disability", a more demanding and more narrowly defined category and, not surprisingly, this was chosen less frequently than in 1997 although it still figured among the most commonly cited health problems (Chart 4.31).

### Chart 4.31

#### Chronic Health Conditions: Male

(Weighted Percentage for the Six Most Frequently Reported Conditions)



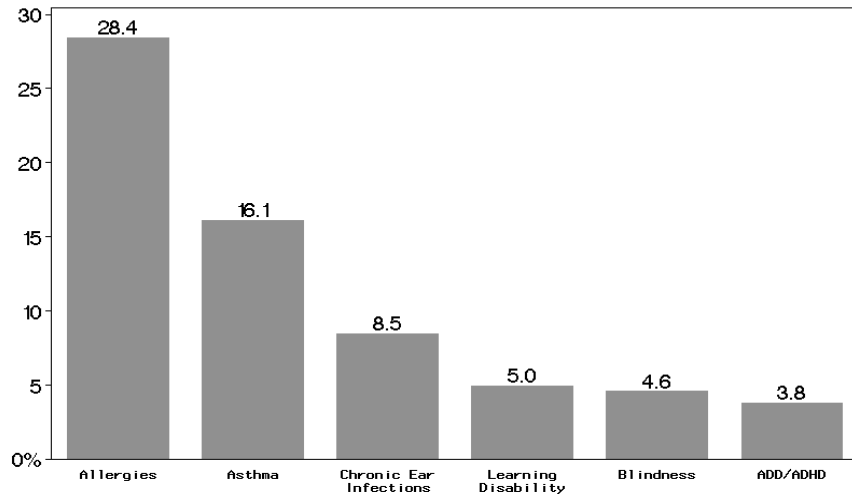
Among females, the top six health conditions were, in order of importance, allergies, asthma, chronic ear infections/problems, learning disabilities, blindness or other serious vision problems and attention deficit disorder. This list is similar to that of male youth. In comparison to 1997, the concern of female youth with being overweight does not arise because it was not a listed option in 2002/03. Asthma is also more important in 2002/03 (Chart 4.32).

In general, for both genders, the incidence of health conditions is lower by several percentage points in the more recent survey than it was in 1997.

### Chart 4.32

#### Chronic Health Conditions: Female

(Weighted Percentage for the Six Most Frequently Reported Conditions)

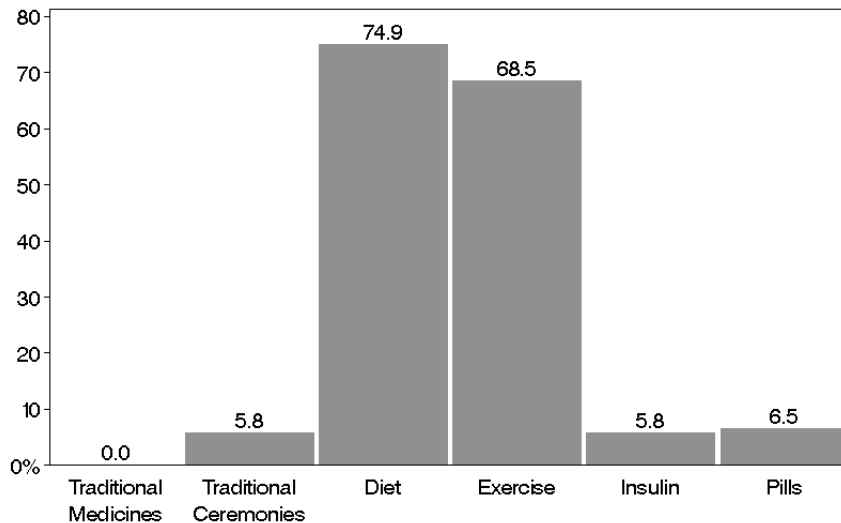


As Chart 4.33 reveals, by far the most important measures being used by the few youth who have diabetes to control the situation are diet and exercise.

### Chart 4.33

#### Measures Used To Control Diabetes

(Weighted Percentage)



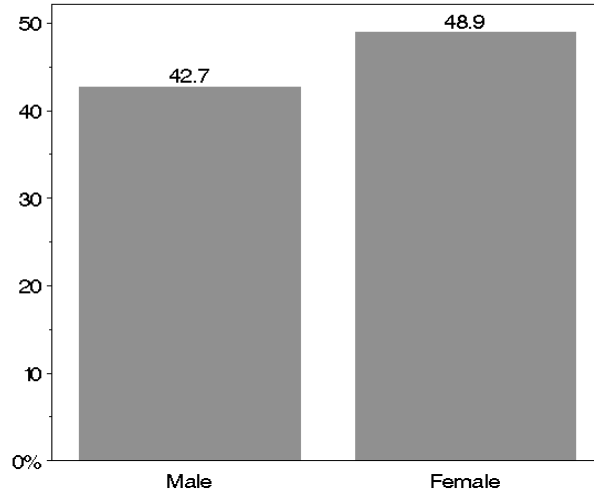
### Injuries

Injuries that require the attention of a health care professional continue to be an important health issue for Mi'kmaq youth. In 2002/03, 49 per cent of female youth and 43 per cent of male youth reported sustaining an injury defined in this way in the previous 12 months (Chart 4.34). While the level was similarly high in 1997, in that year it was male youth who were more likely to report being injured (47 per cent for males compared to 33 per cent for females).

### Chart 4.34

#### Injured At Least Once in Past 12 Months

(Weighted Percentage Within Gender)

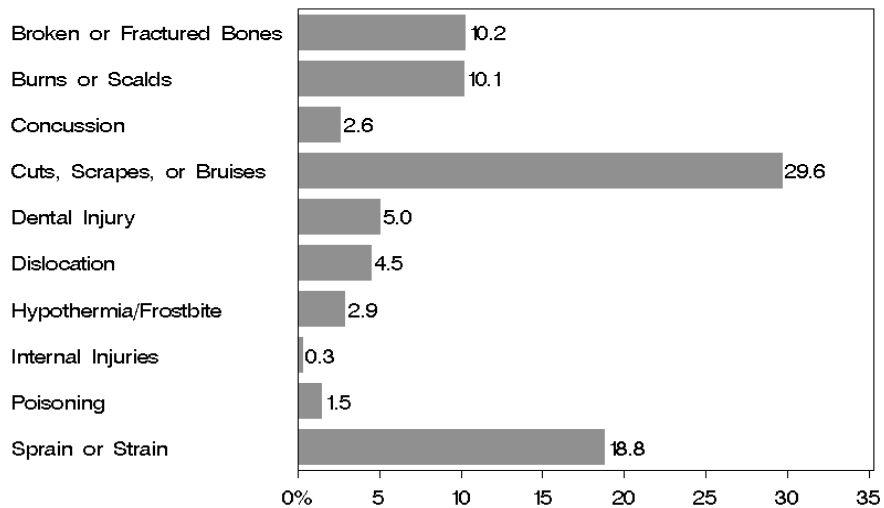


With respect to the types of injuries, cuts/scrapes/bruises were most common, followed by sprains or strains, broken or fractured bones and scalds or burns. This pattern is similar to the results found in 1997 (Chart 4.35).

### Chart 4.35

#### Types of Injuries

(Weighted Percentage Within Each Type)

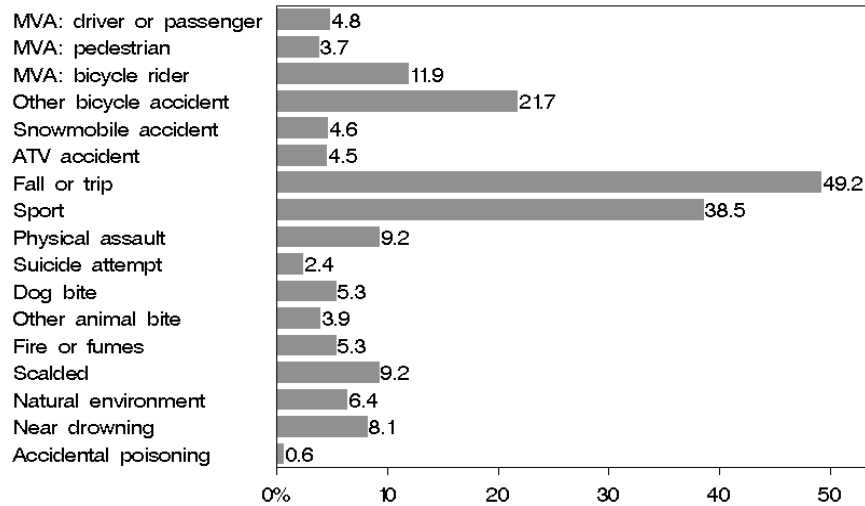


When we asked about the cause of injuries, falling or tripping accounted for 49 per cent of the reported accidents and sport-related injuries were also common. Accidents involving bicycles were also reported, either in the form of collisions with automobiles or in other ways (Chart 4.36). These three types of injuries were the most frequently mentioned in 1997 as well.

### Chart 4.36

#### Causes of Injuries

(Weighted Percentage Within Each Cause)



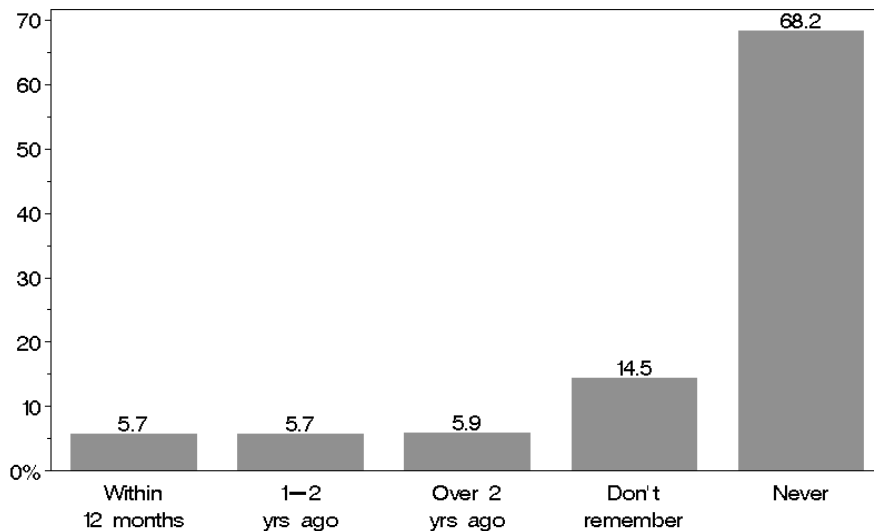
#### Health Care Utilization and Dental Care

In terms of accessing various kinds of health care, about 17 per cent report that they have consulted a traditional healer in the past several years (Chart 4.37)<sup>19</sup>. Close to 22 per cent have gone for counselling, psychological testing or some other kind of mental health service.

### Chart 4.37

#### Last Consulted a Traditional Healer

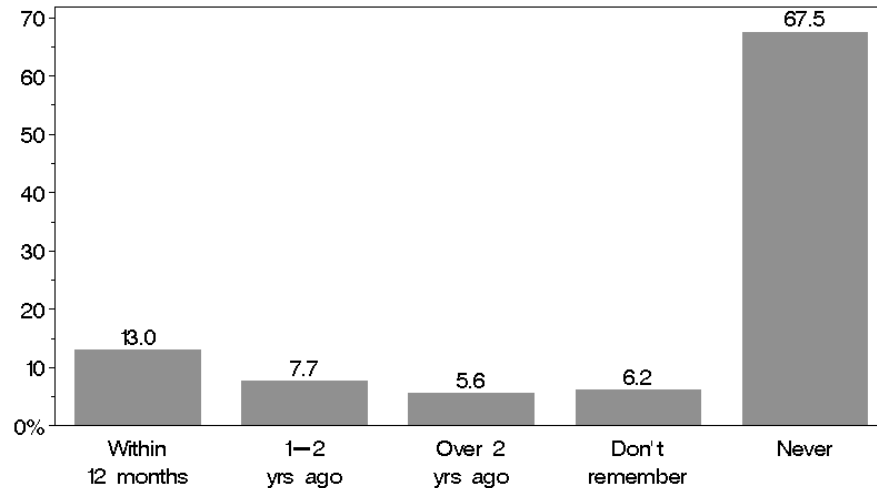
(Weighted Percentage)



<sup>19</sup> Thirteen per cent of youth did not respond to this question.

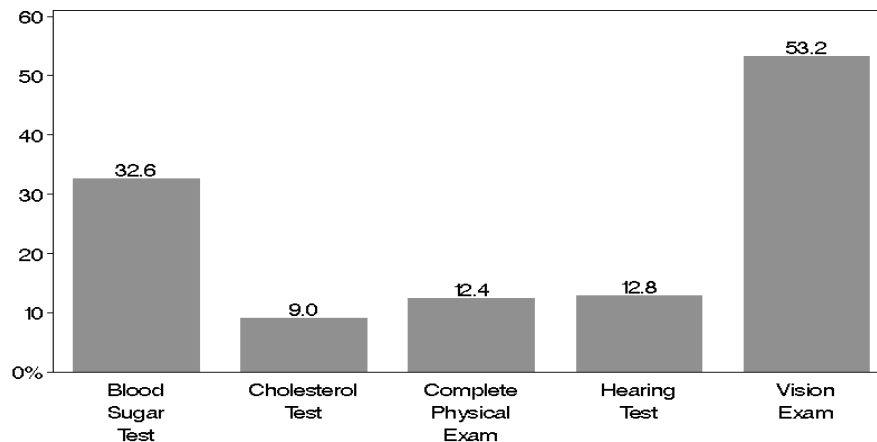
Thirteen per cent of youth have consulted mental health services within the past 12 months, and another 13 per cent have done so in previous years (Chart 4.38)<sup>20</sup>.

**Chart 4.38**  
**Last Consulted**  
**Mental Health Services**  
 (Weighted Percentage)



More than half of Mi'kmaq youth have had a vision or eye exam in the past 12 months. The concern about diabetes has led to just under a third of the youth having a blood sugar test. Others have checked for cholesterol, hearing or have had a complete physical examination (Chart 4.39).

**Chart 4.39**  
**Preventive Care**  
 (Weighted Percentage Within Each Type)

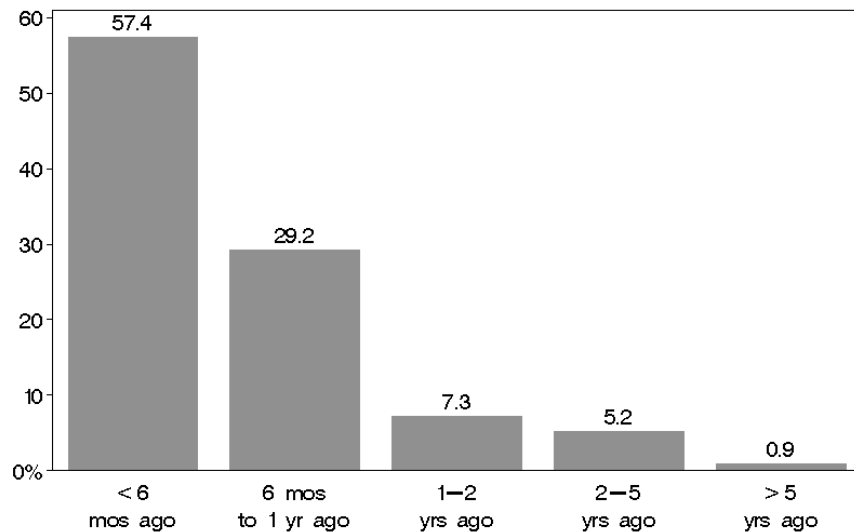


<sup>20</sup> Sixteen per cent of youth did not respond to this question.



With respect to dental care, a majority of the youth have had dental care within the six months preceding the survey, and another 29 per cent in the period between 6 months to a year prior to our study. This suggests a high rate of utilization of dental services (Chart 4.40).

**Chart 4.40**  
**Last Time Dental Care Received**  
 (Weighted Percentage)



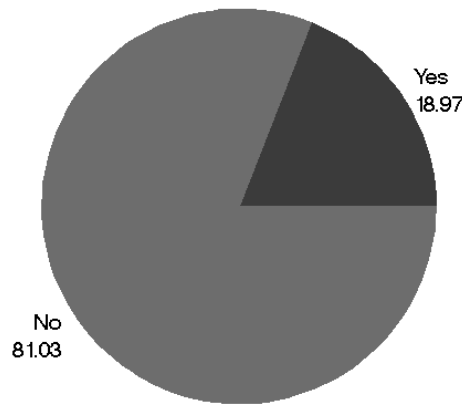
When asked what kinds of dental services they need, most of the youth mentioned some form of preventive services, such as regular maintenance or having fluoride treatments. Others needed to have cavities filled and only a few required more serious interventions such as tooth extractions and periodontal work (Chart 4.41).

**Chart 4.41**  
**Type of Dental Care Needed**  
 (Weighted Percentage)

Type of Work Needed	Weighted Percentage
Maintenance	40.5%
Cavities Filled	33.4%
Fluoride Treatment	17.3%
Extractions	4.1%
Periodontal Work	1.2%

As an indication of how problematic their dental health is, a relatively high 19 per cent of the youth indicated that they experienced problems with their teeth or dental pain in the past month (Chart 4.42).

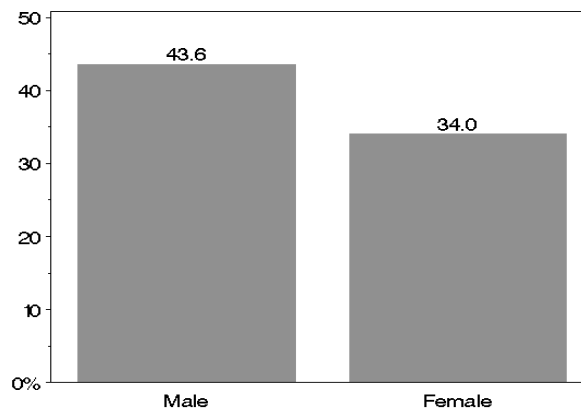
**Chart 4.42**  
**Dental Pain/Problem in past 12 months**  
(Weighted Percentage)



### Lifestyle

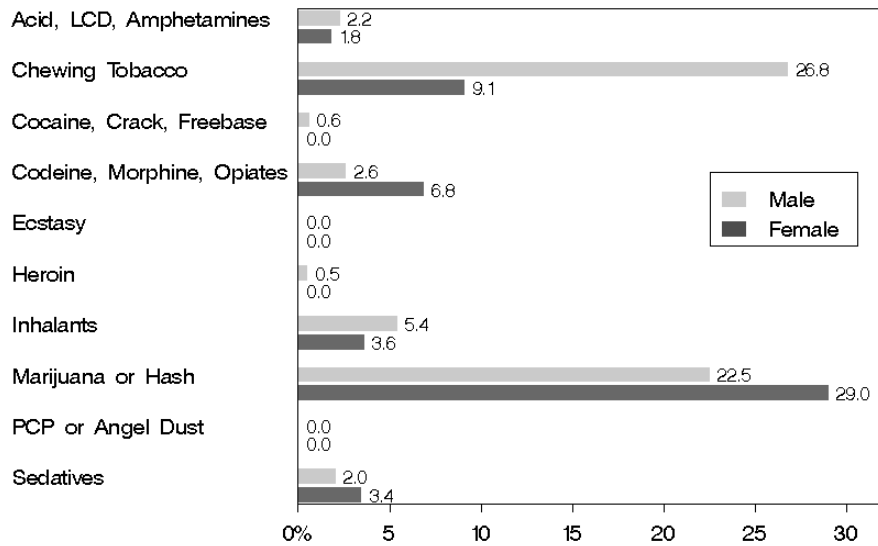
Youth were asked whether and how frequently they used mood altering drugs in the past 12 months without a prescription. In contrast to 1997, when female youth were more likely to do so, in 2002/03 it was more likely to be male youth who picked one or more of a long list of substances, as Chart 4.43 demonstrates. We cannot say, however, whether drug use has increased since 1997 because the two questions are not strictly comparable.

**Chart 4.43**  
**Taking Mood Altering Drugs**  
Took Any Drug At Least Once Without Prescription in Past 12 Months  
(Weighted Percentage Within Gender)



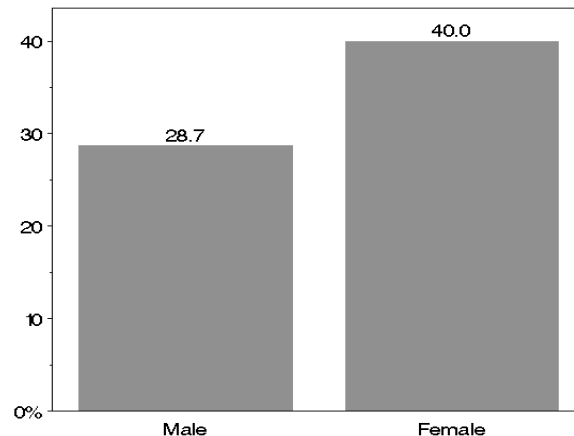
Male youth were most likely to use chewing tobacco, which has increased in usage since 1997 (Chart 4.44). This is followed by marijuana or hash and then, much less likely, various kinds of inhalants. Among female youth, marijuana or hash is the drug of choice followed by chewing tobacco and codeine, morphine or other opiates.

**Chart 4.44**  
**Use of Specific Mood Altering Substances**  
 (Weighted Percentage)



In response to the question whether the respondent had a drink of beer, wine, liquor or other alcoholic substance in the past 12 months, we can report that alcohol use is down in comparison with 1997 – from 49 to 40 per cent among females and moderately from 31 to 29 per cent among males (Chart 4.45).

**Chart 4.45**  
**Drank Alcohol in Past 12 Months**  
 (Weighted Percentage Within Gender)

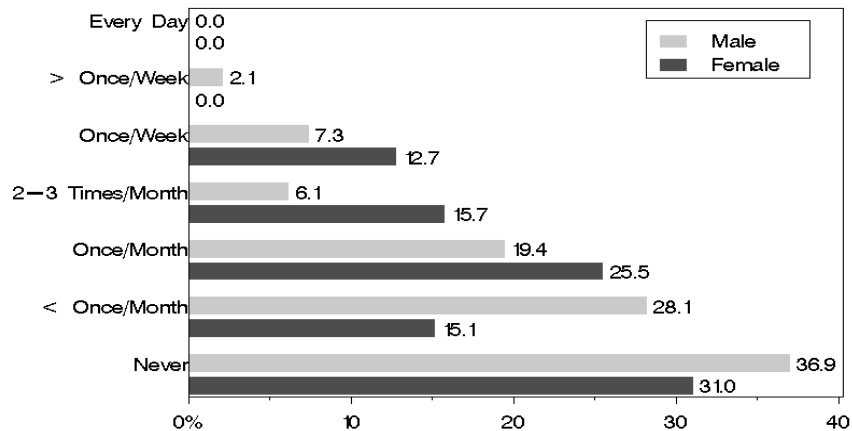


A troubling aspect about alcohol consumption is perhaps not so much that it occurs among youth but that, for a sub-group, there are frequent bouts of heavy or “binge” drinking – defined as 5 or more drinks on one occasion. The following chart suggests that, among those who consume alcohol, 54 per cent of female youth and 35 per cent of male youth engage in heavy drinking once a month or more frequently (Chart 4.46).

**Chart 4.46**

**Frequency of Heavy Drinking**

5 Or More Drinks On One Occasion In Past 12 Months  
(Weighted Percentage Within Gender)

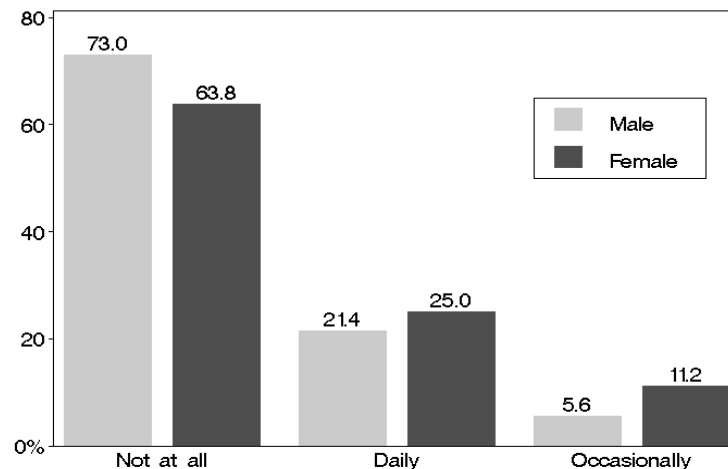


There is further good news with respect to cigarette smoking, which is down substantially for both male and female youth in comparison with 1997. The percentage of females smoking has decreased from 48 per cent to 36 per cent (adding together daily and occasional smoking) while for male youth the percentage has dropped from 41 per cent to 27 per cent (Chart 4.47).

**Chart 4.47**

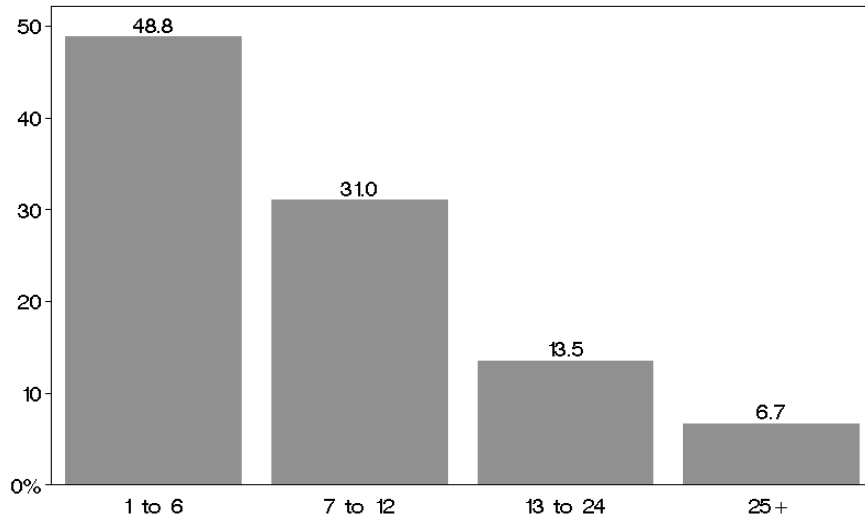
**Smoked Cigarettes at Time of Survey**

(Weighted Percentage Within Gender)



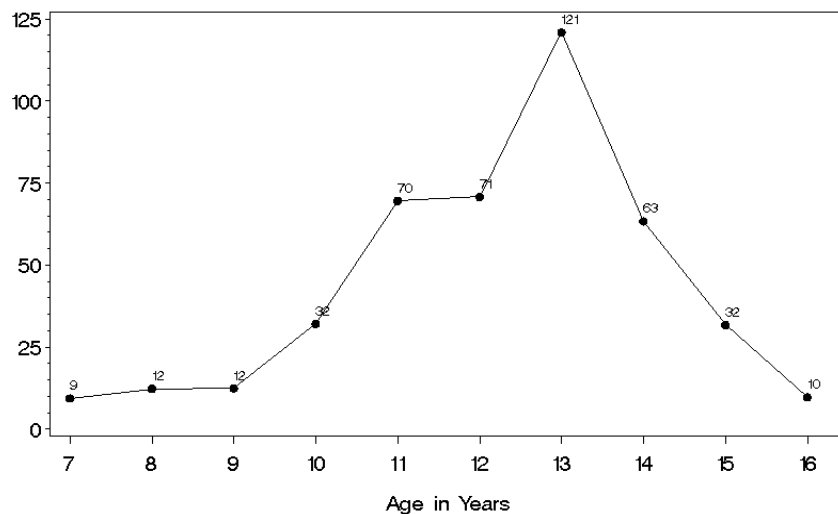
The number of cigarettes smoked per day, among those who smoke, is typically in the 1 to 6 range, but close to 20 per cent at the other extreme smoke anywhere from 13 to over 25 cigarettes per day (Chart 4.48).

**Chart 4.48**  
**Number of Cigarettes Smoked Each Day**  
 (Weighted Percentage)



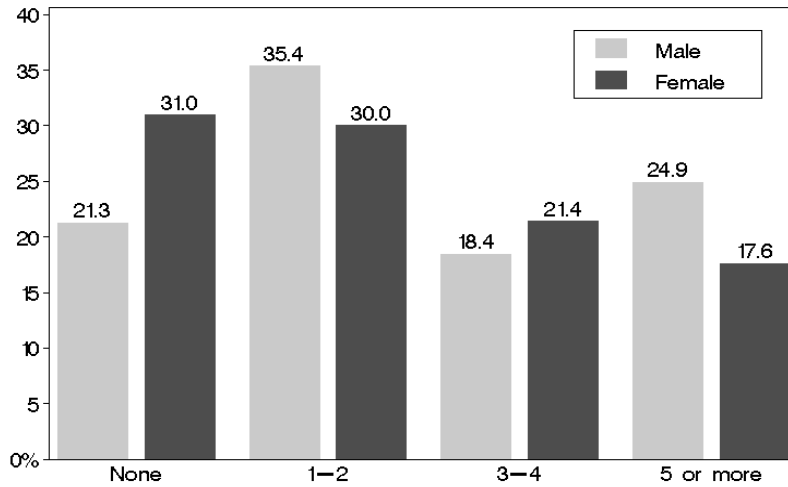
Mi'kmaq youth are typically about thirteen years of age when they begin smoking, but the increase in the smoking pattern kicks in as early as 9 years. In comparison with 1997, it appears that experimenting with, and starting to smoke, is occurring at a younger age in the more recent period (Chart 4.49).

**Chart 4.49**  
**Age When Cigarette Smoking Started**  
 (Weighted Number Of Cases At Each Age)



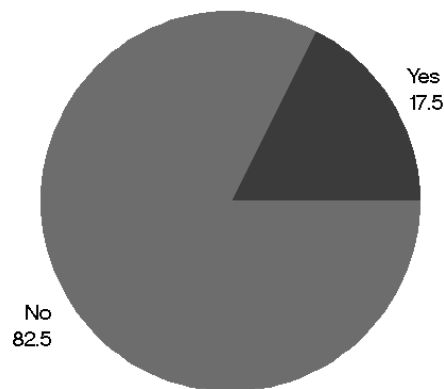
Mi'kmaq youth do try to quit smoking, however. Indeed the following chart shows that around 40 per cent of those who smoked at the time of the survey have made three or more attempts to stop smoking (Chart 4.50).

**Chart 4.50**  
**Number of Attempts to Quit Smoking**  
 (Weighted Percentage Within Gender)



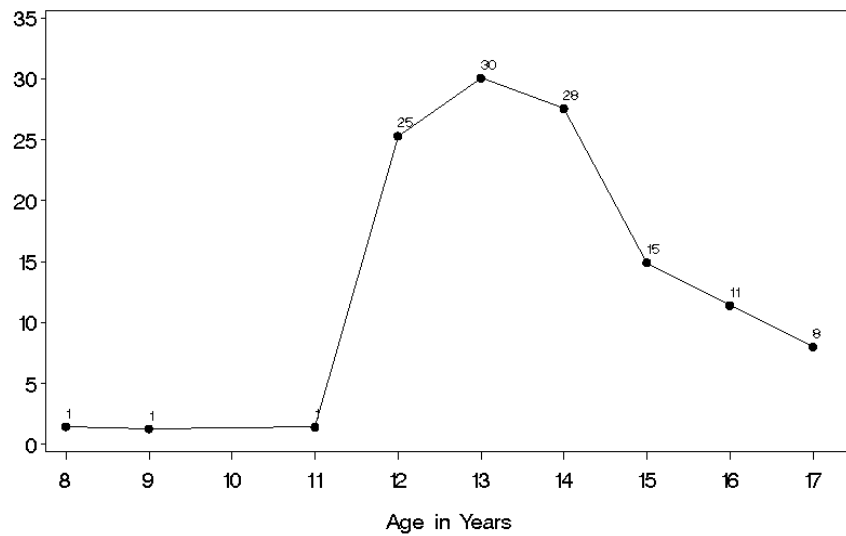
Among those who were not smoking cigarettes at the time of the survey, there were a number who used to smoke and who have now quit (Chart 4.51).

**Chart 4.51**  
**Have you ever smoked cigarettes daily?**  
 (Weighted Percentage)



Among those who have quit smoking, the largest numbers are reported in the 12-14 year age range, suggesting that smoking was part of a pattern of experimental behaviour, tried out and found wanting (Chart 4.52).

**Chart 4.52**  
**Age When Cigarette Smoking Stopped**  
(Weighted Number Of Cases At Each Age)



This group, those who have quit, gave a number of reasons for their decision. Both male and female youth mentioned “respect for loved ones” quite frequently, or wanting to choose a healthier lifestyle. Peer pressure from friends or co-workers was also important for male youth, but carried surprisingly little weight with the young women, who were much more likely to cite greater awareness of the effects of tobacco among their reasons, an argument to which the young men were impervious (Chart 4.53)<sup>21</sup>.

**Chart 4.53**  
**Reasons for Quitting Smoking**  
 (Weighted Percentage)

<b>Reason for Quitting</b>	<b>Males</b>	<b>Females</b>
Out Of Respect For Loved Ones	31.8%	30.0%
Chose A Healthier Lifestyle	31.9%	26.6%
Peer Pressure From Friends Or Co-Workers	22.1%	7.1%
Greater Awareness Of Ill Effects Of Tobacco	0.0%	27.3%
Health Condition	5.8%	2.4%
Respect For Traditional Significance Of Tobacco	0.0%	7.1%
Pregnancy	0.0%	5.0%
Doctor"s Orders	0.0%	0.0%

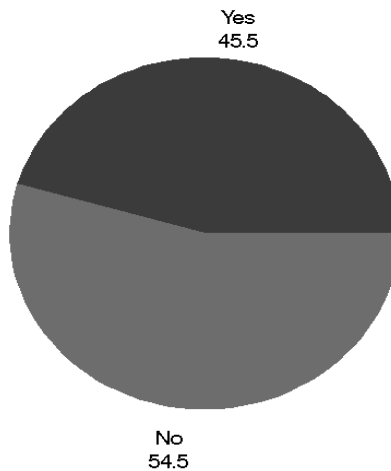
---

<sup>21</sup> Some caution is required in interpreting this table as the number of cases of those not smoking now who used to smoke is not large (35 cases).



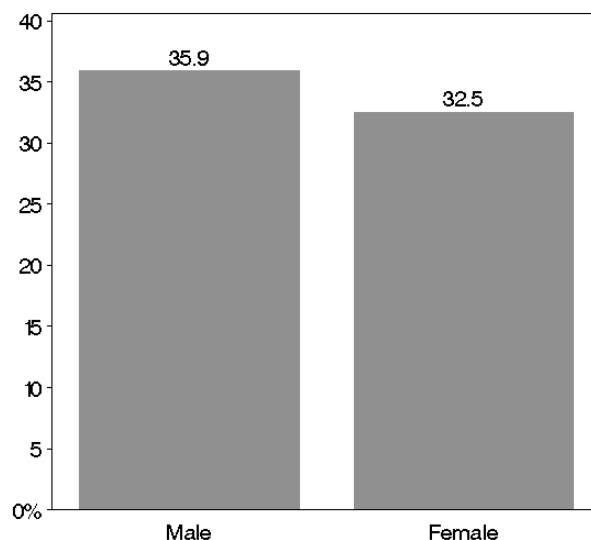
Finally, we learn from the following chart that 46 per cent of youth state they have a smoke-free home, a big improvement from the 27 per cent in 1997 who lived in an environment where no one was smoking (Chart 4.54).

**Chart 4.54**  
**Do you have a smoke-free home?**  
(Weighted Percentage)



With regard to sexual activity, about a third of the youth, and a slightly higher proportion of males than females, report that they are sexually active (Chart 4.55). The percentage increases from 7 per cent among 12 to 13 year olds to 38 per cent among those in their mid-teen years and reaches 61 per cent among those 16 and 17 years of age (Chart 4.56).

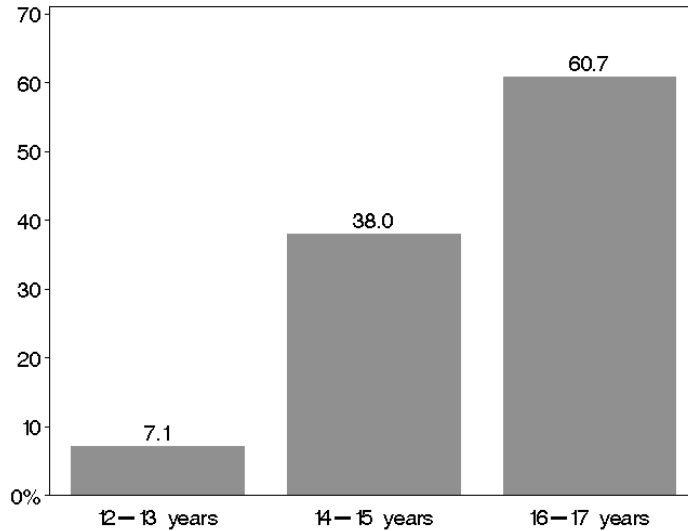
**Chart 4.55**  
**Are You Sexually Active?**  
(Weighted Percentage Within Gender)



**Chart 4.56**

**Are You Sexually Active?**

(Weighted Percentage Within Age Group)

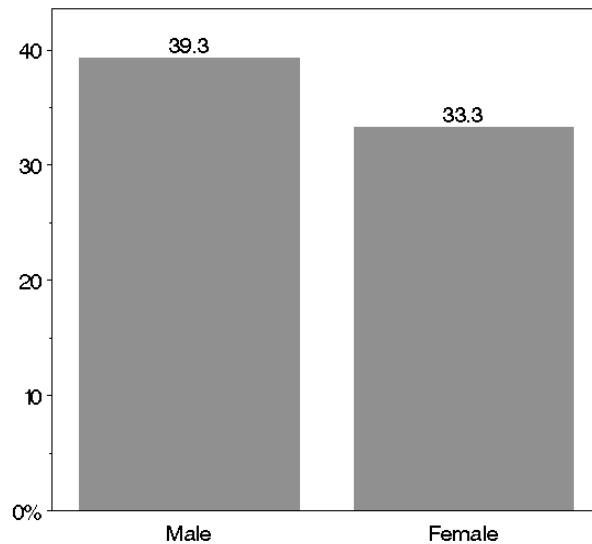


More than a third of the youth, and more males than females, say they have had intercourse in the past 12 months (Chart 4.57).

**Chart 4.57**

**Have You Had Intercourse in Past 12 Months?**

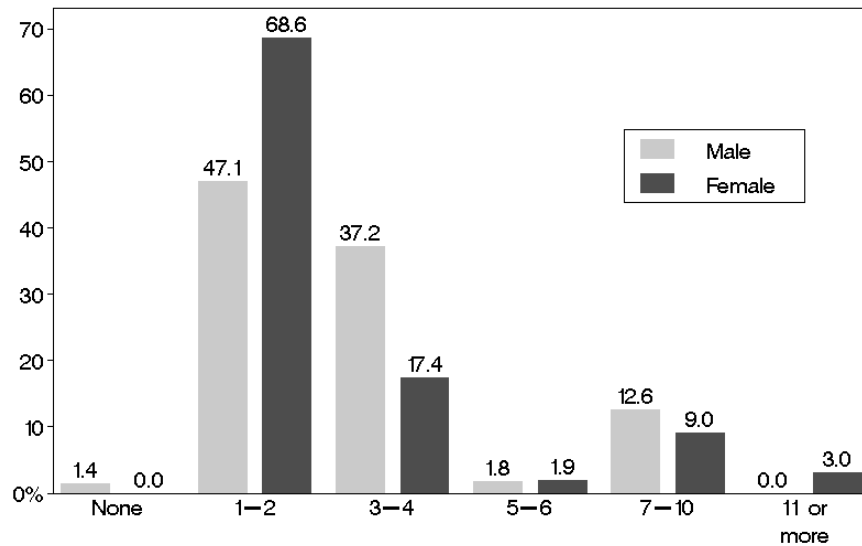
(Weighted Percentage Within Gender)



Among those who have had intercourse in the last 12 months, sexual partners tend to be limited in number, with about 47 per cent of the males and two-thirds of the females indicating that the number of

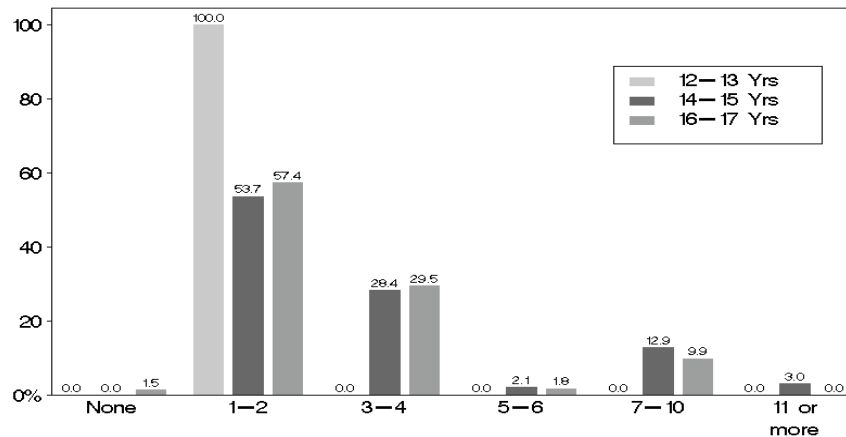
sexual partners is limited to one or two (unfortunately, the question does not permit distinguishing between one and two partners). The other side of the coin, however, is that for male youth in particular, half have engaged in sex with as many as 3 to 10 partners in the past 12 months (Chart 4.58).

**Chart 4.58**  
**Number of Sexual Partners in Past 12 Months**  
 (Weighted Percentage Within Gender)



The following chart reveals that the pattern of having a large number of sexual partners is restricted to those who are in their mid-teens or older (Chart 4.59).

**Chart 4.59**  
**Number of Sexual Partners in Past 12 Months**  
 (Weighted Percentage Within Age Group)



Youth who are sexually active are, in almost all cases, likely to use birth control methods except for 5 per cent of males and 8 per cent of females. Condoms are far and away the method of

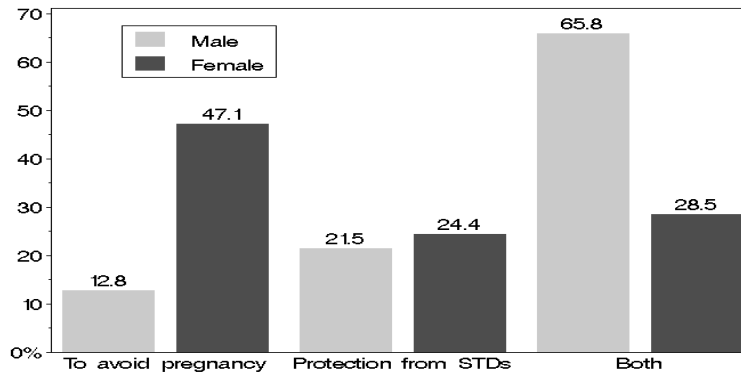
choice among male youth, chosen by about 85 per cent of sexually active youth, while females also choose birth control pills (Chart 4.60).

**Chart 4.60**  
**Types of Birth Control or Protection Method Used**  
 (Weighted Percentage)

Type	Males	Females
Condom	88.9%	83.7%
Birth Control Pills	7.3%	55.7%
None	4.9%	8.2%
Withdrawal	4.5%	8.5%
Depo Provera	0.0%	4.5%
Diaphragm	0.0%	0.0%
Sponges	0.0%	0.0%
Foam	0.0%	0.0%
Rhythm	0.0%	0.0%
IUD	0.0%	0.0%

From the data in the following table, the main story is that young Mi'kmaq women are much more likely than males to give the avoidance of pregnancy as the reason for using birth control or protection methods. Secondly, males are much more likely than the females to give two reasons for using these methods: to avoid pregnancy and to protect from sexually transmitted diseases (Chart 4.61).

**Chart 4.61**  
**Reasons for Using Birth Control**  
 (Weighted Percentage Within Gender)



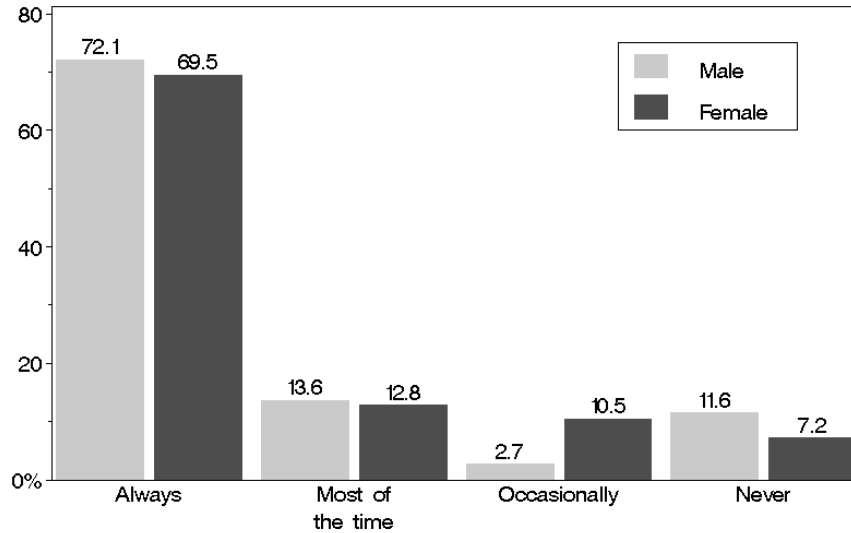
Regarding the frequency of using condoms to avoid sexually transmitted diseases such as HIV/AIDS or gonorrhea, around 70 per cent of both genders say that they always use condoms.

That leaves, however, the remainder who do so only most of the time or occasionally, including some 10 per cent who never use protection (Chart 4.62).

**Chart 4.62**

**Use of Condoms**

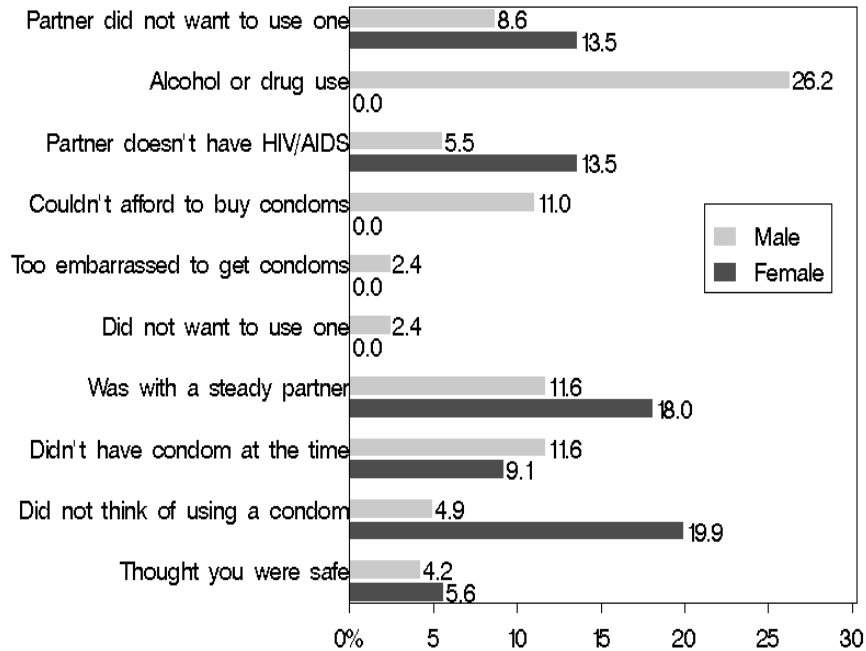
(Weighted Percentage Within Gender)



The reasons for not doing so are varied, and differ somewhat by gender. Among males, for example, the most frequently mentioned factor is being under the influence of alcohol or drugs. Among females, not thinking of using a condom or having faith that this would not be an issue with a steady partner, were frequently mentioned (Chart 4.63)<sup>22</sup>.

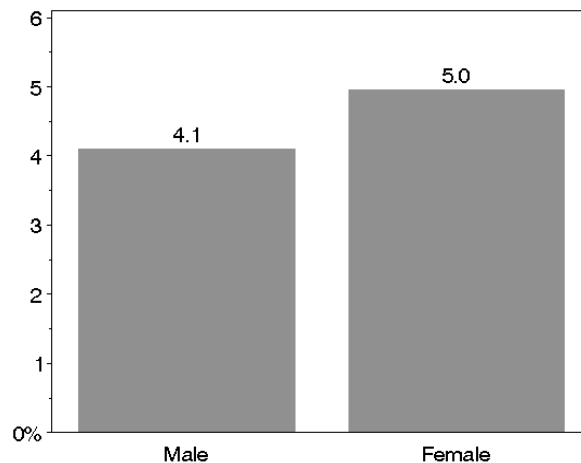
<sup>22</sup> This chart needs to be interpreted with caution due to the small number of cases (28).

**Chart 4.63**  
**Reasons for Not Always Using Condoms**  
 (Weighted Percentage Within Gender)



Among the teen group, 5 per cent of the women report having been pregnant while 4 per cent of the young men say they have been the cause of someone becoming pregnant (Chart 4.64).

**Chart 4.64**  
**Have you ever been pregnant  
 or gotten someone pregnant?**  
 (Weighted Percentage Within Gender)

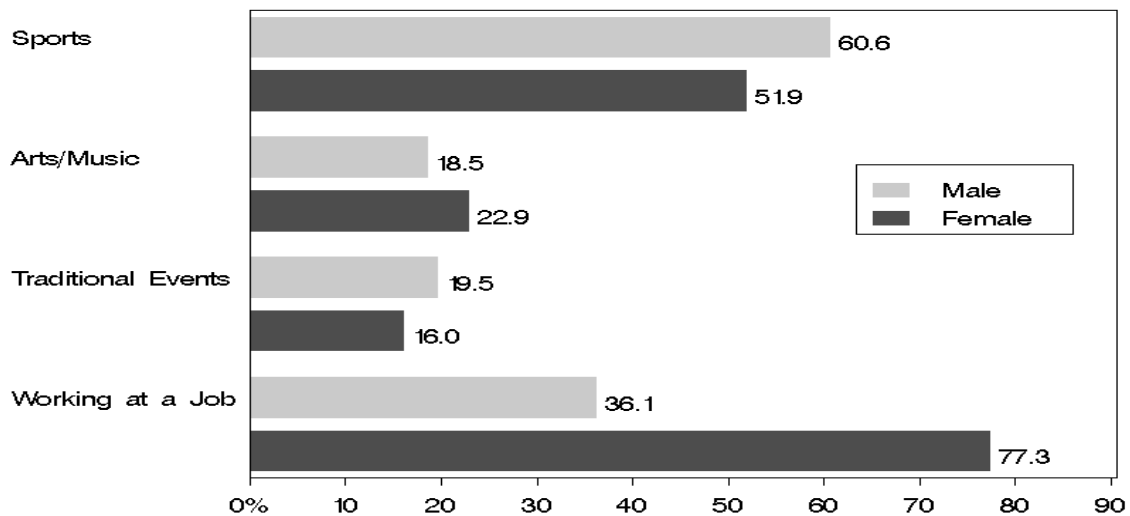


## Personal Wellness and Support

In this section, we report on a number of dimensions that pertain to leisure activities, self-esteem, depression and suicides, and sources of social support.

Beginning with involvement with activities most of which would be of a social nature and located outside the home, we observe from the following chart that about a third of the young males are working at a job, and the proportion is more than double that for young females. Other gender differences exist, such as higher male engagement with sports, or more female involvement in arts and music, but they are much less pronounced (Chart 4.65).

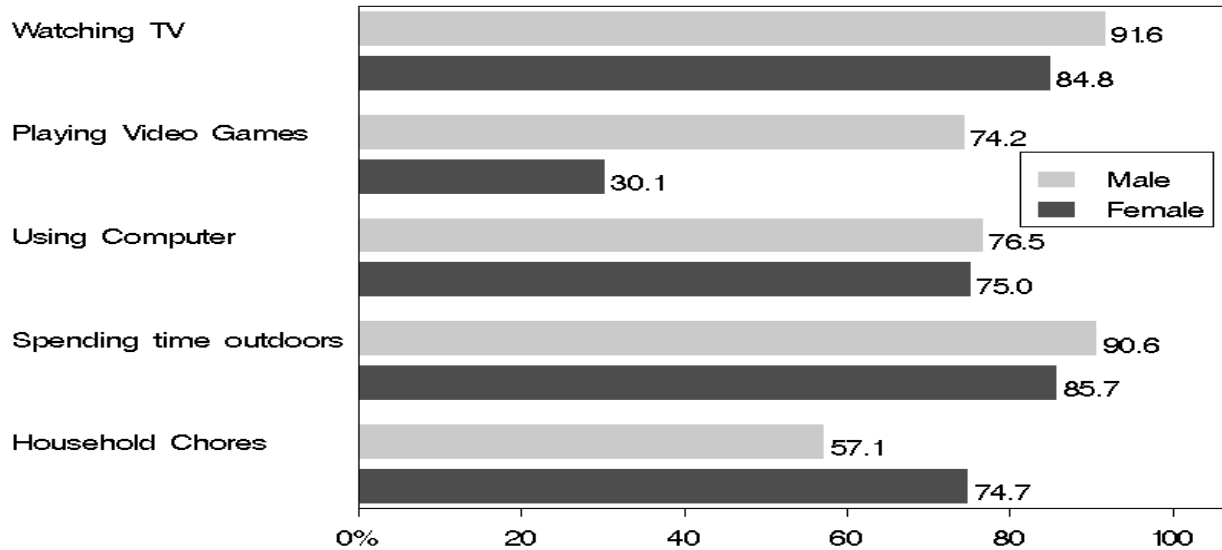
**Chart 4.65**  
**Participation in Social Activity**  
(Weighted Percentage)



Other activities, which tend to be more solitary and take place mostly within the home, show very high activity levels. Almost all youth watch television, for example, although the percentage is down from the 100 per cent who responded that they do so in 1997<sup>23</sup>. Spending time outdoors is also very popular, followed by “using the computer”. Significant gender differences are found with respect to playing video games – mostly a male activity – and doing household chores where females are more likely to be engaged (Chart 4.66).

<sup>23</sup> In 1997, the question asked whether a person engaged in the activity at least once a week. In 2002/03, the wording changed slightly to ask about how many hours per day. Our chart reports on those spending at least one hour per day or more.

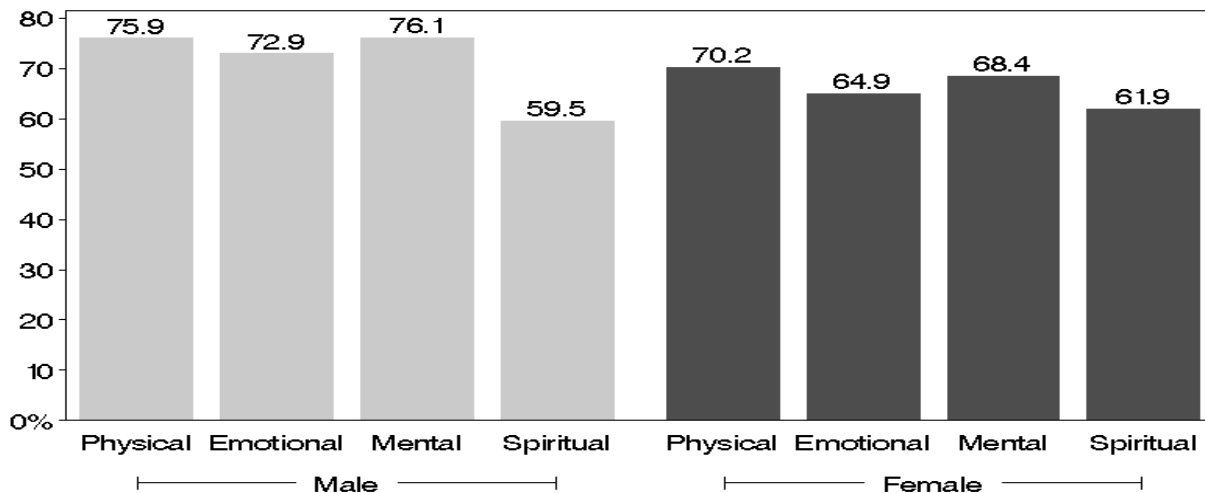
**Chart 4.66**  
**Participation in Other Selected Activities**  
 (Weighted Percentage Within Gender)



When asked if they are in balance in the physical, emotional, mental and spiritual dimensions of their lives, respondents generally answer in the affirmative “all of the time” or “most of the time” except the spiritual dimension is more often identified as being lacking. Looking at gender differences, female youth are more likely to say that they lack balance in the mental and emotional spheres (Chart 4.67).

**Chart 4.67**  
**Life Balance**

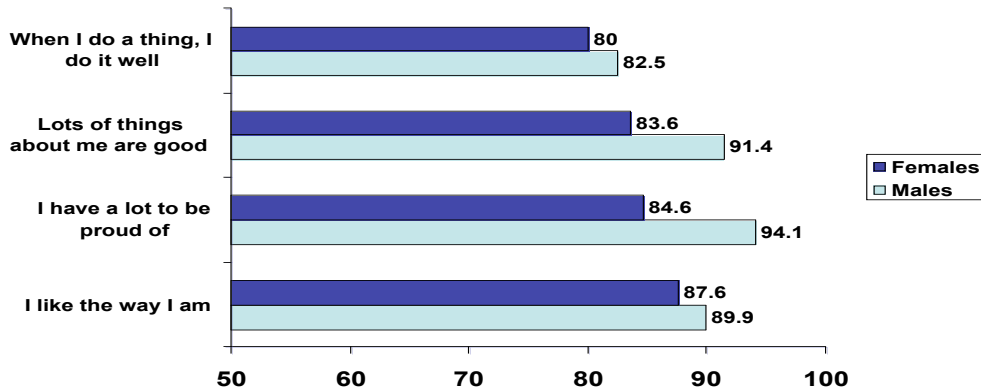
Percentage who feel in balance all or most of the time  
 (Weighted Percentage Within Gender)





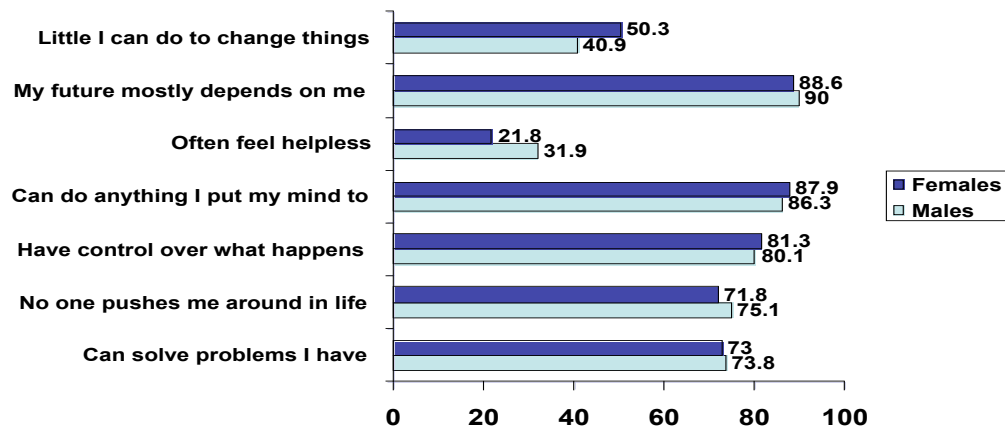
We turn now to several groups of indicators of youth self-esteem. First, a number of questions address the self-image of youth, which is generally quite positive if one adds together those who strongly agree, or simply agree, with the given statements (Chart 4.68). However, young women are less likely to opt for the “strongly agree” category than are the males.

**Chart 4.68**  
**Indicators of Self-image**



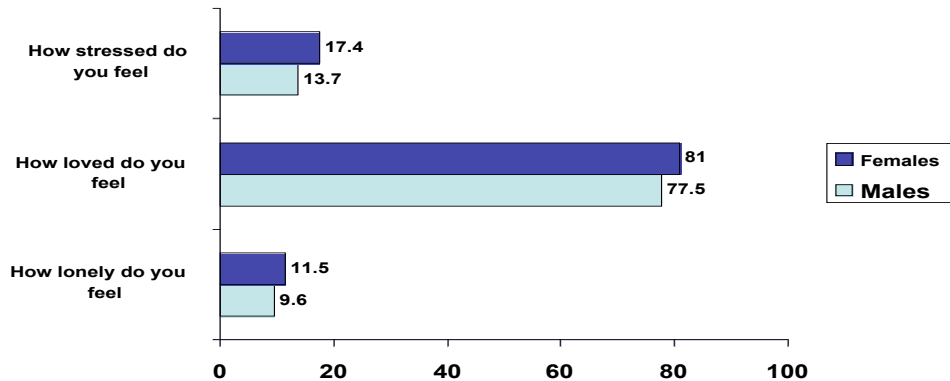
The next set of statements assesses the extent to which youth are confident in their abilities and in control over what happens to them. On these measures, the percentages agreeing or strongly agreeing are somewhat less than for self-image, but these two categories still usually include the large majority of respondents. The lowest level of confidence is expressed around the idea that there is little they can do to change things or that they often feel helpless. Gender differences are not substantial for the most part (Chart 4.69).

**Chart 4.69**  
**Indicators of self-confidence**



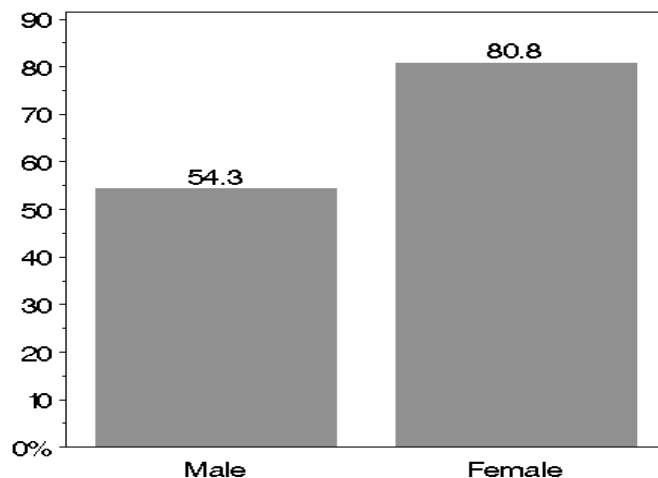
The third set of questions dealing with self-esteem get at issues of stress and loneliness. Both male and female youth for the most part feel loved, but females are more inclined to admit that they are lonely quite a bit or a lot. On the statement relating to how stressed they feel, young women are more likely to say that they experienced quite a bit or a lot of stress (Chart 4.70). However, the gender differences on this particular statement are not as large as they were in 1997.

**Chart 4.70**  
**Indicators of Stress and Loneliness**



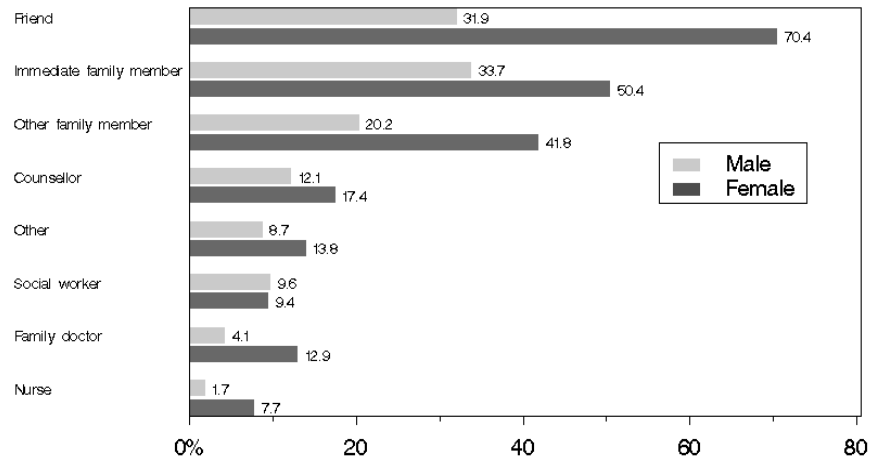
Gender differences are also evident in the following chart, which shows that female youth, in particular, are much more likely to see or talk on the phone to others about their emotional or mental health than are male youth (Chart 4.71).

**Chart 4.71**  
**Youth Who Have Talked To Someone About Their Emotional/Mental Health In Past 12 Months**  
(Weighted Percentage Within Gender)



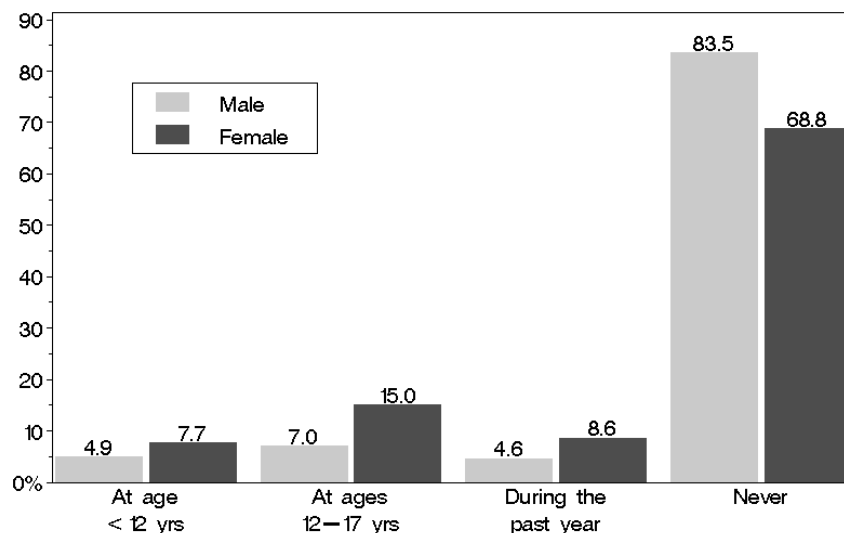
Friends and immediate family members are most frequently chosen for this purpose, followed by other family members and counsellors (Chart 4.72).

**Chart 4.72**  
**Who youth consult about emotional or mental health problems**  
 (Top Eight Responses, Weighted Percentage Within Gender)



Our survey also included several questions about suicide. First, it is not uncommon for youth to think about suicide, with 31 per cent of the women indicating that they have done so compared to 16 per cent of the males (Chart 4.73).

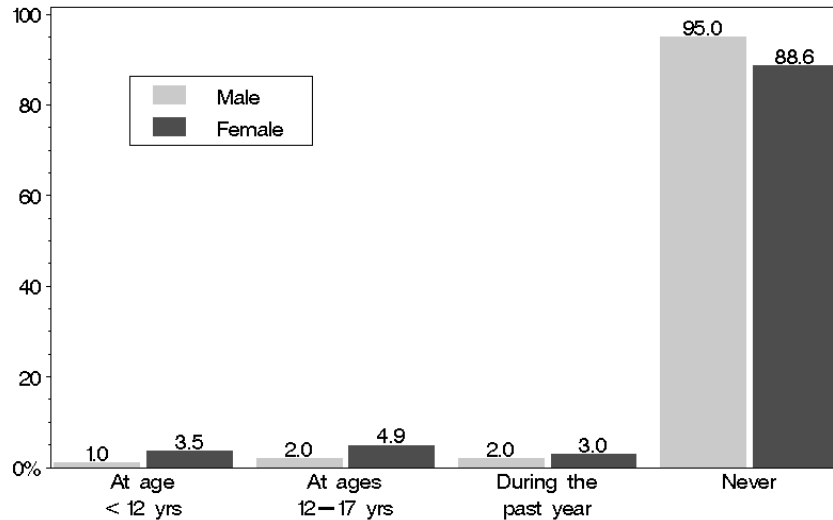
**Chart 4.73**  
**Ever thought about committing suicide?**  
 (Weighted Percentage Within Gender)



Actually attempting suicide is less frequent, but still 11 per cent of the females and 5 per cent of the males responded affirmatively to this question (Chart 4.74).

**Chart 4.74**

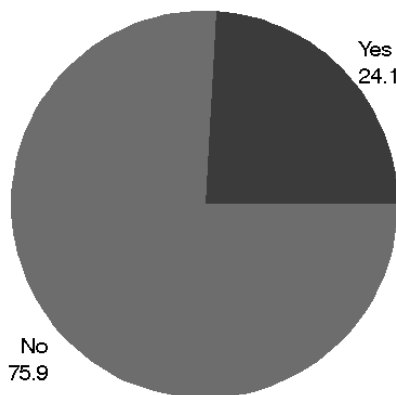
**Ever attempted suicide?**  
(Weighted Percentage Within Gender)



Youth also have to contend with a context in which suicides take the lives of others in the community. Almost a quarter of the sample (24 per cent) indicate that in the past 12 months a close friend or family member has committed suicide (Chart 4.75).

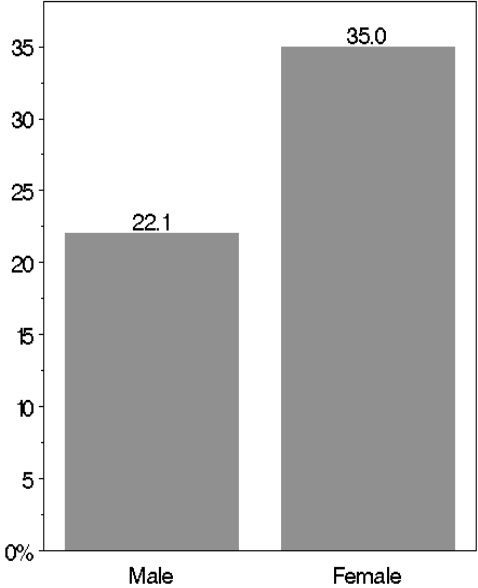
**Chart 4.75**

**Suicide of Friend or Family Member**  
(Weighted Percentage)



A pattern of gender differences continues with the question about whether youth felt sad, “blue” or depressed for two weeks or more in a row in the past 12 months. Among males, 22 per cent responded affirmatively (about the same percentage as in 1997), while 35 per cent of the females did so (down from 47 per cent in 1997) (Chart 4.76)<sup>24</sup>.

**Chart 4.76**  
**Feeling sad, blue or depressed**  
(Weighted Percentage Within Gender)



<sup>24</sup> The proportion of missing cases is 14 per cent for for females on this question.

Issues that youth are concerned about and which may be linked to depression for some are itemized in the following table. It gives the responses to the question: “Are there other issues affecting the well-being of teens in the community that should be asked about?” Among these, concern about alcohol and drug abuse is most prominent, followed by unhappiness about the lack of recreational programs and facilities, and issues around sex, dating and pregnancy (Chart 4.77)<sup>25</sup>.

**Chart 4.77**  
**Other Issues Affecting the Well-Being of Youth**  
 (Weighted Percentage of Youth Responding)

Issue	Weighted Percentage
Alcohol And Drug Abuse	11.7%
Recreational Programs/Facilities Needed	9.4%
Sex, Dating, Relationships, Pregnancy	3.8%
Bullying	2.4%
Depression And Suicide	1.7%
Peer Pressure	1.4%
Family Violence	1.3%
Racism	1.1%
Illegal Activity	0.9%
Gangs And Violence	0.7%
Traditional Events	0.6%
Miscellaneous	0.5%
Decision Making	0.4%
Self-Esteem	0.2%
Coping With Tragedy	0.2%
Gambling	0.1%
Tutoring	0.1%

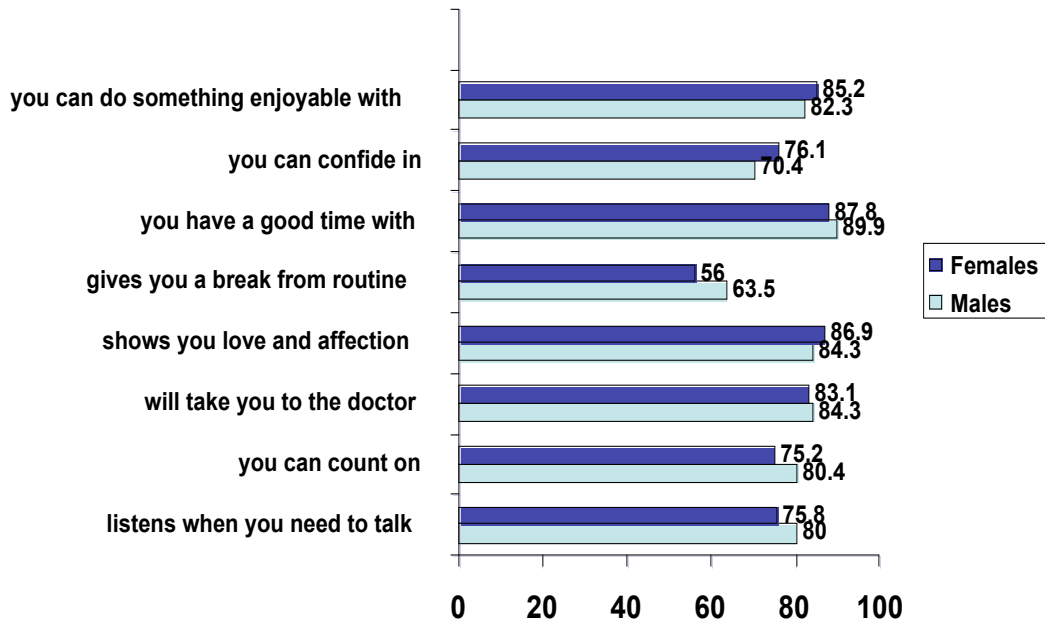
---

<sup>25</sup> Only a few youth chose to respond to this question, which required a write-in response.

A large majority of youth say they have someone they can go to all of the time or most of the time when they need social support, except with respect to having someone who can give them a break from routine. In this instance, the percentages are lower, especially for young women. Otherwise, the gender differences are not substantial. It is worth noting that a small percentage of the youth answer this question by saying “almost none of the time”, suggesting that there is a small proportion of the youth who are isolated or who do not have someone they can go to in times of difficulty (Chart 4.78).

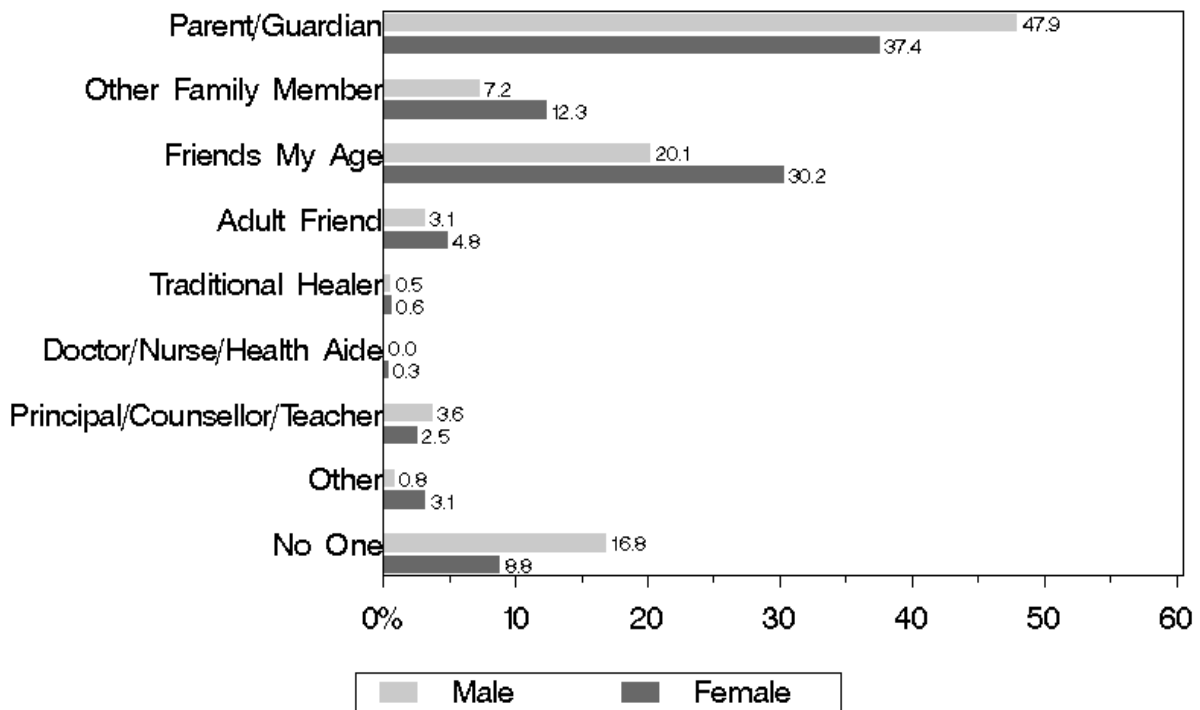
## Chart 4.78 Social Support

How often do you have someone who...



A subsequent question asks more precisely who the youth would go to for help with a wide range of situations. Only one answer was accepted for each problem. Many topics were covered, from family problems to physical and mental health issues such as pregnancy or depression to relationship issues. We have chosen the following three charts to illustrate the main tendencies and patterns. As the chart dealing with “anger and feeling out of control” illustrates, parents are by far the most common source of support. Typically close to 50 per cent of the boys and 40 per cent of the girls would turn to their parents. Other family members are not too important, and adult friends, traditional healers, doctors, nurses or health aides, and school personnel such as principals or counsellors are decidedly unimportant (Chart 4.79).

**Chart 4.79**  
**Who would you go to first for help with:**  
**Anger / Feeling Out Of Control**  
 (Weighted Percentage)



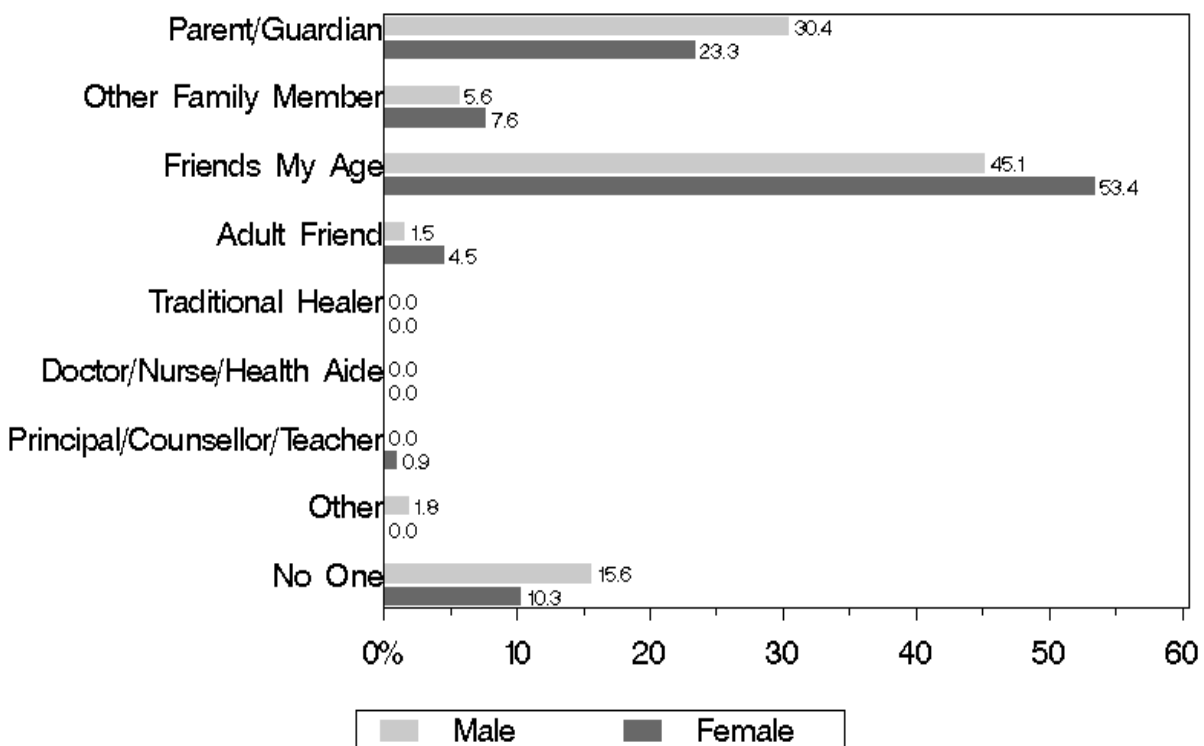


The chart on anger also illustrates, however, that “friends my own age” are quite frequently sought out especially by females. Usually, some 20 per cent of boys and 30 per cent of girls would go to friends their own age. This especially true when relationship issues (boyfriend/girlfriend) is the subject to be discussed, as the following chart shows (Chart 4.80).

**Chart 4.80**

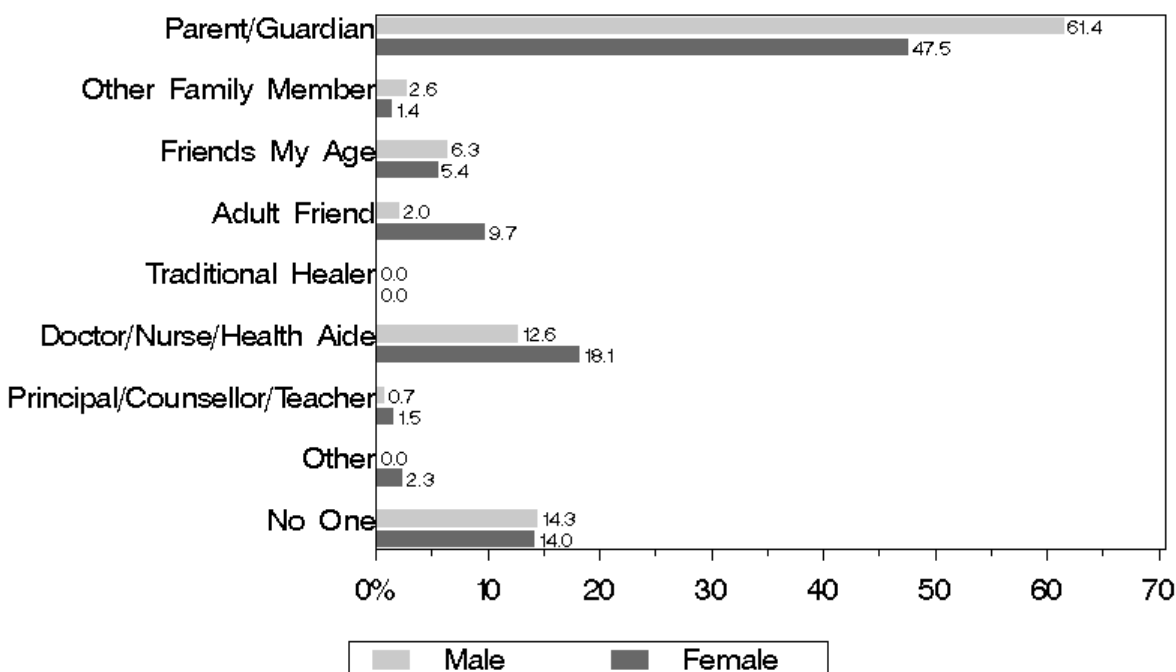
**Who would you go to first for help with:  
Relationships (boyfriend/girlfriend)**

(Weighted Percentage)



However, there are some issues, especially those where there is a physical health aspect to the situation, where medical personnel assume some importance. We show this pattern below in the case of sexually transmitted disease, but it is also evident when it comes to pregnancies and birth control (Chart 4.81).

**Chart 4.81**  
**Who would you go to first for help with:**  
**Sexually Transmitted Diseases**  
 (Weighted Percentage)



All three charts reveal that a significant percentage of youth – typically 10 per cent among girls and up to 15 per cent among boys – feel they have no one they can go to when they have important issues to discuss.

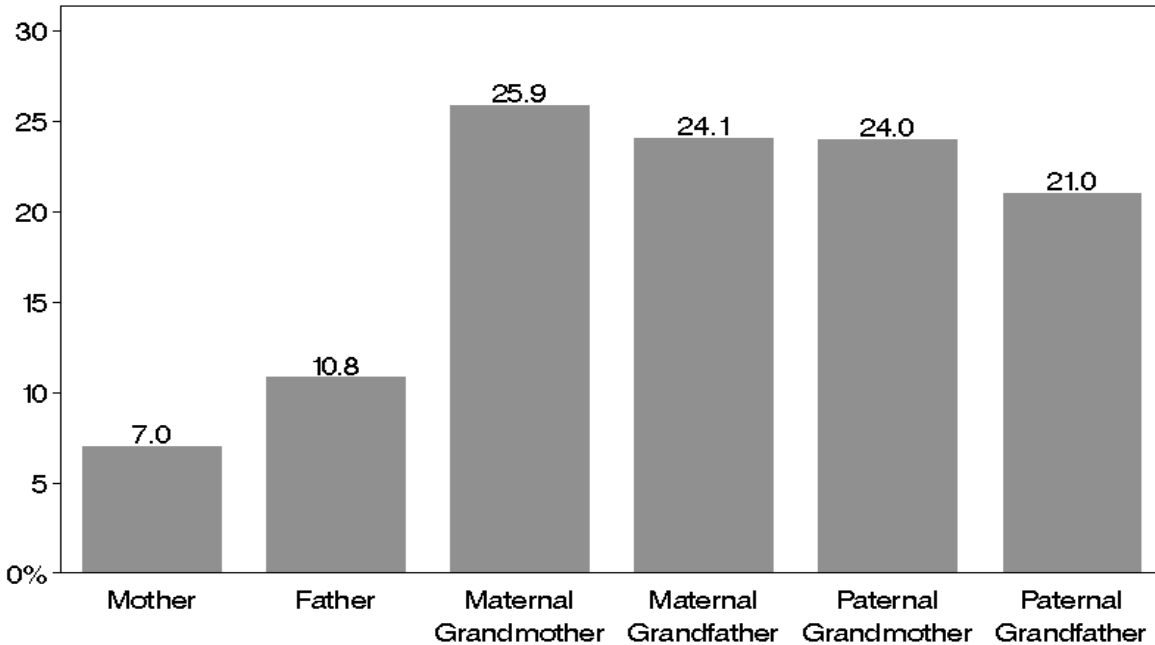
**Residential Schools**

Finally, we turn to an indicator of whether the youth have had exposure to the residential school system through the lived experience of their parents and grandparents. We find that the mother of 7 per cent of the youth went to residential school, while this was the case for 10 per cent of their fathers. Since the Shubenacadie residential school (which was attended by Mi’kmaq children from all over Nova Scotia) closed its doors in the 1970’s, it would more frequently be the case that their grandparents attended residential schools than their parents. Chart 4.82 below shows that the grandparents of up to 26 per cent of the youth spent some time in residential schools. The youth questionnaire does not explore this dimension any further.

**Chart 4.82**

**Parent or Guardian Attended Residential Schools**

(Weighted Percentage Within Each Category)



**Conclusion to the Youth Chapter**

In this chapter, we have presented a considerable amount of data on the health of Mi'kmaq youth living on reserve in Nova Scotia. What are we to make of the results? Much of the information has both positive and negative elements to it. For example, we learned that only about 28 per cent of the youth use Mi'kmaq as their most common language of expression, quite a bit less than adults living on reserve. On the other hand, the figure for youth is higher than it was for 1997.

In education, the data shows that 80 per cent of Mi'kmaq youth have a positive orientation to their schooling, and they (especially female youth) have high educational aspirations. But we also learn that 43 per cent of the youth have had to repeat a grade, and that they are struggling with mathematics, reading and classroom distractions.

In the area of physical health, there seems to be a high level of physical activity but also high consumption of junk foods and problems with youth being overweight and obese. The major chronic health conditions represent a carryover from the time they were children, involving conditions affecting breathing and hearing such as allergies, asthma, bronchitis and ear infections. However, the levels are reduced from 1997. Injuries remain high, in fact higher than 1997 with between 40 and 50 per cent of youth experiencing injuries that required medical attention in the 12 months prior to the survey. Access to dental care is good, but still 19 per cent of youth say that they experienced dental problems or pain in the month before they were interviewed.

Most of the trends that we observed in the field of addictions are positive for Mi'kmaq youth. This is especially the case with cigarette smoking which is down substantially among both males and females, although still above Nova Scotia norms. The percentage of youth living in smoke free homes has also improved, from 27 per cent in 1997 to 46 per cent in 2002-03. The percentage of youth using alcohol is down but, among those who drink, heavy drinking by a portion of the youth population remains a concern. Between 34 and 44 per cent of Mi'kmaq youth take advantage of mood altering drugs, with marijuana the drug of choice, but the 2002-03 results are also notable for the high proportion of youth who chew tobacco.

About a third of the youth are sexually active, and among this group a high proportion use condoms or, among females, birth control pills. However, between 5 and 8 per cent do not use any protection because they are under the influence of drugs or alcohol, or they are not thinking, or they have a steady partner whom they trust.

In the area of personal wellness and support, we noted that youth play outdoors and engage in sports, and the young women are especially likely to be working. There is heavy use of television and computers, and male youth are very likely to play video games while the girls are doing chores. The self-image of youth is reported to be high, but there is a degree of fatalism when it comes to self-confidence as revealed in agreement with the statement that "there is little I can do to change things". Gender differences show up on dimensions such as stress, feeling sad/blue/depressed, and talking to others about mental and emotional health. However, between 10 and 20 per cent of youth seem isolated, saying that they have no one that they can go to when they encounter specific challenges such as anger management, boyfriend/girlfriend issues, or questions around sexually transmitted diseases. When it comes to social support and parenting, the issue is complicated by the fact that only 45 per cent of Mi'kmaq youth live with their father, and only 40 per cent of Mi'kmaq youth report that their biological parents are still living together.

## Chapter Five: The Health of Mi’kmaq Adults

As with children and youth, our information on the health of adults comes from a sample of adult respondents, but the results reported here are generalized to the adult Mi’kmaq population living on reserve as a whole. From an initial sample of 520 adults, we successfully interviewed 482 persons, reaching 93 per cent of our target. The format for adults involved the interviewer asking questions of the respondent and entering the results on a laptop computer. In some cases, if the respondent did not feel comfortable with this arrangement, results could be entered on a paper copy of the questionnaire and subsequently entered into the data base.

As Chart 5.1 shows, the respondents to the survey come from all 13 Mi’kmaq communities approximately in proportion to their size<sup>26</sup>.

**Chart 5.1**  
**Adult Respondents by Community of Residence**  
(Actual Number of Cases)

Acadia	6	Membertou	38
Afton	37	Millbrook	32
Annapolis Valley	8	Pictou Landing	28
Bear River	8	Shubenacadie	22
Chapel Island	41	Wagmatcook	24
Eskasoni	182	Whycocomagh	50
Horton	6		

### Personal Background Information

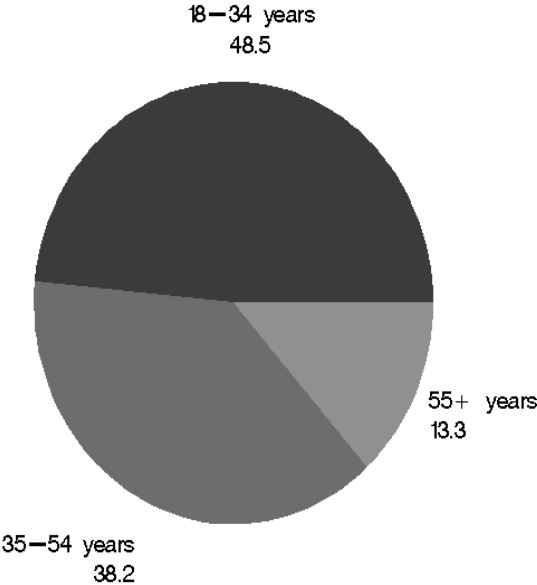
In this section, we present some results that describe the personal and household characteristics of the respondents, beginning with their age. In our survey, we defined adults as persons 18 years of age and over. Chart 5.2 shows that almost half the adult population living on reserve is

---

<sup>26</sup> The reader is reminded that, with the exception of Chart 5.1, all other charts in this chapter report weighted results for the Mi’kmaq population as a whole and not simply results based on the sample.

between the ages of 18 and 34 (up to but not including those aged 35 and over). This result is not surprising because it reflects the high birth rates and declining mortality rates of previous years, resulting in a large young adult population. Since these are the years when people form families and enter the labour market, it explains why there is so much pressure to find jobs and housing, and provide related services on reserve. This demographic bulge may also help to explain the importance of certain health conditions and health behaviours as well, as we shall see below.

**Chart 5.2**  
**Age of Adults**  
(Weighted Percentage)

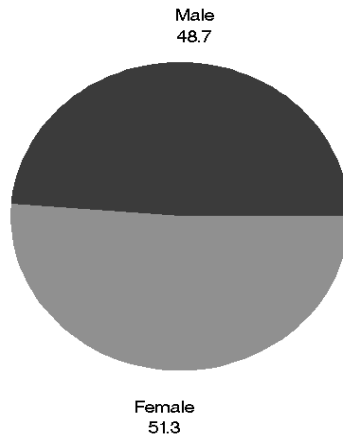


In Chart 5.3, information on the gender of the adult population living on reserve is presented. The chart reveals a slightly higher proportion of females than males on reserve, a finding that is consistent with our 1997 results and also with other data sources such as the 2001 Census<sup>27</sup>.

**Chart 5.3**

**Gender**

(Weighted Percentage)

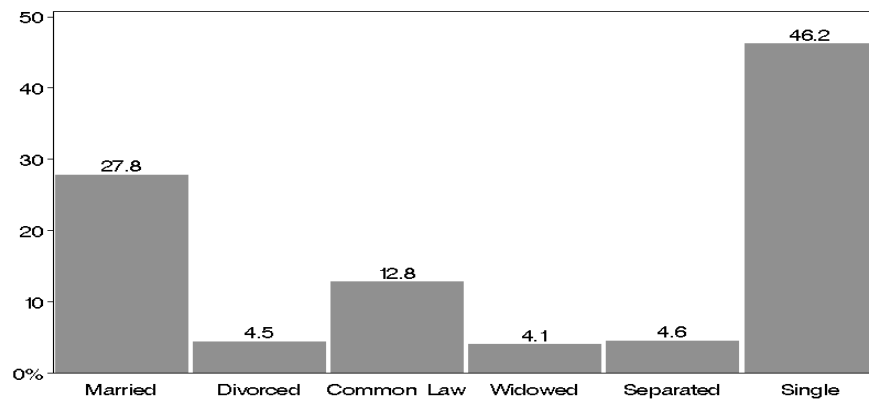


Given the high proportion of young adults, it is perhaps not surprising to find that almost half of the adult population is still single. Another 28 per cent are married and 13 per cent are in a common law relationship (Chart 5.4).

**Chart 5.4**

**Marital Status**

(Weighted Percentage)



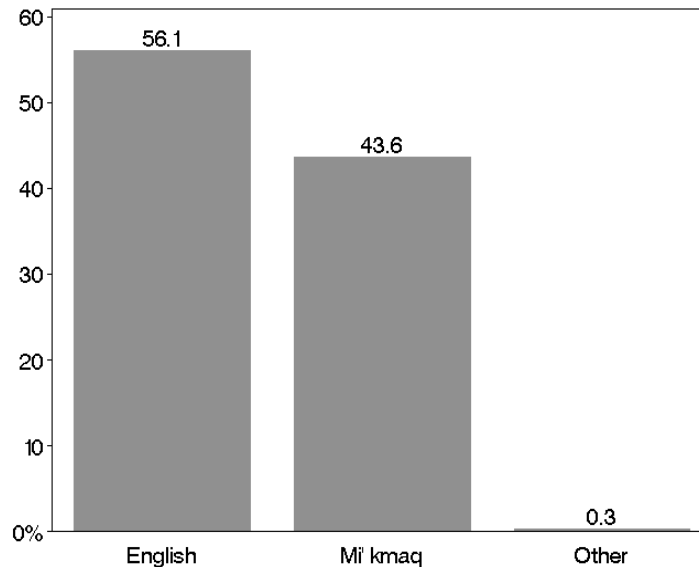
<sup>27</sup> Unless otherwise noted in this chapter, figures comparing our results with First Nations in Canada are taken from the First Nations Regional Longitudinal Health Survey 2002/03 compiled by the National Aboriginal Health Organization (2005). Figures for the Nova Scotia population were collected in 2003 by the Canadian Community Health Survey, Cycle 2.1, and compiled by the Nova Scotia Department of Health (2005). In this and other chapters, data on the health of the Nova Scotia Mi'kmaq population in 1997 is taken from the Mi'kmaq Health Research Group (1999).

## Language and Education

There is understandably much concern about the loss of Aboriginal languages in Canada, and efforts are being made in Nova Scotia and elsewhere to teach native languages in some schools. However, in view of five centuries of sustained interaction between the Mi'kmaq and those who settled here from Europe and America, when for some of that time the newcomers tried to implement a policy of coerced assimilation, it is also surprising how resilient the use of the Mi'kmaq language has been.

Chart 5.5 shows that English and Mi'kmaq are the two languages adults use most often in daily life, with 44 per cent of the adult population stating that Mi'kmaq is the language most often used in daily life.

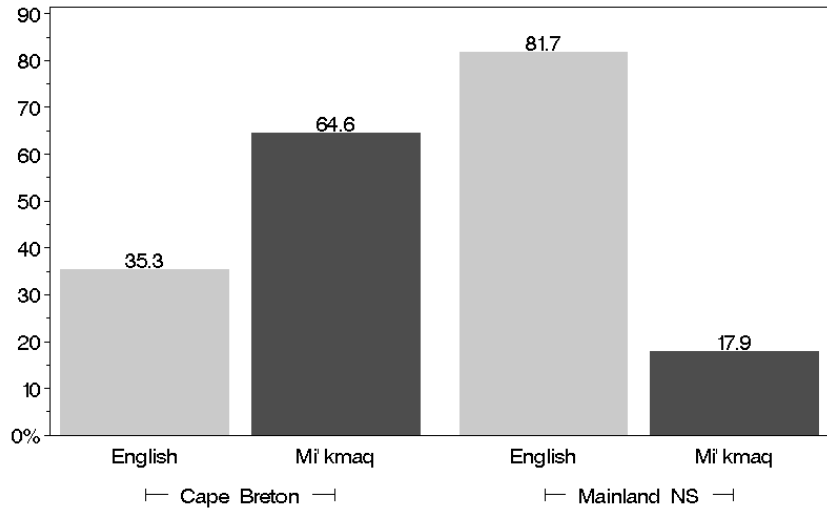
**Chart 5.5**  
**Language Used Most Often**  
(Weighted Percentage)



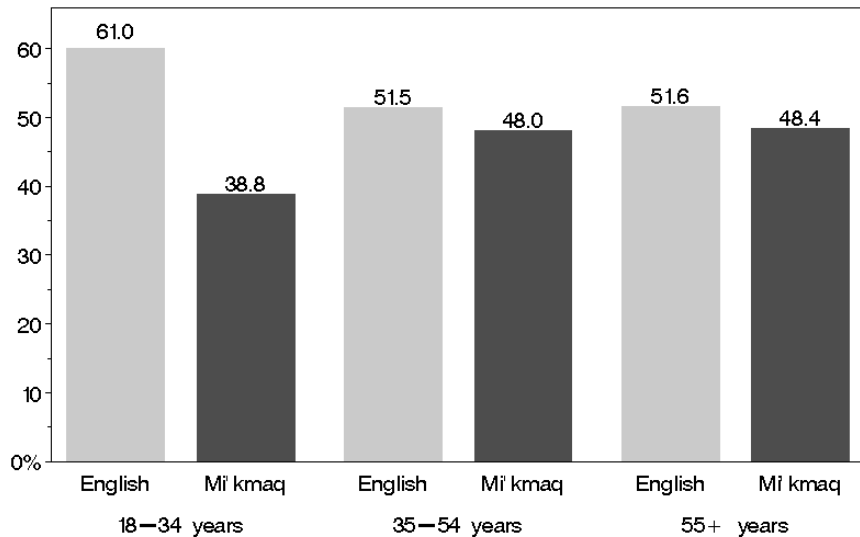


However, there are sharp differences in the extent to which Mi'kmaq is used from one community to another. In general, the language is much healthier in Cape Breton than on the Nova Scotia mainland, as Chart 5.6 reveals. In Chart 5.7, we look at language use by age group, showing that English is much more likely to be the language of choice among the younger portions of the adult population.

**Chart 5.6**  
**Language Used Most Often by Region**  
 (Weighted Percentage)



**Chart 5.7**  
**Language Used Most Often by Age Group**  
 (Weighted Percentage Within Age Group)



In the next charts, we look at how comfortable or fluent adults are in speaking Mi'kmaq. Chart 5.8 shows that a majority of adults are either fluent in speaking Mi'kmaq or speak it relatively well.

**Chart 5.8**  
**Do You Speak Mi'kmaq?**  
(Weighted Percentage)

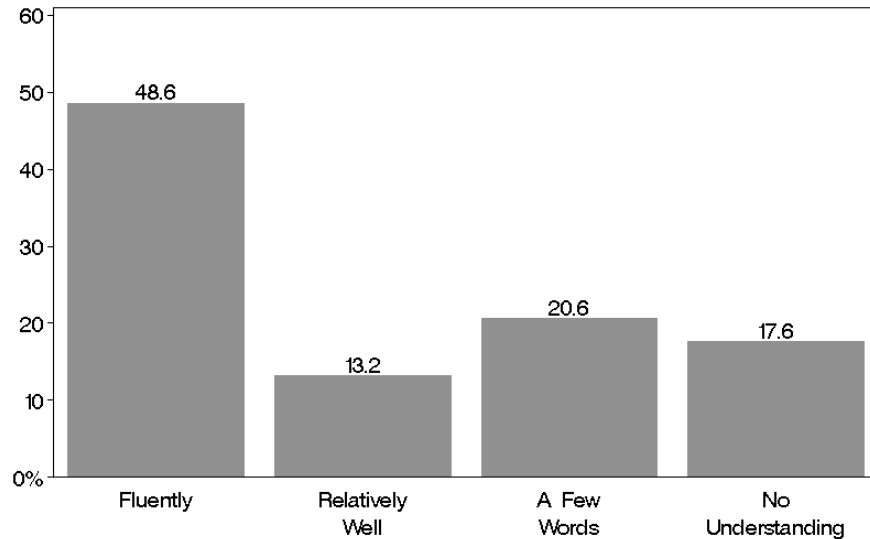
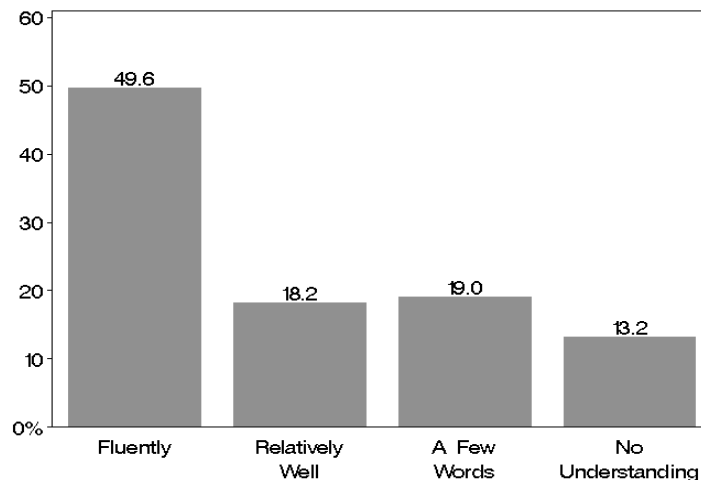


Chart 5.9 provides information on understanding Mi'kmaq. About two-thirds of the respondents claim they are fluent in understanding Mi'kmaq, or understand it relatively well, while the remainder comprehend only a few words or not at all.

**Chart 5.9**  
**Do You Understand Mi'kmaq?**  
(Weighted Percentage)

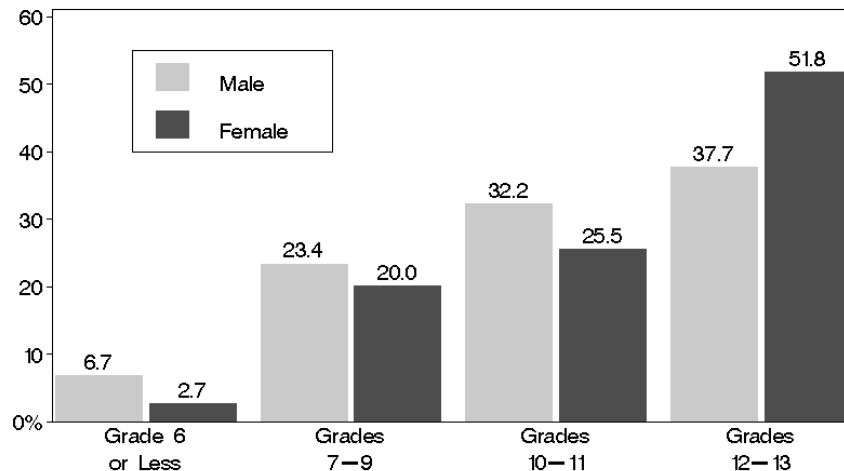


With respect to educational achievement among the adult on-reserve population, Chart 5.10 shows that about half of the adult females have completed high school while only some 38 per cent of adult males have done so. For both groups, the figures are better than they were in 1997 (41 per cent and 29 per cent respectively) but they still leave a large proportion of the adult population with less than a high school education. A slightly different question, did you graduate from high school, generates lower percentages – 32% for males and 42% for females (Chart 5.11). The first set of figures may be higher because those who completed GED-type courses would perhaps say that they *completed* high school but not that they *graduated* from high school.

**Chart 5.10**

**Highest Grade of Elementary or Secondary School Completed**

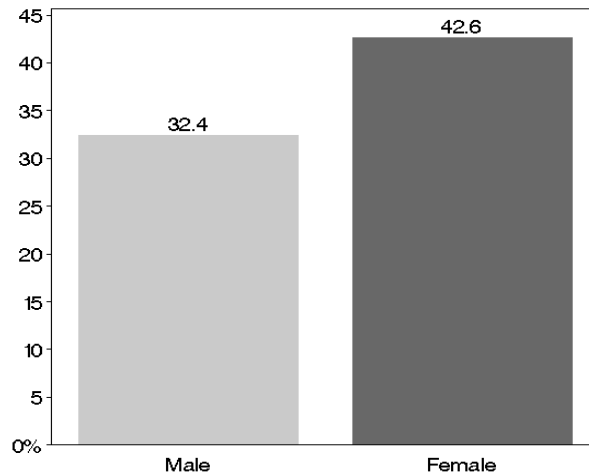
(Weighted Percentage Within Gender)



**Chart 5.11**

**Did You Graduate from High School?**

(Weighted Percentage Within Gender)



Of course, many of those who reached the senior high school level did not stop there. In Chart 5.12, we provide figures for the percentage of on-reserve adults who have enrolled in or completed various kinds of post-secondary education. The gender differences are interesting in this chart, for they show adult males to be much more likely than females to enrol in trade and technical kinds of courses, but there is a sharp drop-off in males actually graduating with a diploma or certificate. Adult females are also more likely to graduate from university. The apparent high rate at which adult males (and to a lesser degree, adult females) begin but then withdraw from post-secondary education is a subject worthy of more in-depth study<sup>28</sup>.

**Chart 5.12**  
**Post-Secondary Education**  
(Weighted Percentage Within Gender)

Type and Level of Post-Secondary Education	Males	Females
Some trade, technical or vocational school	31.2%	16.2%
Some community college or CEGEP	10.0%	11.3%
Some university	22.6%	25.8%
Diploma or certificate from trade, technical or vocational school	16.3%	9.6%
Diploma/certificate from community college, CEGEP or university	12.0%	12.6%
University degree	6.4%	12.8%
Master's degree	0.0%	3.4%
Earned doctorate (PhD)	0.0%	0.0%

### Employment and Income

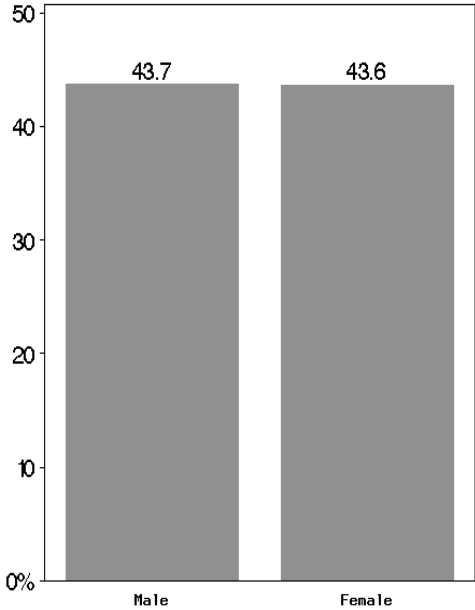
Respondents were asked if, at the time of the survey, they were working for pay – meaning that they could be earning wages, a salary, or be self-employed. The results provided in Chart 5.13 reveal that close to 44 per cent of the adult population was working at the time of the survey. This compares to an employment rate of 55 per cent for Nova Scotians generally. The chart also suggests that there is little difference between males and females on this dimension, but in the Nova Scotia population, the employment rate is 60 per cent for males and 50 per cent for females. While only 44 per cent of Mi'kmaq adults were reported to be working, this should not be taken to mean that the rest of the adult population (some 56%) were deemed to be unemployed because there are other possibilities. For example, those not working may be retired, or in poor health, going to school or looking after small children. But clearly the percentage of

---

<sup>28</sup> Some of the gap between enrolment and graduation may be explained by some students whose studies are currently in progress.

the adult Mi'kmaq population that was working at the time of the survey is relatively small and it does imply a high rate of unemployment<sup>29</sup>.

**Chart 5.13**  
**Currently Working for Pay**  
(Weighted Percentage)



---

<sup>29</sup> The employment rate for Nova Scotians is reported by Statistics Canada to be the percentage of the population 15 years of age and over that is working. The figure for the Mi'kmaq presented above reports on the population 18 years of age and over.

Further insight into economic factors is provided in Chart 5.14, which provides data on sources of income for the adult population. The question asked the respondent whether, in the prior year, he/she received income from any of the following sources. Multiple answers could be chosen. The results reveal that income from paid employment and from social assistance were the two main sources of income for adults in the year 2001. Gender differences are evident, especially with respect to males being more likely to be self-employed and receiving income from employment insurance. Mi'kmaq women were more likely to report receiving income from child tax benefits.

**Chart 5.14**  
**Income Sources**  
 (Weighted Percentage Within Gender)

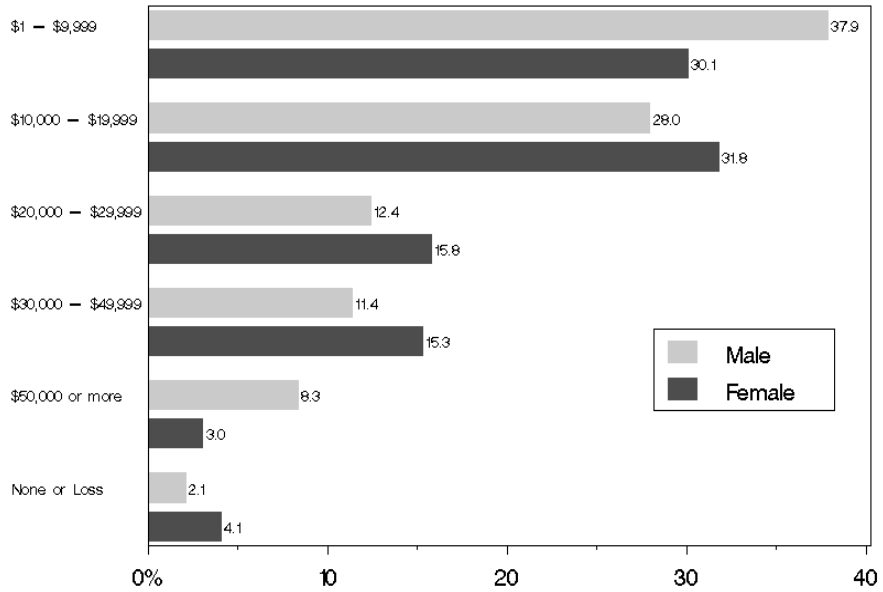
<b>Income Source</b>	<b>Males</b>	<b>Females</b>
Paid employment	55.2%	46.1%
Self-employment	17.0%	7.5%
Employment insurance	23.0%	11.2%
Social assistance	43.7%	54.2%
Royalties, trusts, land claims	4.3%	7.0%
Old age security	1.7%	3.5%
Canada/Quebec pension plan	3.2%	4.8%
Guaranteed income supplement or spouse's allowance	0.0%	5.8%
Retirement, pensions, etc.	0.4%	0.5%
Veteran's pension	0.4%	1.8%
Child tax benefits	13.3%	56.5%
Child support, alimony	0.9%	3.5%
Worker's compensation	0.4%	2.0%
Disability allowance	1.3%	1.1%
Education or training allowance	10.2%	15.4%

Charts 5.15 and 5.16 document predominantly low incomes on the part of adults living on reserve. With respect to *personal* income, the most frequently chosen categories are in the range up to \$19,999 (Chart 5.15). For *household* incomes, where multiple earners come into play, higher income categories are chosen but the large majority of cases are accounted for by the time one reaches the \$50,000 mark. On the whole, these two charts portray a population in which poverty is a major factor, and this no doubt has substantial implications for health.

**Chart 5.15**

**Personal Income**

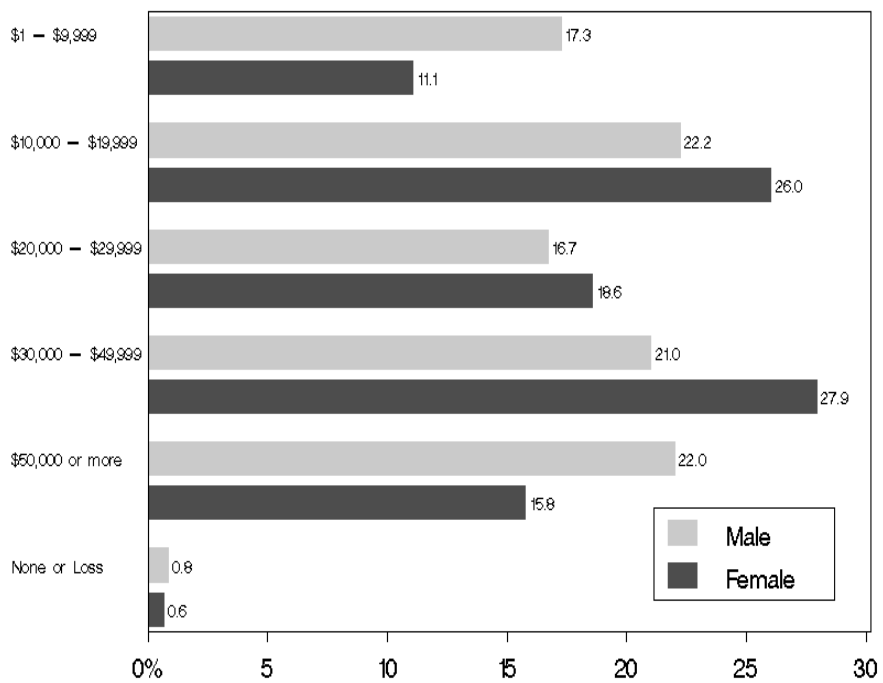
(Weighted Percentage Within Gender)



**Chart 5.16**

**Household Income**

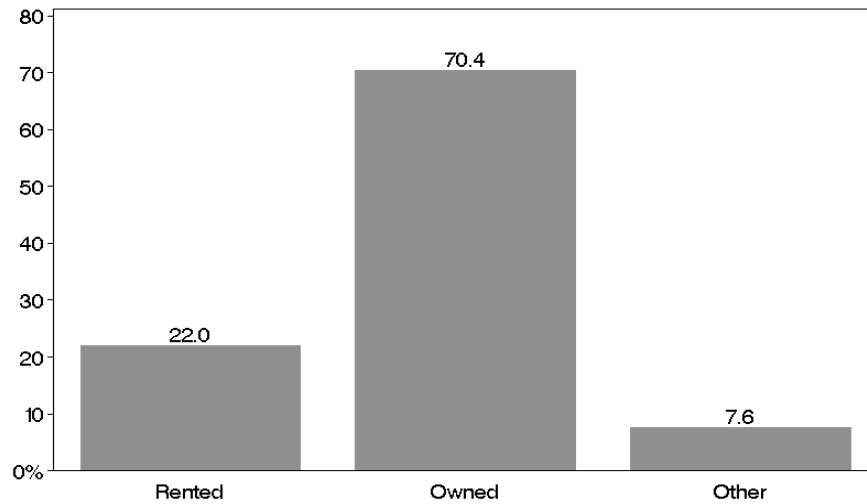
(Weighted Percentage Within Gender)



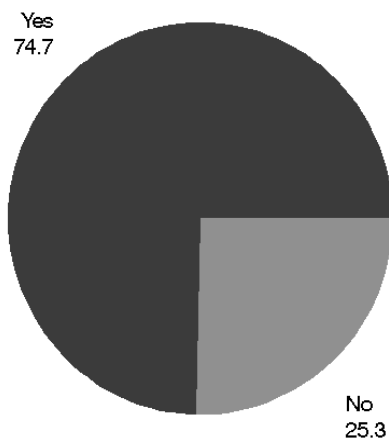
## Housing

Some persons who live on reserve are clearly in rental housing such as apartment buildings, and this reflected in Chart 5.17. However, more than two-thirds of adults say that they own their own home. This is despite the fact that three quarters also say they live in housing owned by the Band (Chart 5.18). It appears that many of those who live in Band-owned housing still consider it to be their own home.

**Chart 5.17**  
**Home Ownership**  
(Weighted Percentage)



**Chart 5.18**  
**Do you live in Band-owned Housing?**  
(Weighted Percentage)





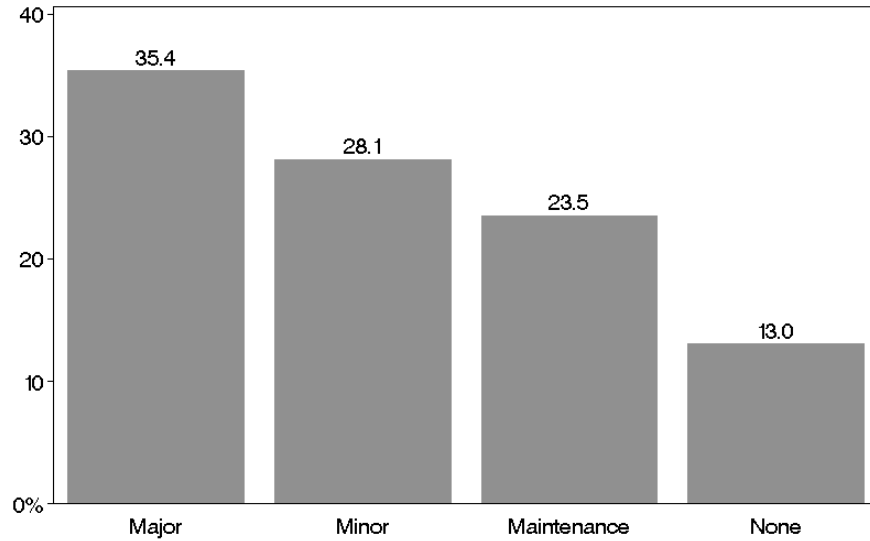
Almost all the homes have the basic amenities such as stoves, refrigerators, hot and cold running water, and a septic tank or sewage service (Chart 5.19). Close to half report having a computer and an internet connection.

**Chart 5.19**  
**Home Amenities**  
(Weighted Percentage)

Type of Amenity	Weighted Per cent
Working smoke detector	83.5%
Carbon monoxide detector	11.6%
Fire extinguisher	50.0%
Telephone with service	79.8%
Computer	54.8%
Connection to the Internet	46.3%
Refrigerator	99.7%
Stove for cooking	99.3%
Electricity	99.9%
Cold running water	99.4%
Hot running water	99.4%
Flush toilet	99.4%
Septic tank or sewage service	98.1%
Garbage collection service	96.9%

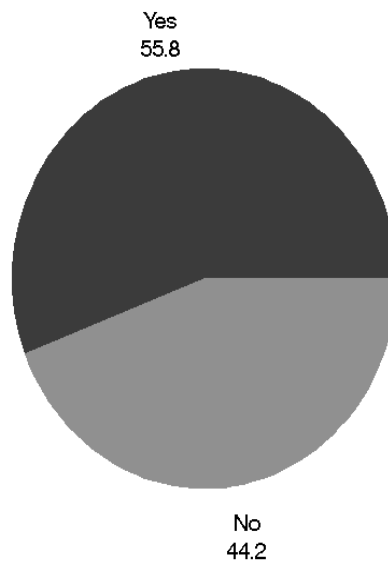
Respondents were asked if their dwelling was in need of repairs and if so, what level of repair was required. Examples of major repairs given in the question included defective plumbing or electrical wiring, or structural repairs to walls, floors, or ceiling. Minor repairs were exemplified by missing or loose floor tiles, bricks, shingles, or defective steps, railing or siding. Regular maintenance refers to things like painting or furnace cleaning. Informed by these examples, just over a third of the respondents replied that their dwelling required major repairs and more than a quarter said their home required minor repairs. Thirteen per cent said that no repairs were required (Chart 5.20)

**Chart 5.20**  
**Home Repairs Needed**  
(Weighted Percentage)



In addition, just over half the households reported that there has been mold or mildew in their home in the past 12 months (Chart 5.21)

**Chart 5.21**  
**Mold or Mildew in the Home**  
(Weighted Percentage)

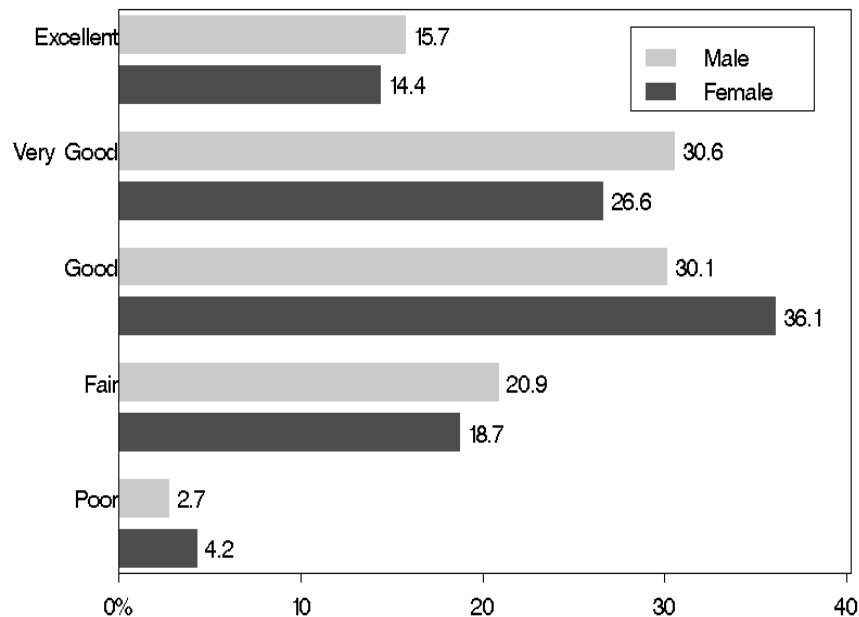


## General Health

In the preceding sections, we have described a number of background characteristics of Mi'kmaq adults, including many (such as age, gender, employment, education, and housing) that are related to health outcomes. We begin now to describe the health of the adult population, beginning with the respondents' rating of their own health. In the absence of an actual assessment by health professionals, this self-reporting of health status is a reasonable approximation.

We see from Chart 5.22 that only a small percentage of adults (around 15 per cent) describe their health as excellent, but on the other hand about three quarters of the adults claim that their health is at least good or better. The chart also reveals some gender difference, with adult females more likely to say that their health is good rather than very good or excellent. There are also some predictable differences by age group (Chart 5.23). Those 55 years and over are more likely to report that their health is only fair or poor than is the case for younger age groups.

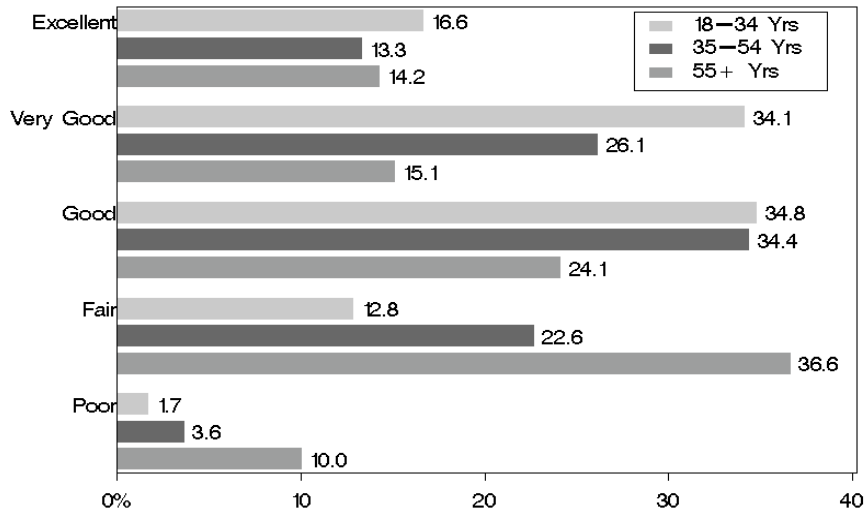
**Chart 5.22**  
**Self-Rating of Health**  
(Weighted Percentage Within Gender)



### Chart 5.23

#### Self-Rating of Health

(Weighted Percentage Within Age Group)

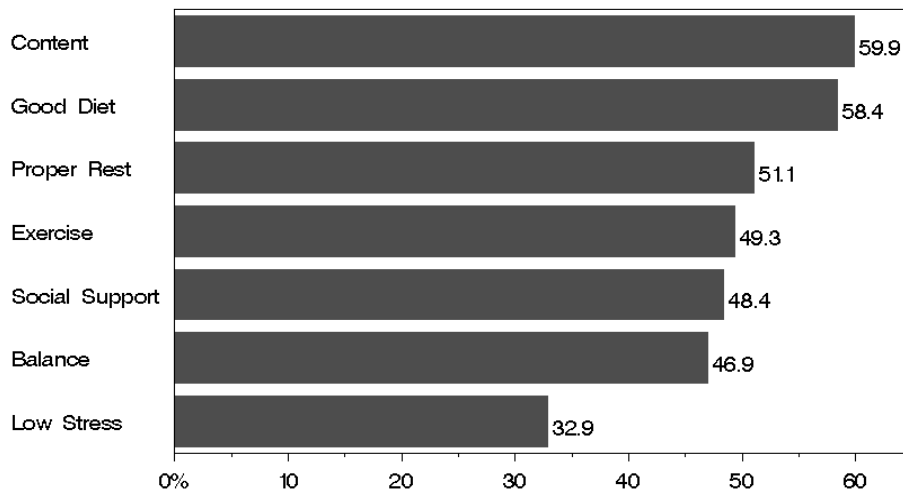


Respondents were then asked what factors made them healthy. This was an open-ended question rather than one where the interviewer read out a list of possibilities. In response, the adult population mentioned such things as being happy or content, eating a good diet, and getting proper rest and regular exercise. Having good social supports (for example, from family, friends and co-workers) was also deemed to be important as was the idea of living a life that was in balance in terms of the physical, emotional, mental and spiritual dimensions. The answers are interesting because they reflect an awareness of the determinants of health that are quite broadly based (Chart 5.24).

### Chart 5.24

#### What Makes You So Healthy?

(Weighted Percentage)



## Health Conditions

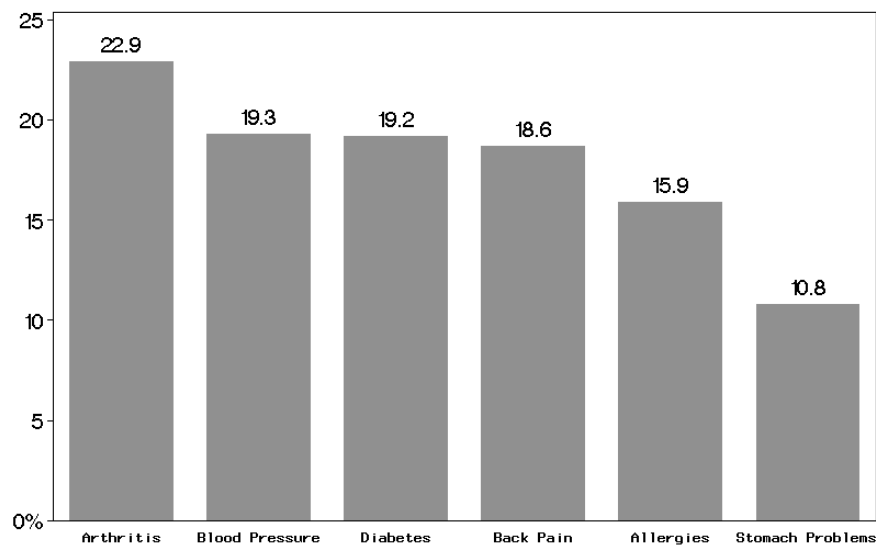
From the following two charts, we get an idea of the health conditions that are most common among Mi'kmaq adults, both male and female (Charts 5.25 and 5.26). Respondents were asked if they have been told by a health care professional that they have any of a long list of health conditions. For adult males, the following chart reveals that arthritis, high blood pressure, diabetes, and back pain were important, followed by allergies and stomach problems. The list is similar for females, although the order of the items varies a bit from the male pattern. In particular, allergies are more frequently mentioned while high blood pressure is a less frequently chosen category.

Two other things are notable about these charts. First, while many of the ailments chosen would also be high on the list for Nova Scotians generally, what really stands out is the high percentage of adults who have been told by a health professional that they have diabetes – 19 per cent for males and 20 per cent for females. This compares to 5.5 per cent of Nova Scotians who report that they have been diagnosed with diabetes, and 4.6 per cent of Canadians. Secondly, the charts reveal that a higher proportion of adult females among the on-reserve adult population report these health conditions than is the case for males.

### Chart 5.25

#### Chronic Health Conditions: Male

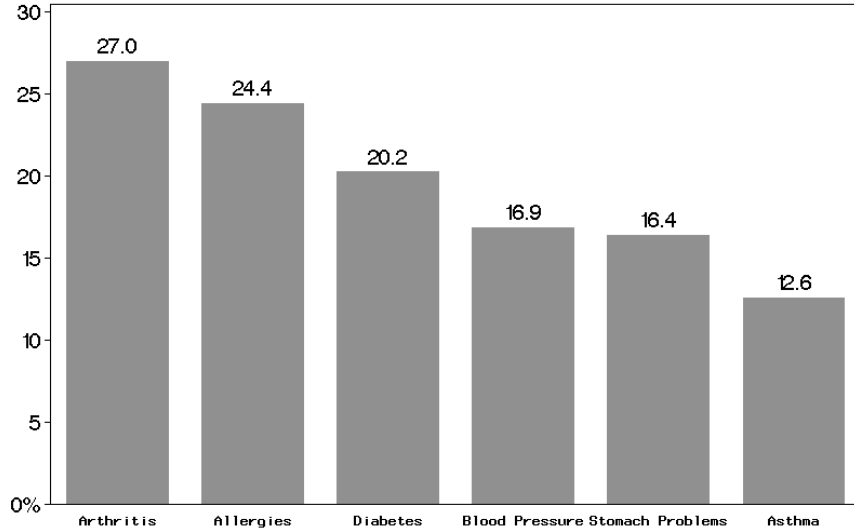
(Weighted Percentage for the Six Most Frequently Reported Conditions)



### Chart 5.26

#### Chronic Health Conditions: Female

(Weighted Percentage for the Six Most Frequently Reported Conditions)

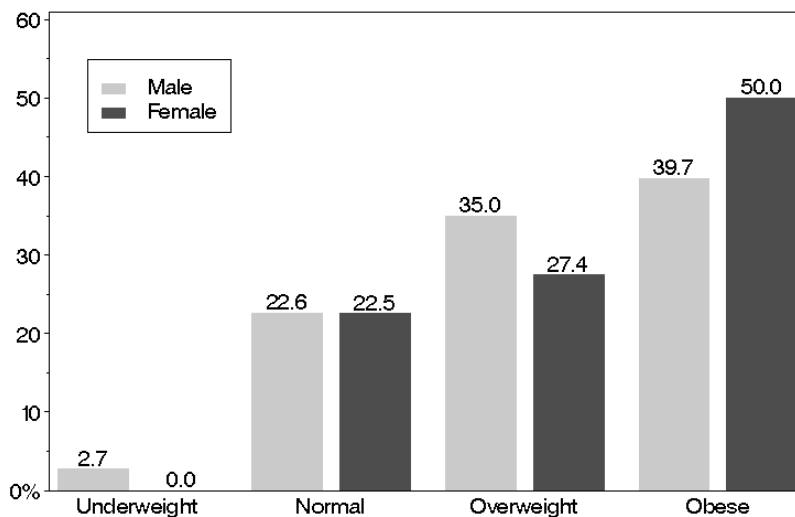


It has been well established that diabetes is related to contributors such as improper nutrition, lack of exercise and being overweight or obese. With respect to weight, we report the body mass index for males and females in Chart 5.27 and for age groups in Chart 5.28. As with children and youth, we use the categorizations provided by the National Aboriginal Health Organization. The Body Mass Index calculation was not possible for 19 per cent of respondents due to missing data on the weight and/or height dimension.

### Chart 5.27

#### Body Mass Index

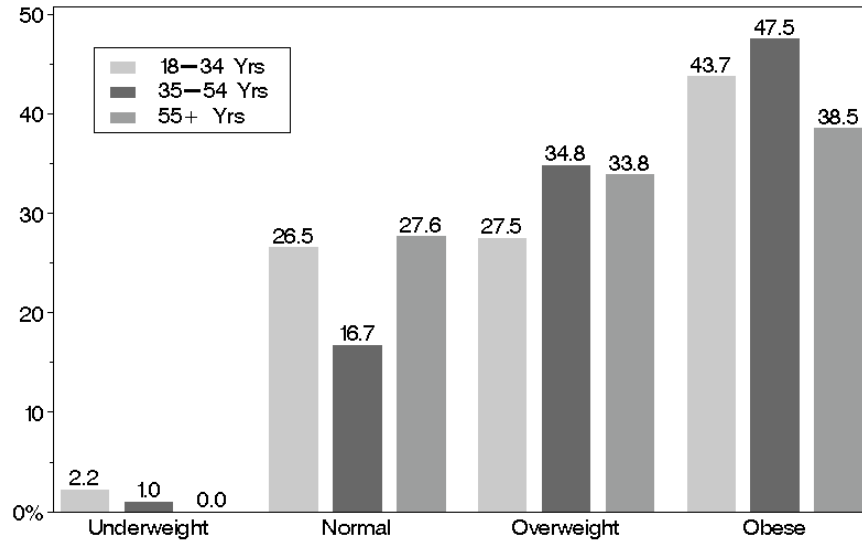
(Weighted Percentage Within Gender)



**Chart 5.28**

**Body Mass Index**

(Weighted Percentage Within Age Group)

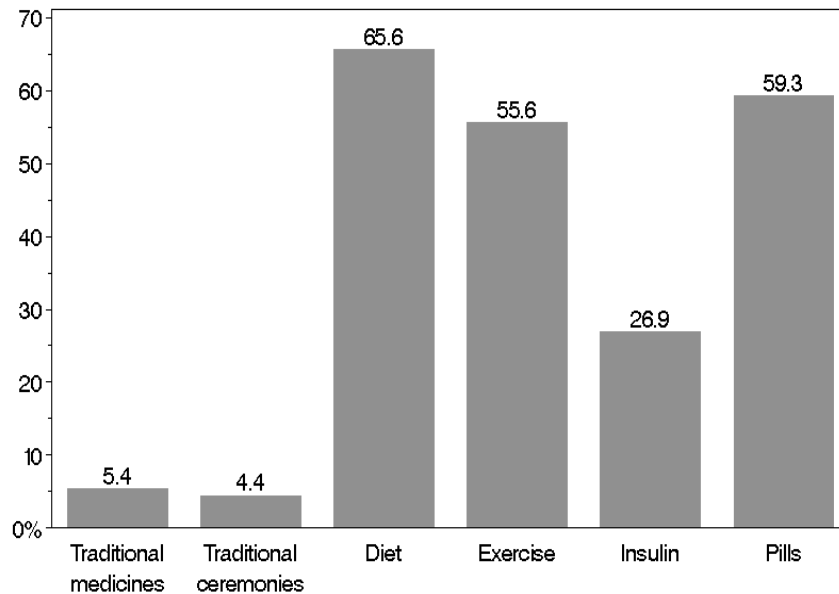


Mi'kmaq adults with diabetes use a number of different methods to control this condition, among them traditional medicines and ceremonies, including help from healers. However, the most common measures involve reliance on diets, pills and exercise (Chart 5.29).

**Chart 5.29**

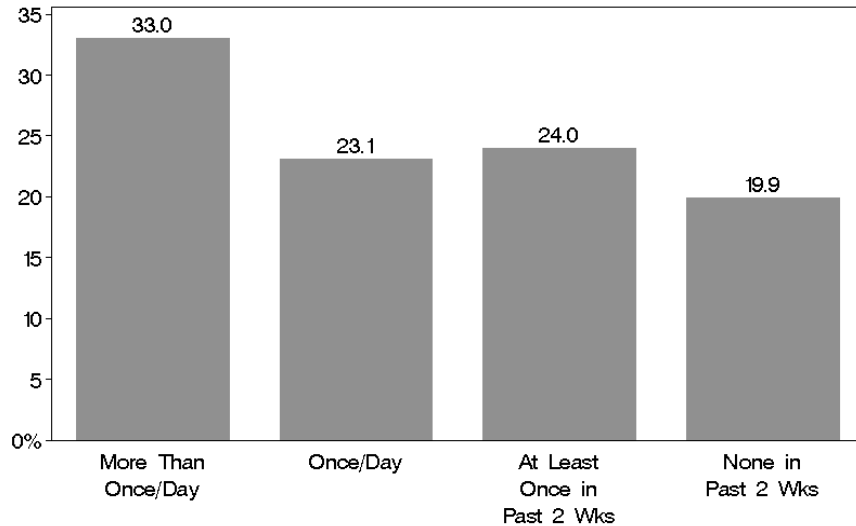
**Measures Used To Control Diabetes**

(Weighted Percentage)



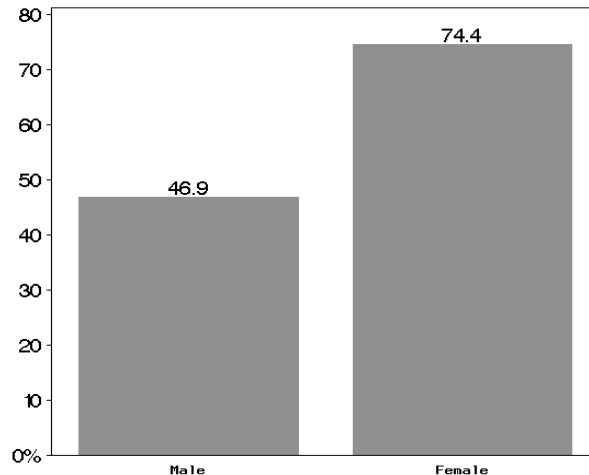
Information is also available on how frequently persons with diabetes check their blood sugar levels. A majority of respondents do this at least once a day, and others at least once per week, but 20 per cent have not done so in the two weeks preceding their interview (Chart 5.30).

**Chart 5.30**  
**Frequency of Checking Blood Sugar**  
 (Weighted Percentage)



We note as well that, among women with diabetes, three-quarters of them were attending a diabetes clinic or seeing someone for diabetes education at the time of the survey. However, among the males there is considerable room for improvement with less than half obtaining education or support from these services (Chart 5.31).

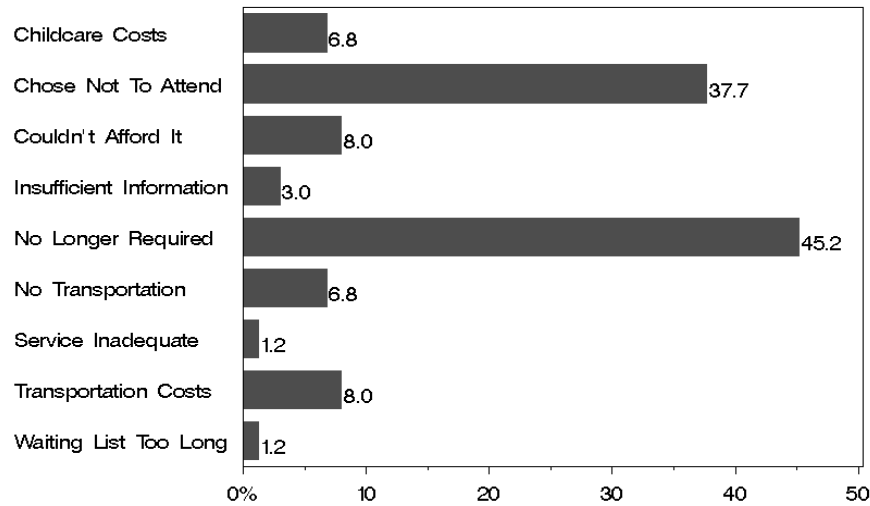
**Chart 5.31**  
**Currently Attending Diabetes Clinic**  
 (Weighted Percentage)





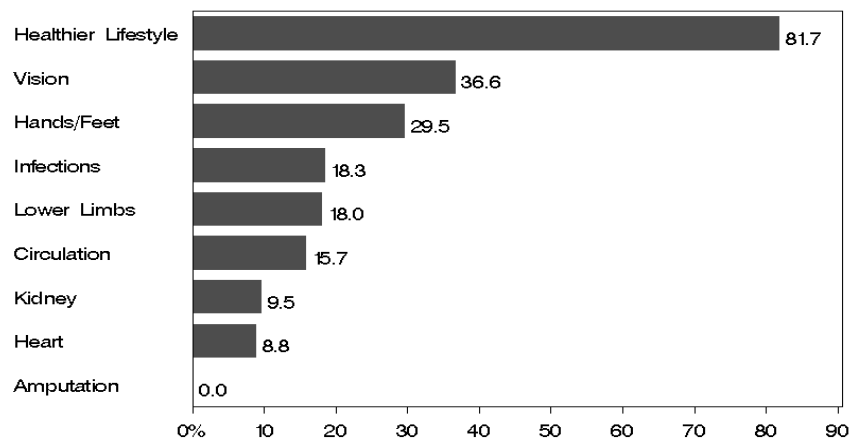
This may be legitimate if attending is no longer required and almost half of those with diabetes claim that is the case. However, almost 40 per cent indicate that they have chosen not to attend, and barriers to attendance such as child care costs and lack of access to transportation create difficulties for some persons (Chart 5.32).

**Chart 5.32**  
**Reasons for Not Attending Diabetes Education**  
 (Weighted Percentage)



Diabetes is a serious illness and it is not surprising to learn that it has had a substantial impact on those who have contracted it. For most, it has led to the person leading a healthier lifestyle, but more than a third have had their vision affected and close to that proportion have experienced difficulty with their hands and feet (Chart 5.33).

**Chart 5.33**  
**Impact of Diabetes**  
 (Weighted Percentage)



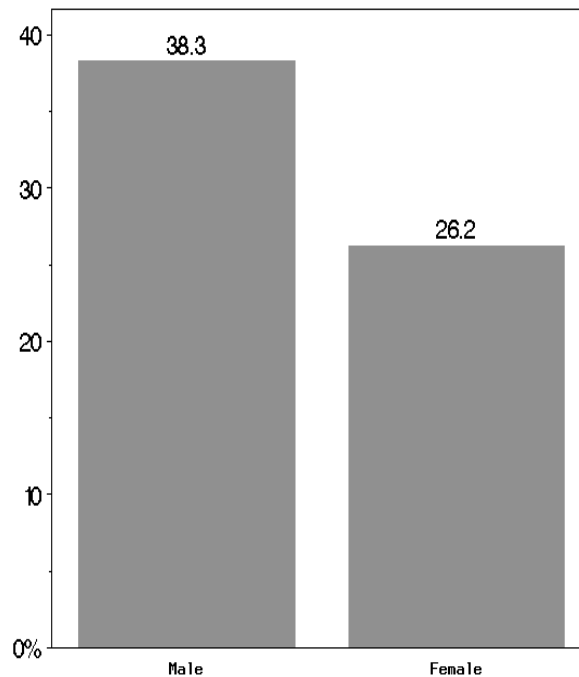
## Physical Injuries

The level of injuries is high among Mi'kmaq adults, although not as high as among youth. Thirty-eight per cent of males report being injured in the past 12 months, compared to 26 per cent for females (Chart 5.34). These figures are quite a bit higher than in 1997, when only 21 per cent of males and 13 per cent of females reported being injured in the previous 12 months.

**Chart 5.34**

### Injured in Past 12 Months

(Weighted Percentage Within Gender)



The following chart gives a picture of the kinds of injuries sustained. Major cuts scrapes and bruises, as well as major sprains or strains topped the list for both males and females, but there were also a fair number of broken bones and burns. Dental injuries occurred frequently among Mi'kmaq males, suggesting perhaps sports-related injuries. In general, almost all types of injuries were less likely to occur among females (Chart 5.35)

**Chart 5.35**  
**Types of Injuries**  
 (Weighted Percentage Within Gender)

Type of Injury	Males	Females
Broken or fractured bones	13.8%	9.7%
Burns or scalds	7.3%	4.4%
Dislocation	4.5%	2.1%
Sprain or strain (major)	18.3%	10.6%
Cuts, scrapes, bruises (major)	20.0%	11.5%
Concussion	5.2%	1.8%
Poisoning	0.8%	0.0%
Injury to internal organ	1.3%	2.5%
Dental injury	10.7%	1.8%
Hypothermia, frostbite	0.7%	0.5%

In terms of the circumstances that gave rise to the injuries sustained, by far the most important is a person falling or tripping. Sport-related injuries are also important, followed by bicycle accidents and various kinds of physical assault (Chart 5.36).

**Chart 5.36**  
**Causes of Injuries**  
 (Weighted Percentage)

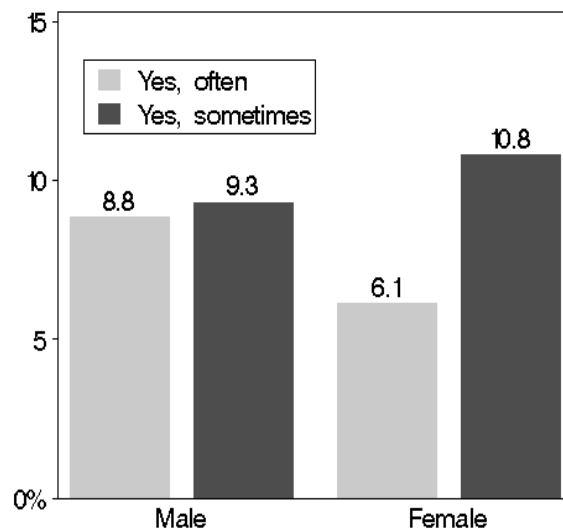
Cause of Injury	Weighted Percentage
Fall or trip	46.0%
Sport	19.5%
Bicycle (including collisions with autos)	11.8%
Physical assaults and domestic violence	10.9%
Scalded by hot liquid or food	10.4%
Motor vehicle accident	6.8%

**Disability and Physical Activity Limitation**

We see from Chart 5.37 that around 18 per cent of adults state that they often or sometimes are limited in the kinds or amount of activity they can do at home because of a physical or mental condition or health problem. This is higher than the 12 per cent figure established in the 1997 survey, but the questions aren't strictly comparable. In 1997, some emphasis was placed in the question on *long term* activity limitation and this element is missing from the 2002 questionnaire.

We note that there is not a lot of difference between males and females with respect to activity limitation at home. There are major differences, as one would expect, by age group. The percentage reporting that they experience activity limitations often or sometimes jumps from about 3 per cent among the 18-34 year age group to 11 per cent among those 35 to 54, and to 21 per cent in the 55 and over age category (Chart 5.38).

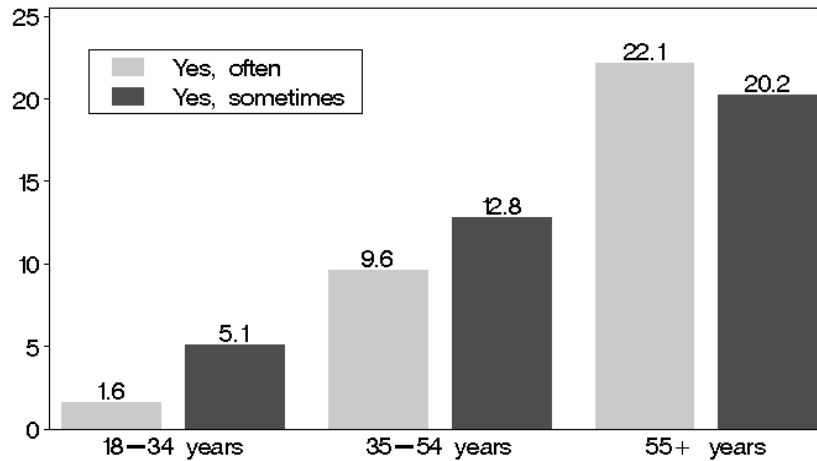
**Chart 5.37**  
**Activity Limitations At Home**  
(Weighted Percentage Within Gender)



**Chart 5.38**

**Activity Limitations At Home**

(Weighted Percentage Within Age Group)



Respondents were asked if they currently needed a number of services in their home to help them cope with a physical condition or health problem. They also had the opportunity to say whether in fact they received the service in question. An indication of unmet needs is derived from these two pieces of information. Chart 5.39 shows that in almost all cases the majority of respondents are receiving the services they need, but that still leaves significant numbers who are not well served. This is especially true of home maintenance, but also other services such as personal care and light housekeeping.

**Chart 5.39**

**Those Receiving Home Services**

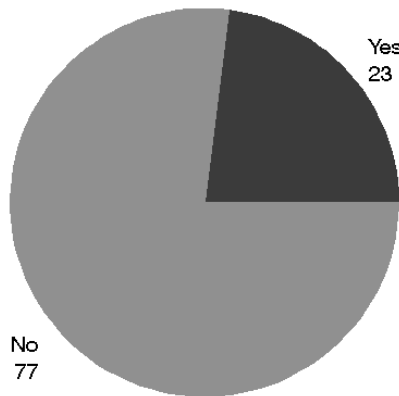
(Weighted Percentage of those needing each service)

Type of Service	Weighted Percentage
Light housekeeping	59.8%
Home maintenance (minor repairs, etc.)	25.1%
Care from a nurse	79.7%
Palliative care (terminally ill)	63.0%
Personal care (grooming, washing, etc.)	53.8%
Meals prepared or delivered	71.7%

**Health Care Access**

Almost a quarter (23 per cent) of the adult respondents indicated that they used traditional medicines Chart 5.40). While this number is substantial, it is down from the 34 per cent who responded in the affirmative in 1997. However, the question asked in 1997 is not strictly comparable with what was asked in 2002-03.

**Chart 5.40**  
**Using Traditional Medicines**  
(Weighted Percentage)



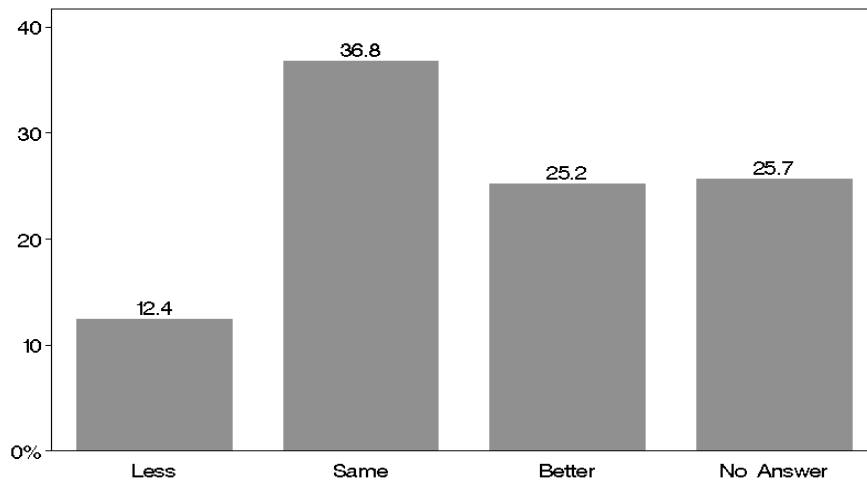
The data reveals that just under 20 per cent of adults are not interested in using traditional medicines, but others report various barriers to accessing them. These obstacles are summarized in Chart 5.41 in order of importance. We can see that the most common obstacles have to do with lack of information both about the nature of these medicines and where to find them. Issues relating to costs are less frequently mentioned.

**Chart 5.41**  
**Barriers to Accessing Traditional Medicines**  
 (Weighted Percentage)

Type of Barrier	Weighted Percentage
Do not know enough about them	23.2%
Do not know where to get them	17.0%
Not available through health centre	6.5%
Not covered by NIHB	4.1%
Concerned about effects	3.4%
Too far to travel	2.8%
Can't afford them	0.6%

Respondents were also asked how they would rate their access to services more generally, compared to other Canadians. The most common response was that they rated access to be about the same as for other Canadians, but 25 per cent said it was better and 12 per cent worse. A substantial proportion (26 per cent) didn't answer this question, likely because they didn't know (Chart 5.42).

**Chart 5.42**  
**Level of Access to Health Services**  
 (Weighted Percentage)



In the next chart, we obtain an idea of the kinds of access barriers that Mi'kmaq adults are experiencing when they try to access health care services. We see from Chart 5.43 that by far the most important obstacle, mentioned by just under half the respondents, is the length of the waiting list. This is followed by other factors that have to do either with expenses that cannot be afforded (e.g., lack of transport, not covered by NIHB, cost of care etc.) or questions about the adequacy or availability of the service (e.g., doctor/nurse not available; service not culturally appropriate).

**Chart 5.43**  
**Barriers to Receiving Health Care**  
 (Weighted Percentage)

Waiting List Too Long	46.5%	Cost Of Care, Service	12.8%
No Transportation	22.8%	No Access to Traditional Care	12.0%
Not Covered By NIHB	22.3%	Culturally Appropriate	11.5%
Doctor/Nurse Not Available	15.7%	Chose Not To Seek Healthcare	10.3%
Health Care Inadequate	15.1%	Service Was Not Available	10.0%
Transportation Costs	15.0%	Health Facility Not Available	7.7%
NIHB Approval Denied	14.8%	Child care Costs	7.7%

The questionnaire also delved deeper into the kinds of health services that were difficult to access from NIHB. Medication was the most important, followed by dental care, transportation services and vision care (Chart 5.44).

**Chart 5.44**  
**Difficulty Accessing NIHB Health Services**  
 (Weighted Percentage)

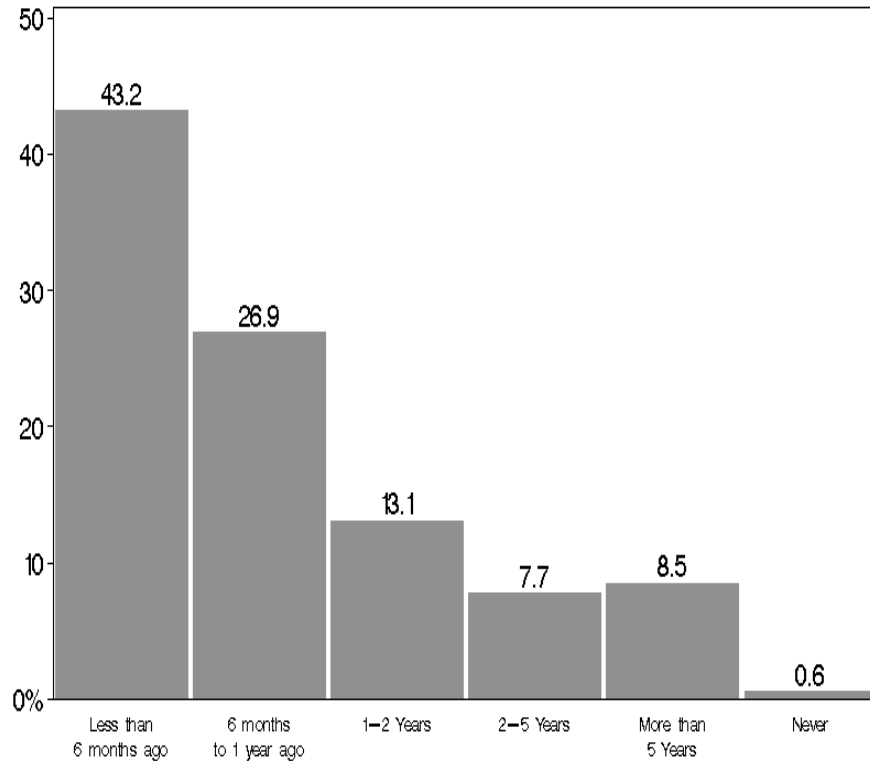
Medication	19.3%
Dental Care	13.7%
Transportation Services Or Costs	12.2%
Vision Care	11.3%
Other Medical Supplies	7.1%
Escort Travel	5.3%
Hearing Aid	0.9%

### Dental Care



Over two-thirds of the adult population has received dental care in the year prior to their interview (somewhat better than in 1997), but on the other hand, some 17 per cent have not had dental attention for two years or more (Chart 5.45).

**Chart 5.45**  
**Last Time Dental Care Received**  
(Weighted Percentage)



Part of the reason for not accessing dental services may be the fact that respondents are encountering barriers, such as lack of coverage for the service under NIHB, or the refusal of NIHB to approve the service. As with access to other health care services, costs factors are important not only for the service itself but also for transport and other items such as childcare. Long waiting lists and inadequacy of services are also reported (Chart 5.46).

**Chart 5.46**  
**Barriers to Dental Care Access**  
 (Weighted Percentage)

Service Not Covered By NIHB	12.5%
Approval For Services Under NIHB Was Denied	10.0%
Transportation Costs	8.9%
Waiting List Too Long	8.6%
Dental Services Not Available In My Area	8.3%
Cannot Afford It	8.0%
Felt Dental Services Were Inadequate	6.6%
Direct Cost Of Care	5.4%
Other Cost	3.2%
Childcare Costs	3.1%

Maintenance work, such as dental check-ups and cleaning, is the most common type of care needed, followed by cavities, fluoride treatment, prosthetics and extractions. These figures are similar to those reported in 1997, except that maintenance work has become more important, replacing restoration (fillings) as the most frequently mentioned category (Chart 5.47).

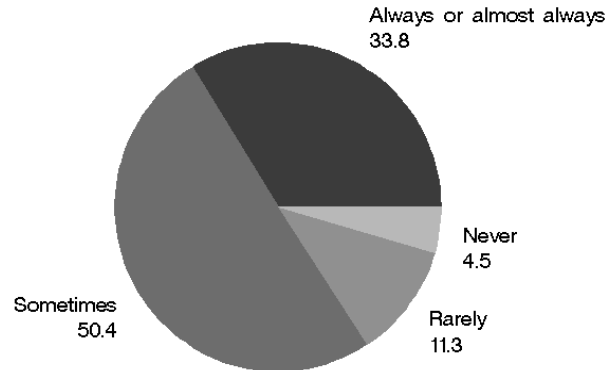
**Chart 5.47**  
**Type of Dental Care Needed**  
 (Weighted Percentage)

Maintenance	51.6%
Cavities Filled	37.1%
Fluoride Treatment	13.5%
Prosthetics	10.7%
Extractions	9.8%
Periodontal Work	5.3%
Orthodontic Urgent	2.8%
Orthodontic Work	1.2%

**Food and Nutrition**

A third of Mi'kmaq adults state that they always (or almost always) eat a nutritious, balanced diet, but that is the case only sometimes for another 50 per cent while the remainder say they eat a balanced, nutritious diet only rarely or never (Chart 5.48).

**Chart 5.48**  
**Eating a Nutritious, Balanced Diet**  
 (Weighted Percentage)



In the following table, some of the culprits in a poor diet are itemized along with the percentage of the adult population who eat or drink them a few times a week or more (Chart 5.49).

**Chart 5.49**  
**Eating Junk Food**  
 (Weighted Percentage)

Food Item	Per cent consuming item a few times a week or more
Coffee/tea	78.5%
Soft drinks/pop	71.0%
Added salt	60.2%
Added sugar	58.4%
French fries, potato chips, pretzels, fry bread	49.2%
Fast food (e.g., burgers, pizza, hot dogs)	44.0%
Cakes, pies, cookies, candy, chocolate	42.7%

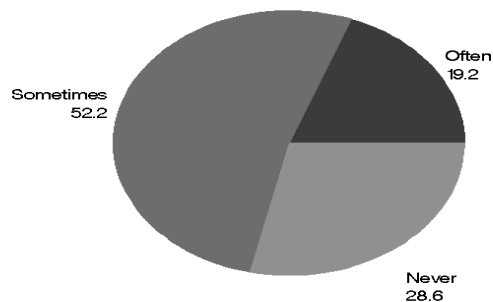
While foods high in sugar, fat and calories are a frequent part of the diet, traditional foods also figure in the Mi'kmaq diet, as the following chart indicates. Respondents were asked if they ate traditional foods in the 12 months preceding the interview. The results suggest that close to half of the adult population eat traditional foods at least a few times a year, especially when it comes to foods such as land-based animals, fish of various kinds, berries and bannock (Chart 5.50).

**Chart 5.50**  
**Eating Traditional Foods**  
 (Weighted Percentage)

Traditional Food Item	Not at all	A few times	Often
Land-based animals (moose, caribou, bear, deer)	46.6%	42.9%	10.3%
Fresh water fish	38.4%	47.4%	14.1%
Salt water fish	39.1%	45.3%	15.5%
Other water based foods (shellfish, eels, clams, sea weed, urchins, etc.)	40.0%	48.8%	11.1%
Sea-based animals (whale, seal, walrus)	98.2%	1.2%	0.4%
Game birds (goose, duck, partridge, etc.)	82.3%	16.6%	1.0%
Small game (rabbit, muskrat, etc.)	80.4%	15.9%	3.5%
Berries or other wild vegetation	33.3%	48.8%	17.7%
Bannock/Fry bread	24.8%	49.3%	25.8%
Corn soup	79.1%	16.9%	3.9%

A pattern of sharing traditional foods has also been retained, with more than two-thirds of the adult population indicating that someone had shared traditional food with their household in the past 12 months, at least sometimes if not often (Chart 5.51).

**Chart 5.51**  
**Sharing Traditional Foods**  
 (Weighted Percentage)



## Physical Activity

Respondents were asked about the physical activities in which they participated in the previous 12 months. They had some 21 items from which to choose, and the results show that almost all activities attracted participants in substantial numbers. Furthermore, our data reveals that typically people participated in more than one activity.

We note from the chart that almost all of the adult population listed walking as one kind of exercise. This is followed by a number of traditional activities, such as swimming, fishing, and berry picking. Riding bicycles, hiking, dancing, using exercise equipment and hunting were also frequently mentioned (Chart 5.52).

**Chart 5.52**  
**Participation in Physical Activities**  
**(Weighted Percentage)**

Activity	Percent	Activity	Percent
Hunting, trapping	23.5%	Berry picking or other food gathering	37.2%
Fishing	43.8%	Competitive or group sports	18.5%
Bicycle riding	32.0%	Weights, exercise equipment	25.5%
Walking	90.8%	Golf	18.1%
Aerobics/Fitness class	10.8%	Bowling	22.0%
Dancing (aerobic, traditional, modern, etc.)	29.3%	Canoeing	12.9%
Running	22.4%	Martial arts	5.5%
Hiking	29.8%	Skiing	6.2%
Skating	17.0%	Swimming	47.2%
Rollerblading/Inline skating/Roller-skating	5.7%	Skateboarding	2.8%
Snow-shoeing	1.7%	Other	2.4%

Is this physical activity sufficient to result in an increase in a person's heart rate and breathing? The following two charts provide information about both the frequency and duration of exercise that produces an increase in the heart rate and in breathing. With respect to *frequency*, the chart suggests that some of the adult population is fairly active, on average once a day or more (Chart 5.53). With respect to *duration*, we learn that close to 30 per cent of the adult population engages in physical activity sufficient to increase heart rate and breathing for at least five or more hours per week (Chart 5.54). Both charts have high numbers of missing information.

**Chart 5.53**  
**Frequency of Participation in Physical Activities**  
**(Weighted Percentage)**

Number of Times Per Week	Percent
0 times	2.4%
1-4 times	29.5%
5-9 times	24.0%
10-14 times	2.9%
15+ times	2.0%
No Answer	39.2%

**Chart 5.54**  
**Duration of Participation in Physical Activities**  
**(Weighted Percentage)**

Hours Per Week	Percent
None	7.8%
1 to 2 hours	25.8%
3 to 4 hours	16.0%
5 to 6 hours	9.1%
7 to 10 hours	9.3%
11 or more hours	10.9%
No Answer	21.1%

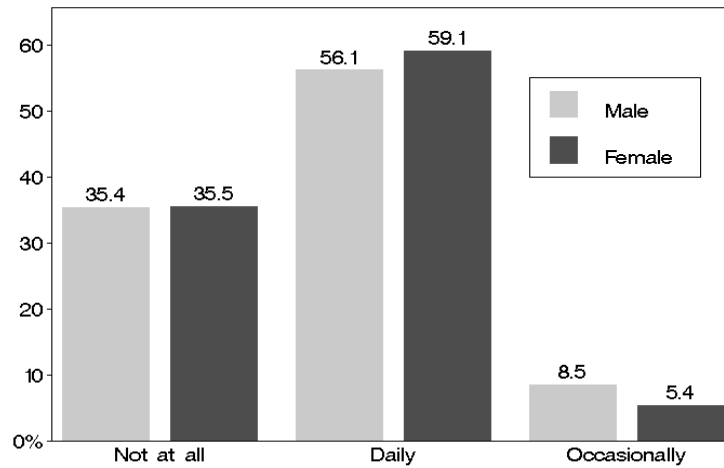
### Lifestyle

We turn now to a series of questions devoted to lifestyle topics, including cigarette smoking, alcohol consumption, other drug use and sexual activity.

While we noticed in the last chapter that there was a significant improvement in the smoking rates of youth, unfortunately that cannot be said for adults. As the following chart reveals, daily smoking rates among adults verges on 60 per cent, and when occasional smokers are added in, it is evident that almost two-thirds of the adult population are smoking cigarettes (Chart 5.55). This is no better than our results in 1997, when 63 per cent of females and 57 per cent of males

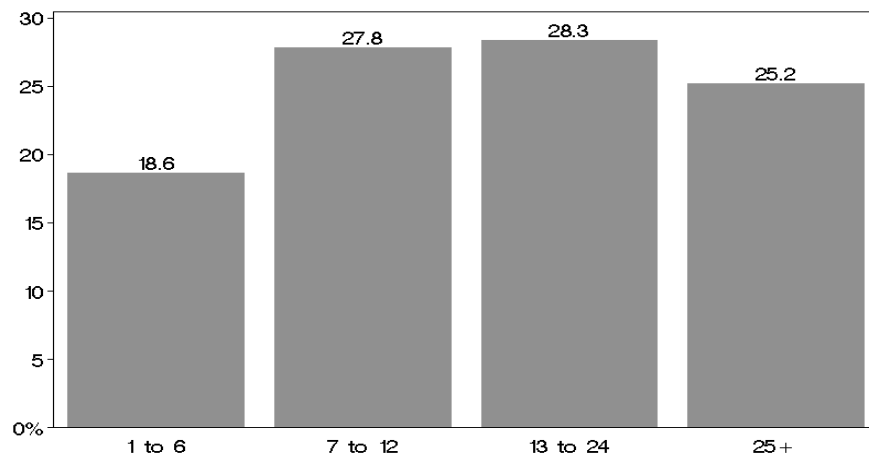
reported smoking cigarettes for a question that did not distinguish between daily and occasional use of tobacco. This compares with 23 per cent of Nova Scotians who smoke daily or occasionally, and a similar number of Canadians in the population at large.

**Chart 5.55**  
**Smoked Cigarettes at Time of Survey**  
 (Weighted Percentage Within Gender)



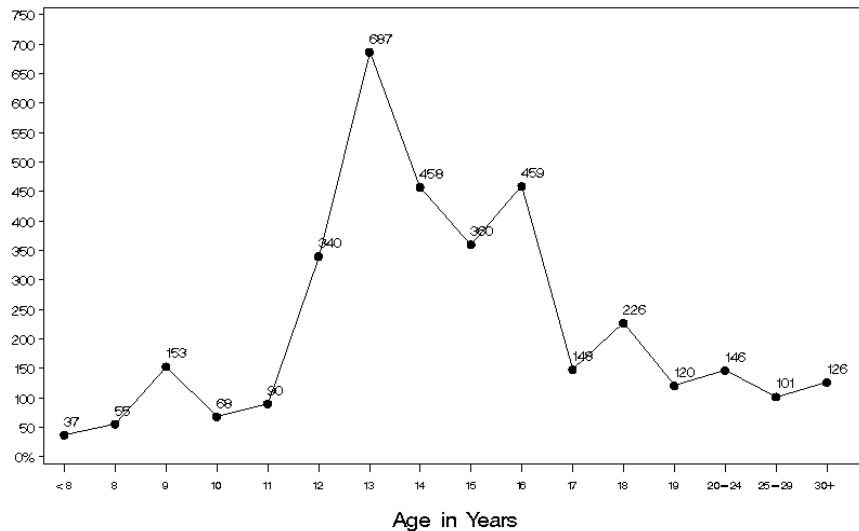
There is some better news, however, in the data on the number of cigarettes smoked each day. Compared to 1997, the trend is toward smoking fewer cigarettes. For example, in 1997, 45 per cent of Mi'kmaq smokers reported puffing on 25 or more cigarettes per day, whereas in the latest survey this number is reduced to 25 per cent, as the chart below indicates (Chart 5.56).

**Chart 5.56**  
**Cigarettes Smoked Per Day**  
 (Weighted Percentage)



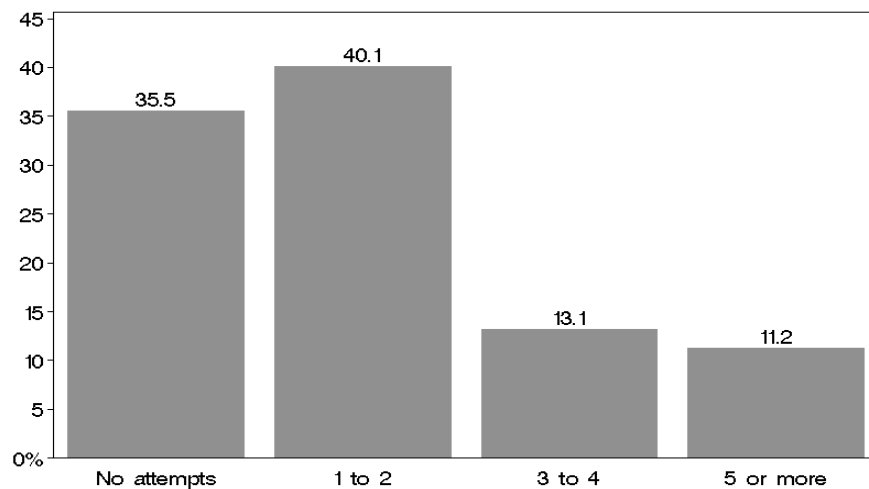
Much as in 1997, it is clear from Chart 5.57 that smoking begins at an early age, with sharp increases in smoking uptake occurring at 11 years of age and continuing at a high level until age 16. This result suggests that strategies to prevent smoking will need to focus on youth in their early teens and through the teen years.

**Chart 5.57**  
**Age When Cigarette Smoking Started**  
 (Weighted Number Of Cases At Each Age)



It appears that Mi'kmaq adults are trying to break away from their addiction to tobacco. The following chart reveals that almost two-thirds of smokers tried to quit in the 12 months prior to the survey, some of them making several attempts (Chart 5.58).

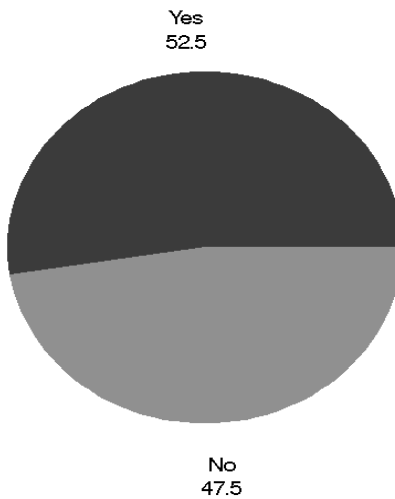
**Chart 5.58**  
**Number of Attempts to Quit Smoking**  
 (Weighted Percentage)





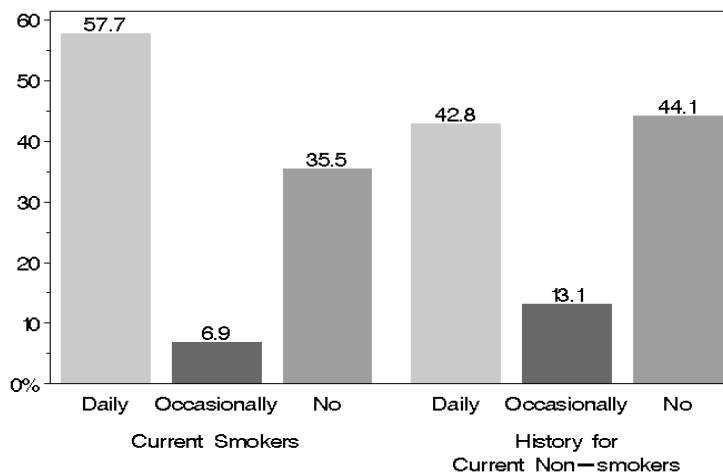
We also have information about the kind of environment that smokers and non-smokers live in. Just over half the respondents report that they live in a smoke-free home, an improvement from the 42 per cent reported in 1997 (Chart 5.59).

**Chart 5.59**  
**Smoke-free Home**  
 (Weighted Percentage)



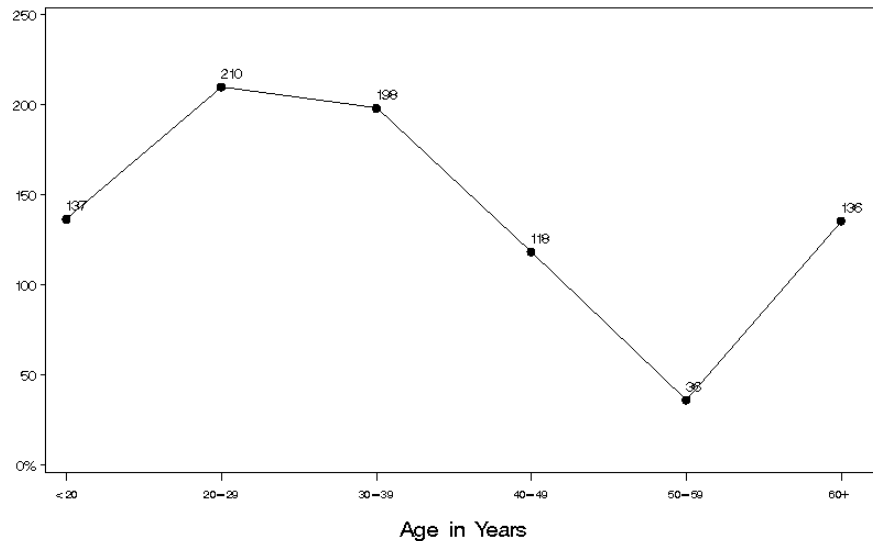
While just under two-thirds of the adult Mi'kmaq population was smoking cigarettes at the time of the survey, there is an additional 36 per cent who indicated that they were not smoking. In Chart 5.60, we examine the history of this non-smoking group. We learn that, while they are not smoking now, 56 per cent of them used to smoke in the past. This permits identifying those who have, over time, quit smoking and a number of questions were put to this group in particular.

**Chart 5.60**  
**Cigarette Smoking**  
 (Weighted Percentage Within Each Group)



Among those who stopped smoking, the late teen years and through the twenties and thirties are the ages when the bulk of cessations are reported. The rate of cessation declines when people are in their forties and fifties, but increases again for those in their sixties (Chart 5.61). These results are similar to what we found in 1997, except that the age reported for stopping smoking are a bit younger in 2002/03, and the upsurge for those in their sixties is new.

**Chart 5.61**  
**Age When Cigarette Smoking Stopped**  
(Weighted Number Of Cases At Each Age)



Among those who quit smoking, a variety of reasons were given but not surprisingly the decision to opt for a healthier lifestyle is the most frequently mentioned (in this question, respondents could choose more than one reason). Other reasons included a link being made between smoking and other illnesses. It appears that educational efforts are having some impact, because “greater awareness” is also an important factor in smoking cessation. While peer pressure from friends and co-workers is not significant, it is interesting that many respondents list “respect for loved ones” as a factor in their decision to stop smoking (Chart 5.62).

**Chart 5.62**  
**Reasons for Quitting Smoking**  
 (Weighted Percentage)

Reason	Weighted Percentage
Chose A Healthier Lifestyle	58.4%
Health Condition	34.9%
Greater Awareness	29.4%
Out Of Respect For Loved Ones	25.4%
Peer Pressure From Friends Or Co-Workers	8.6%
Doctor's Orders	7.8%
Pregnancy	6.6%
Respect For Traditional Significance Of Tobacco	2.4%

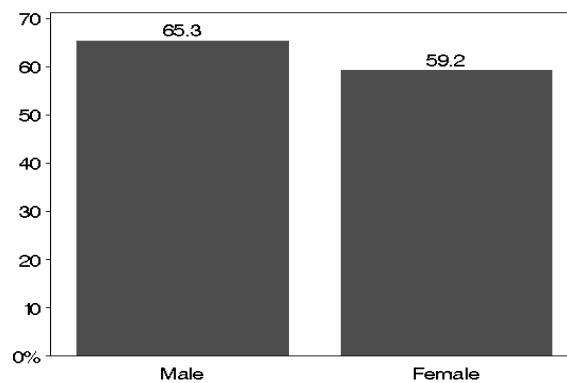
In the next chart, which presents the last of our information on smoking, we report on the methods people have used to quit. The most important by far is to go “cold turkey”, which was further defined in the question as the use of “will-power alone”. All other strategies are much less important, although the nicotine replacement patch was the method of choice for some respondents (Chart 5.63).

**Chart 5.63**  
**Methods used to Quit Smoking**  
 (Weighted Percentage)

Method	Weighted Percentage
Cold Turkey	88.5%
Nicotine Replacement Patch	10.2%
Zyban (Bupropion)	3.8%
Nicotine Replacement Gum	2.8%
With Help From Spirituality	2.7%
Support Or Self-Help Program	1.9%
Other Prescribed Medication	1.1%
With Assistance From Family	1.0%
Traditional Methods	1.0%
Hypnosis	0.5%

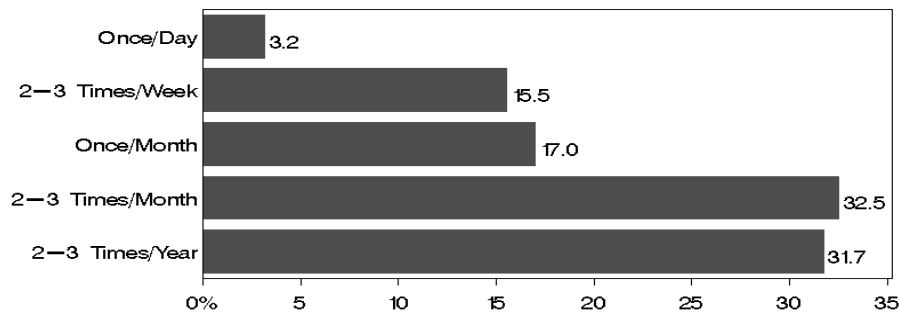
Another important lifestyle pattern has to do with the consumption of alcohol and other mood altering substances. As far as alcohol consumption is concerned, the following chart reveals that 65 per cent of adult males, and 59 per cent of adult females, indicate that they consumed an alcoholic beverage such as beer, wine or liquor, in the previous 12 months (Chart 5.64). These figures are close to what we found in 1997, when 67 per cent of males and 51 per cent of females answered affirmatively to this question. We noted then that the figures for alcohol consumption among Mi'kmaq adults was actually lower than the figure reported for all Nova Scotians.

**Chart 5.64**  
**Consumed Alcoholic Beverage**  
**in Past 12 Months**  
 (Weighted Percentage Within Gender)



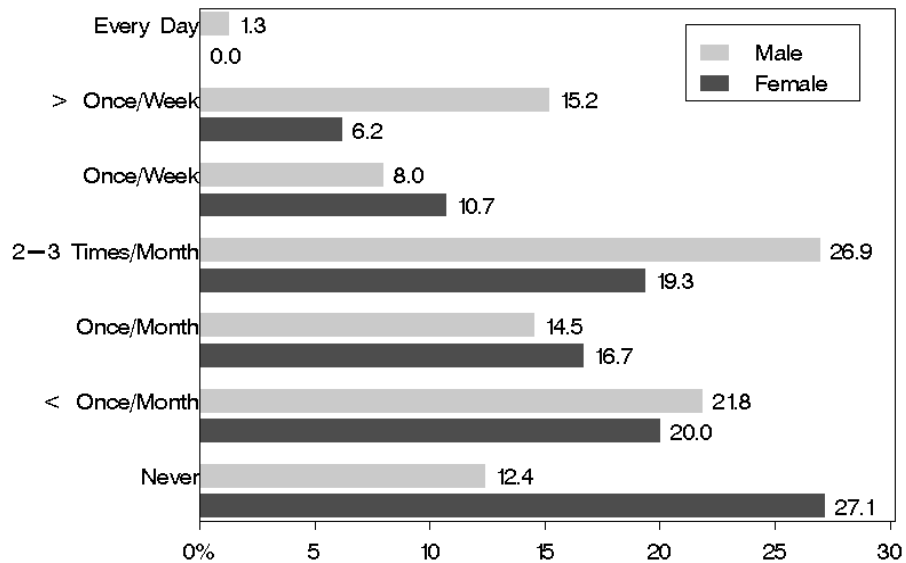
Another question in the survey asks about the frequency of alcohol consumption. The chart reporting on these results suggests that most Mi'kmaq adults are consuming alcohol in moderation, but just under 20 per cent have a drink two or three times weekly or even daily (Chart 5.65). This is down a bit from the 21 per cent who fell into this category in 1997, but on the other hand the percentage of daily drinkers has increased from 1 per cent to 3 per cent in the 1997-2003 time period.

**Chart 5.65**  
**Frequency of Alcoholic Beverage Consumption**  
 (Weighted Percentage)



As in 1997, it is the question about heavy drinking (that is, having 5 or more drinks on one occasion) that reveals the most problematic results. Among those who drink, all but 12 per cent of males and 27 per cent of females have engaged in heavy drinking in the past 12 months, and a substantial 23 per cent of males and 16 per cent of females do so at least once a week or more frequently. The heavy drinking pattern is more pronounced among adult males than females (Chart 5.66).

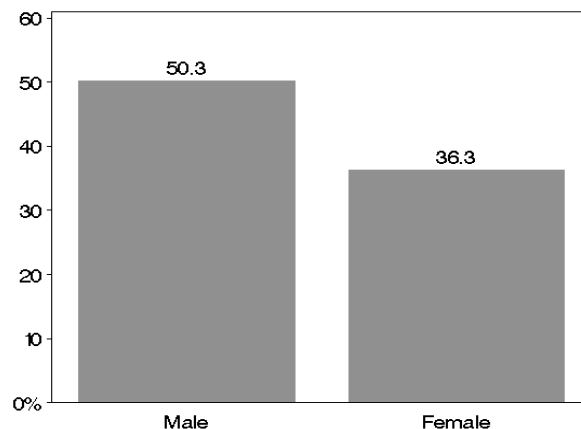
**Chart 5.66**  
**Frequency of Heavy Drinking**  
 (Weighted Percentage Within Gender)



As far as mood altering drugs are concerned, we find that 50 per cent of males and 36 per cent of females took a drug without a prescription in the 12 months prior to the interview (Chart 5.67).

**Chart 5.67**  
**Taking Mood Altering Drugs**

Took Any Drug At Least Once Without Prescripton in Past 12 Months  
 (Weighted Percentage Within Gender)

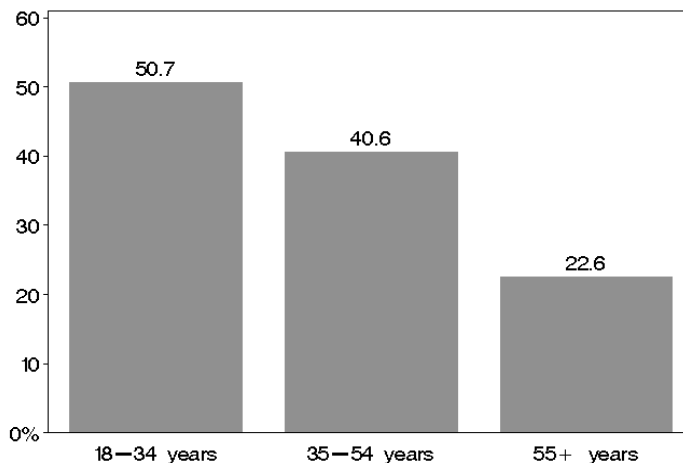


Results are also reported for the same question by age group, and the chart reveals that the use of drugs without a prescription is most common in the 18-34 year age group, after which it falls off, especially among those 55 years of age and older (Chart 5.68).

### Chart 5.68

#### Taking Mood Altering Drugs

Took Any Drug At Least Once Without Prescription in Past 12 Months  
(Weighted Percentage Within Age Group)

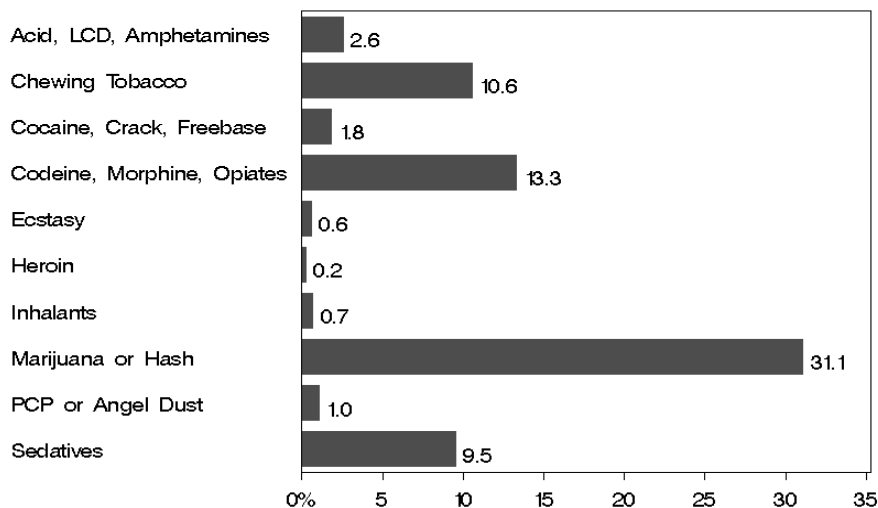


The use of specific substances is reported in Chart 5.69. Respondents could choose from a list of substances that included chewing tobacco, marijuana, ecstasy, inhalants, cocaine and heroin, among others. We see that marijuana or hash is the most commonly used mood altering drug, followed by codeine/morphine/opiates and chewing tobacco.

### Chart 5.69

#### Use of Specific Mood Altering Substances

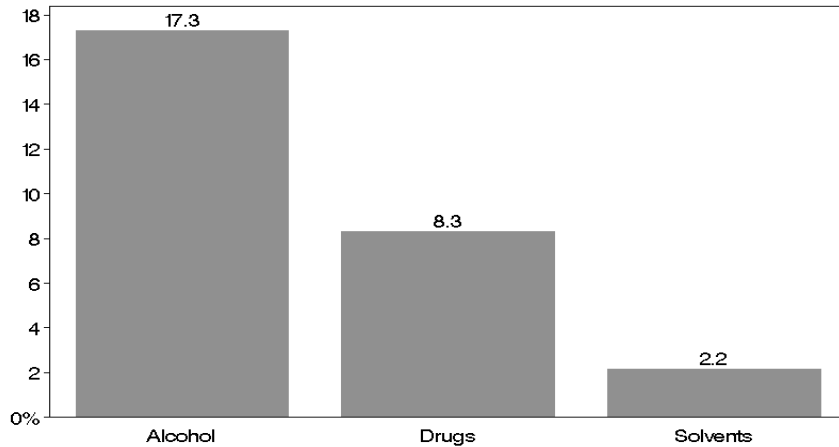
(Weighted Percentage)



Finally with respect to addictions, we report on a question that asked if the respondent has ever been treated for substance abuse. The answers reveal that 17 per cent of adults have been reached by alcohol treatment programs, and 8 per cent by drug treatment services (Chart 5.70).

**Chart 5.70**

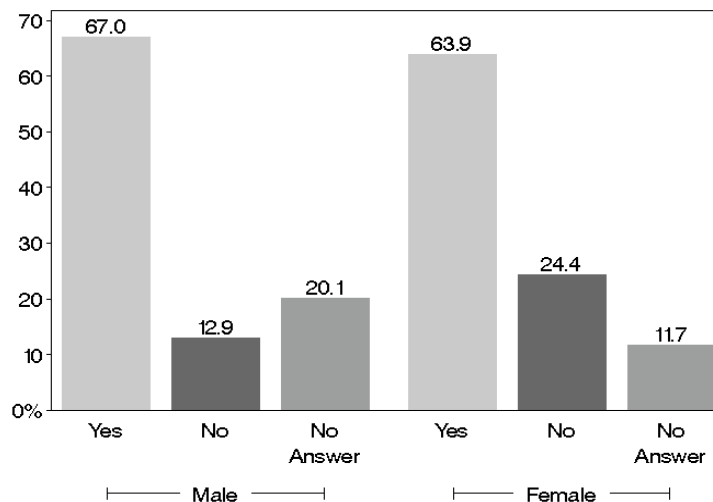
**Substance Abuse Treatment**  
(Weighted Percentage Within Each Type)



We conclude this section on lifestyle patterns with a number of questions that address behaviour and attitudes towards sex and birth control. In the following chart, the data reveals that 67 per cent of the males and 64 per cent of females report that they were sexually active at the time of the interview (Chart 5.71). Not surprisingly, the level of sexual activity varies by age group as well, with 78 per cent of the 18-34 year age group reported to be sexually active, compared to 63 per cent of the 35 to 54 group, and only 27 per cent of those 55 years and over (Chart 5.72).

**Chart 5.71**

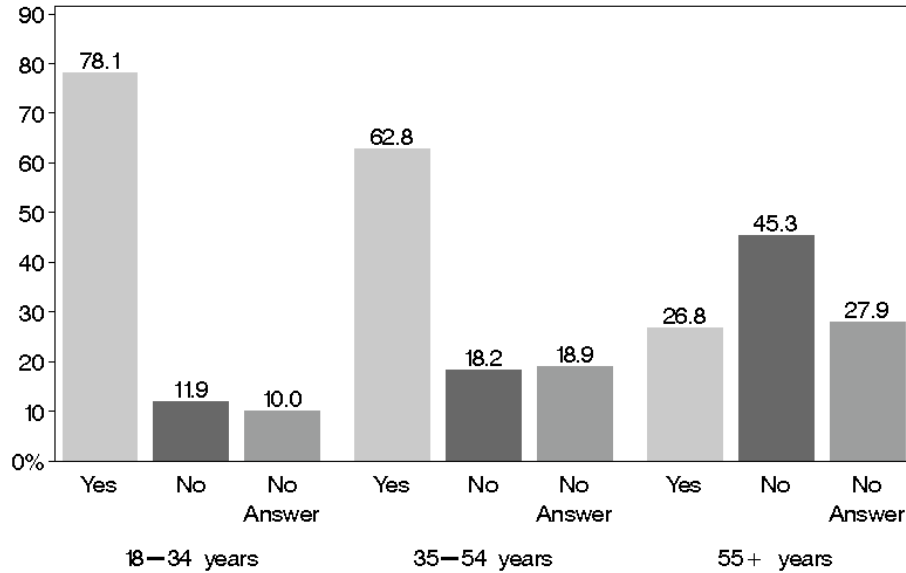
**Are You Sexually Active?**  
(Weighted Percentage Within Gender)



**Chart 5.72**

**Are You Sexually Active?**

(Weighted Percentage Within Age Group)

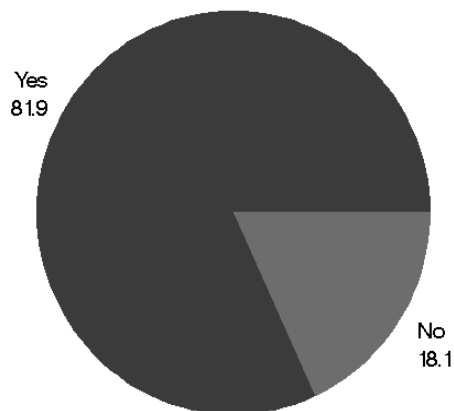


In the adult population, 82 per cent had engaged in sexual intercourse in the past 12 months (Chart 5.73).

**Chart 5.73**

**Had Sexual Intercourse in the past 12 months**

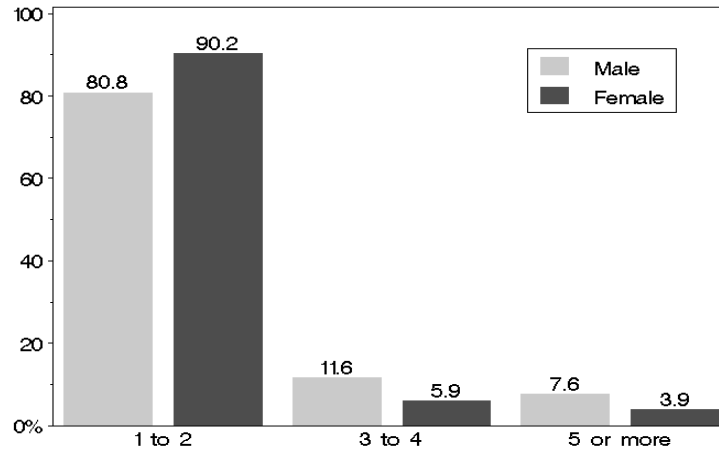
(Weighted Percentage)





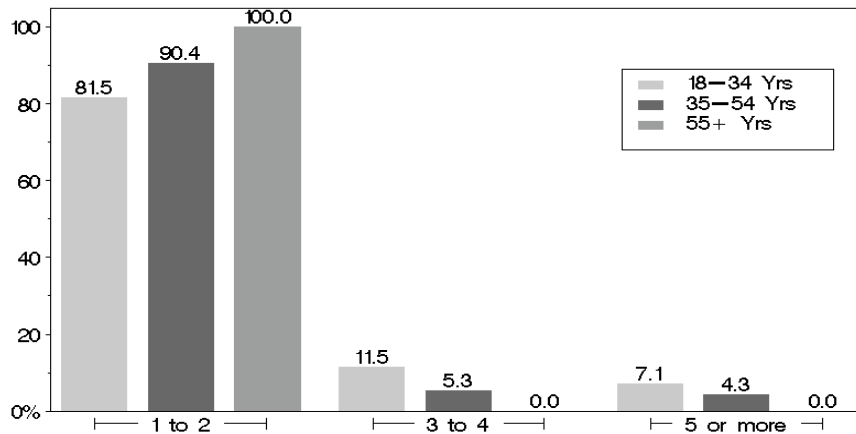
Among those who have been sexually active in the previous 12 months, the vast majority (81 per cent of males and 90 per cent of females) report that they have had only one or two sexual partners in that time period<sup>30</sup>. However, 19 per cent of males and 10 per cent of females have had three or more partners, as Chart 5.74 reveals.

**Chart 5.74**  
**Number of Sexual Partners in Past 12 Months**  
 (Weighted Percentage Within Gender)



There is some variation by age group, with loyalty to one or two partners increasing with age (chart 5.75).

**Chart 5.75**  
**Number of Sexual Partners in Past 12 Months**  
 (Weighted Percentage Within Age Group)



<sup>30</sup> Unfortunately the question does not permit a distinction between one and two sexual partners.

With respect to birth control, the following chart is interesting because it suggests that just over a third of those who have been sexually active in the past 12 months have not used any kind of birth control mechanism. Among those who do practice birth control, condoms are most commonly used, followed by birth control pills and withdrawal methods (chart 5.76).

**Chart 5.76**  
**Types of Birth Control or Protection Methods Used**  
**(Weighted Percentage)**

Type	Weighted Percentage
Condom	39.3%
None	35.3%
Birth Control Pills	24.8%
Withdrawal	11.0%
Depo Provera	3.2%
Rhythm	2.0%
IUD	0.8%
Sponges	0.6%
Diaphragm	0.1%
Foam	0.0%

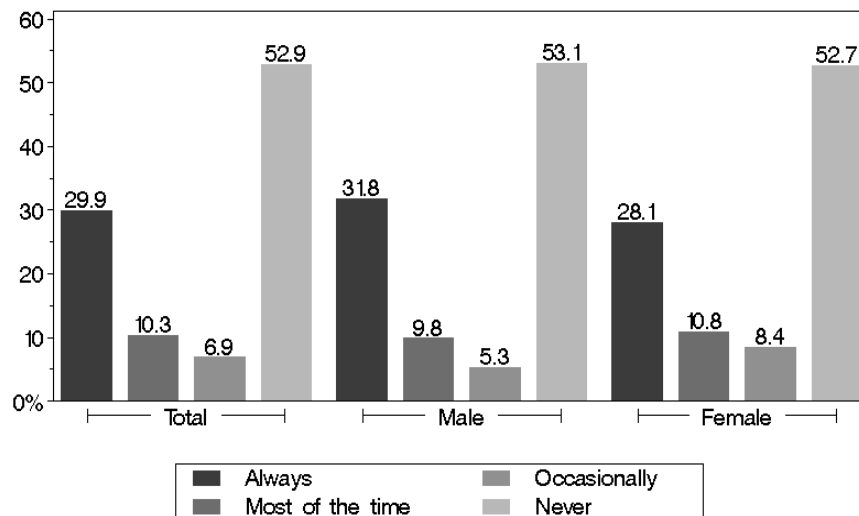
These methods are used for birth control but also to provide protection from sexually transmitted disease (Chart 5.77).

**Chart 5.77**  
**Reasons for Using Birth Control or Protection Methods**  
**(Weighted Percentage)**

Reason	Weighted Percentage
Not using protection	33.3%
Birth control	24.7%
Both birth control and protection from STDs	23.8%
Other reasons	10.1%
Protection from STDs	7.8%
Not Applicable	0.2%

A separate question asked again about the use of condoms to avoid getting sexually transmitted diseases such as HIV or gonorrhea. From the following chart, we learn that, among those who have been sexually active in the past 12 months, half say they never use condoms for this purpose. There are no substantial differences between males and females on this question (chart 5.78).

**Chart 5.78**  
**Frequency of Condom Use**  
**(Weighted Percentage Within Gender)**



For those not always using condoms, what reasons do they give for not doing so? The answers are summarized in Chart 5.79. By far the most frequent reason given has to do with the fact that the respondent is with a steady partner. Others don't use a condom because they want to get pregnant, but this still leaves a large number of adults who do not use a condom for more questionable reasons, such as believing that their partner does not have HIV/AIDS, or just preferring not to use a condom.

**Chart 5.79**  
**Main Reason for Not Using Condoms**  
**(Weighted Percentage)**

Reason	Percent
Your partner did not want to use one	4.30%
You were under the influence of alcohol	7.60%
Your partner does not have the HIV -AIDS virus	5.30%
Your partner wanted to get pregnant	6.20%
You could not afford to buy any condoms	---
You were too embarrassed to get condoms	---
You could not talk to your partner about protection	0.40%
You or your partner is allergic to latex condoms	0.60%
Religious reasons	---
You did not want to use one	4.70%
You do not have the HIV -AIDS virus	0.20%
You were with your steady partner	63.70%
You did not have a condom at the time	1.00%
You could not obtain condoms where you were	---
You did not think of using a condom	0.40%
You find condoms painful	1.30%
You thought you were safe	3.70%
Age	---
Always use contraceptives	---
Do not use contraceptives	0.30%
Not Applicable	---
Other contraceptive	---
Sterilized	---
Other	0.50%

Finally in this section, respondents were asked how many children they had fathered or given birth to. The results are found in Chart 5.80. A larger percentage of males compared to females say that they have not given rise to any children, and most of the remainder are in the 1-3 children range. A very small number have fathered or given birth to large numbers of children, as many as 14 in a couple of instances.

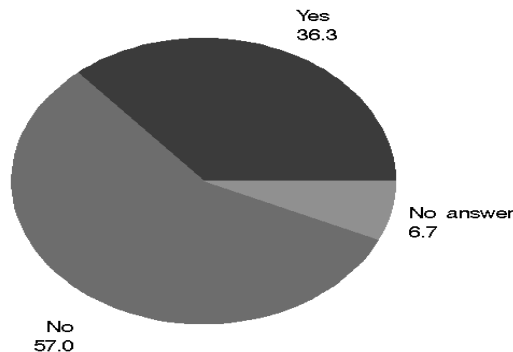
**Chart 5.80**  
**Number of Children Given Birth To or Fathered**  
 (Weighted Percentage)

Number of Children	Males	Females
No children	26.2%	19.9%
One child	15.7%	15.7%
Two children	15.0%	20.3%
Three children	15.9%	14.2%
Four children	11.4%	10.1%
Five or more children	15.6%	19.6%

**Preventive Health Care**

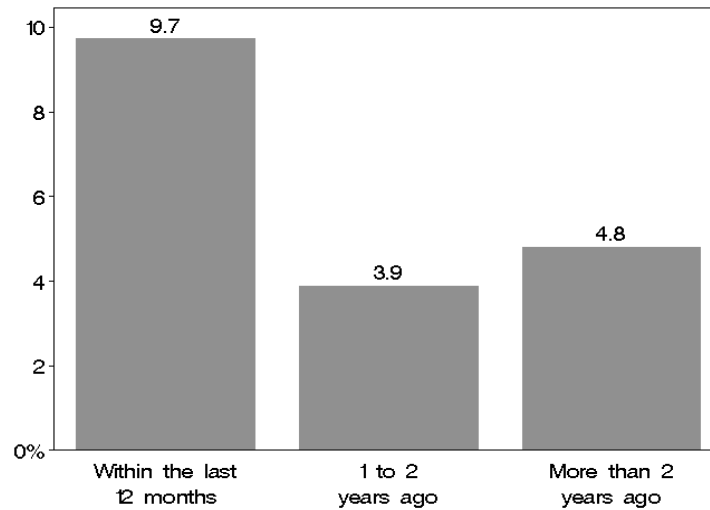
In the survey, there were a number of questions which inquired about the steps that a respondent might have taken to have various aspects of their health checked, perhaps before specific problems emerged. For example, we report some results for the question asking if the respondent has ever been tested for HIV. A surprisingly large number of adults – over a third -- say that they have been tested (Chart 5.81).

**Chart 5.81**  
**Tested for HIV**  
 (Weighted Percentage)



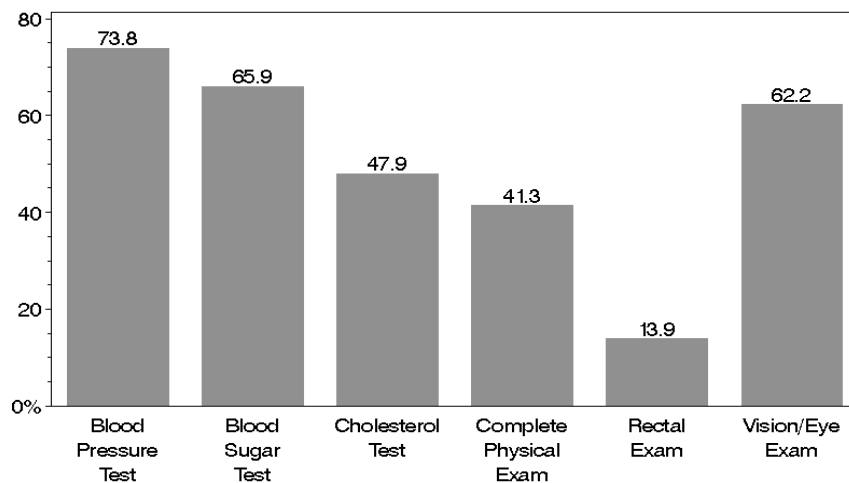
Another question asked when the respondent last consulted a traditional healer. It turns out that less than 20 per cent of the adults have done so. If they have consulted a traditional healer, most did so within the past 12 months, as Chart 5.82 reveals:

**Chart 5.82**  
**Last Consulted a Traditional Healer**  
 (Weighted Percentage)



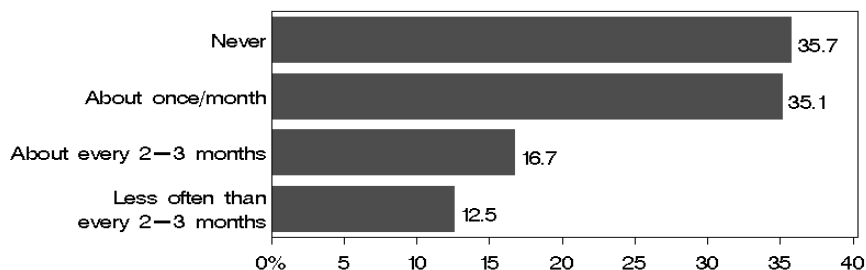
Results are also available on whether the respondents undertook certain kinds of tests or examinations within the past 12 months. The results suggest that many adults are being tested for things like blood sugar, blood pressure and vision, but the proportion receiving rectal exams (to check, for example, about colon or prostate cancer) is quite low (Chart 5.83).

**Chart 5.83**  
**General Preventive Care Tests**  
 (Weighted Percentage)



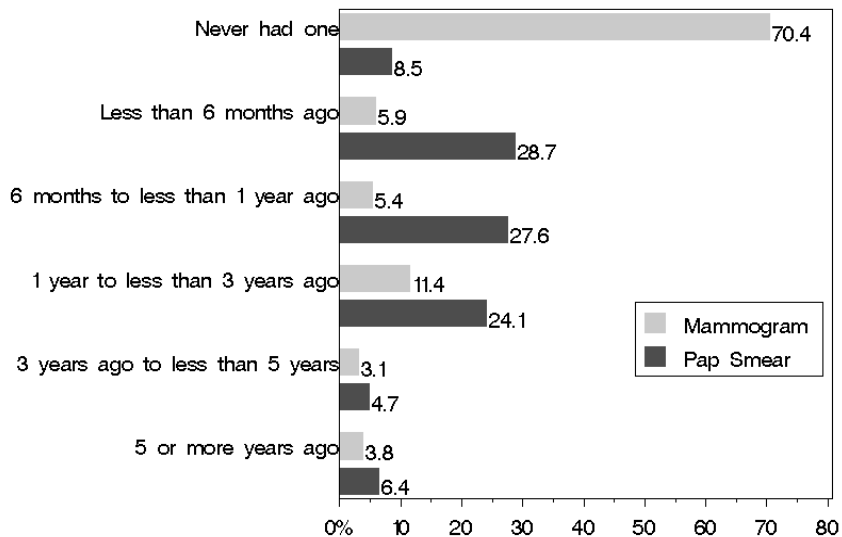
Several questions asked women, in particular, about their preventive health practices. In the following chart, for example, we report on the frequency of breast self-examinations. The results indicate that more than a third of adult Mi'kmaq women have never performed a breast self-examination, but on the other hand a similar proportion do so on a regular basis (Chart 5.84).

**Chart 5.84**  
**Frequency of Breast Self—Exams**  
 (Weighted Percentage)



The dominant feature of Chart 5.85, which reports on the frequency of mammograms and PAP smear tests for women, is the high proportion of women (70 per cent) who report never having had a mammogram. By contrast, less than 10 per cent report never having had a PAP smear taken, and more than half say this has been within the past year.

**Chart 5.85**  
**Preventive Care Tests for Women**  
 (Weighted Percentage)



Having preventive health tests varies of course by age. With respect to mammograms, for example, most women without a family history or symptoms do not get their first one until about age 40. In the following chart, we have used age 40 as one of the dividing lines in exploring how age has a bearing on having a mammogram (Chart 5.86).

**Chart 5.86**  
**Mammograms by Age Group**  
**(Weighted Percentage)**

<b>Last mammogram was:</b>	<b>18-39 years</b>	<b>40-54 years</b>	<b>55+ years</b>
Never had one	89.5%	44.4%	27.6%
Less than 6 months ago	1.5%	20.0%	7.2%
6 months to less than 1 year ago	1.7%	13.1%	10.7%
1 year to less than 3 years ago	2.1%	11.2%	45.8%
3 years ago to less than 5 years ago	1.9%	8.4%	1.8%
5 or more years ago	3.3%	2.9%	6.9%

**Residential Schools**

In our survey, 30 adults out of 482 in our sample (or 6.2 per cent) reported that they had personally attended residential schools. The age at which they started and left residential school is given in Chart 5.87.

**Chart 5.87**  
**Age Started or Left Residential School**  
**(Weighted Percentage)**

<b>Age</b>	<b>Started Residential School</b>	<b>Left Residential School</b>
Under 4	2.1%	2.1%
4-6 years	32.8%	1.5%
7-9 years	44.5%	23.4%
10-12 years	14.7%	33.8%
13-15 years	5.9%	28.9%
16 years or more	---	10.3%

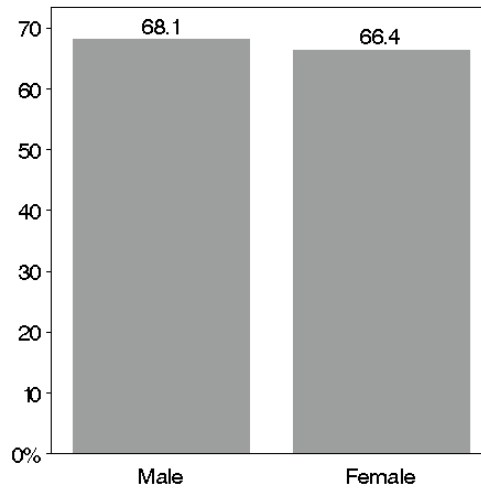


While the number of cases is small, two-thirds of the males and females who attended residential school reported that they believed their health and well-being had been negatively affected by the experience (Chart 5.88). In comparing these results with the 1997 survey, we note that the percentage of residential school attendees who evaluate the experience in negative terms in 2002/03 is higher than it was in 1997 (44 per cent).

**Chart 5.88**

**Believe residential school attendance negatively affected overall health & well-being**

(Weighted Percentage Within Gender)



A further question attempts to discover more precisely what specific aspects of the residential school experience accounted for the negative impact on the respondent's health and well-being. Of this group, most indicate that a wide range of conditions associated with residential school affected their health and well-being (Chart 5.89).

**Chart 5.89**  
**Negative Effects of Residential School Attendance**  
 (Weighted Percentage)

<b>Effect</b>	<b>Weighted Percentage</b>	<b>Effect</b>	<b>Weighted Percentage</b>
Loss of language	89.8%	Isolation from family	85.0%
Loss of cultural identity	88.6%	Harsh discipline	85.9%
Physical abuse	76.4%	Poor education	49.5%
Loss of traditional religion/spirituality	85.8%	Lack of food	70.8%
Harsh living conditions	62.6%	Sexual abuse	27.7%
Lack proper clothing	65.7%	Bullying from other children	64.3%
Verbal, emotional abuse	85.9%	Witnessing abuse	92.0%
Separation from community	73.3%	Other	15.8%

Given that residential schools operated in Canada between 1860 and 1974, and in view of the youth of our adult sample, it makes sense that a higher proportion of the respondents' parents and grandparents attended residential school than was the case for our respondents themselves. This is evident from the following table which shows that 14 to 17 per cent of the respondents' parents attended residential school (Chart 5.90)

**Chart 5.90**  
**Parents and Grandparents Residential School Attendance**  
 (Weighted Percentage)

<b>Relationship to Respondent</b>	<b>Per cent Attending</b>
Mother	17.3%
Father	13.7%
Mother's mother	6.2%
Mother's father	2.9%
Father's mother	4.2%
Father's father	3.0%

A final consideration is whether respondents believe that their parenting, or the parenting received by their parents, was negatively affected by the attendance of their parents or grandparents at residential school. The results are reported in the following table, and they suggest that the parenting provided by their parents suffered in almost 40 per cent of the cases, with another 30 per cent unsure. Respondents believe that the parenting received by their parents suffered in 36 per cent of the cases, with the remainder unsure, as a result of their grandparents attending residential school (Chart 5.91)

**Chart 5.91**  
**Residential Schools and Parenting**  
 (Weighted Percentage)

<b>Do you believe your parent(s) attendance at Residential School negatively affected the parenting you received?</b>	
Yes	38.9%
Not sure	29.4%
No	31.0%
No answer	0.5%
<b>Do you believe your grandparent(s) attendance at Residential School negatively affected the parenting your parents received?</b>	
Yes	36.4%
Not sure	15.0%
No	0.0%
No answer	48.5%

## Personal Wellness

The section on personal wellness includes a series of questions about traditional cultural events and spirituality. It begins with an introductory statement that notes “[e]ach place has different types of traditional activities and different events are important to different people. Some examples are powwows, sweat lodges, pipe ceremonies and community feasts”. Respondents are then asked how important traditional cultural events, traditional spirituality and religion (such as Christianity) are in the respondent’s life. The following chart suggests that, for Mi’kmaq adults, about three-quarters indicate that traditional cultural events, traditional spirituality and religion are either very important, or somewhat important, in their lives (Chart 5.92).

**Chart 5.92**  
**Importance of Traditional Cultural Events,  
Spirituality, and Religion**  
(Weighted Percentage)

	<b>Very important</b>	<b>Somewhat important</b>	<b>Not very important</b>	<b>Not important</b>
Traditional Cultural Events	35.0%	44.4%	12.1%	8.3%
Traditional Spirituality	31.5%	41.1%	14.1%	13.1%
Religion (e.g., Christianity)	44.2%	35.4%	11.3%	8.9%

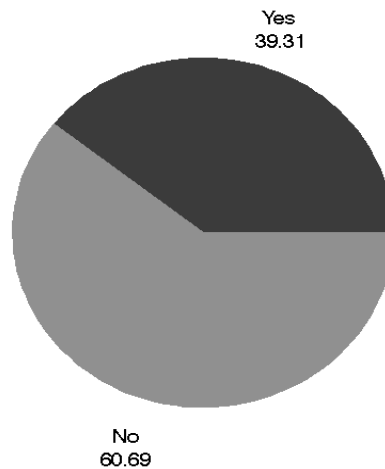
Aboriginal perspectives on health emphasize the importance of achieving and maintaining balance in one’s life, on the key dimensions of physical, emotional, mental and spiritual health. When asked how often they feel they are in balance in the four aspects of their lives, about two thirds to three-quarters of Mi’kmaq adults, both male and female, indicated that this was the case all of the time or most of the time. The responses were fairly consistent from one dimension to another. What does emerge, however, is that Mi’kmaq women were more cautious in their estimates – that is, only about a quarter chose the “all of the time” option, whereas this was the choice of at least a third of the men (Chart 5.93).

**Chart 5.93**  
**Feeling That The Four Aspects of Life Are Balanced**  
 (Weighted Percentage Within Gender)

<b>Gender/ Aspect</b>	<b>All of the time</b>	<b>Most of the time</b>	<b>Some of the time</b>	<b>Almost none of the time</b>
<b>Male</b>				
Physical	39.9%	31.6%	24.9%	3.4%
Emotional	37.5%	30.2%	25.2%	6.9%
Mental	39.5%	35.5%	18.8%	6.0%
Spiritual	35.9%	31.4%	26.4%	6.1%
<b>Female</b>				
Physical	23.2%	42.9%	24.8%	8.8%
Emotional	24.3%	39.1%	28.7%	7.7%
Mental	29.1%	43.2%	19.0%	8.5%
Spiritual	28.7%	37.3%	23.4%	10.4%

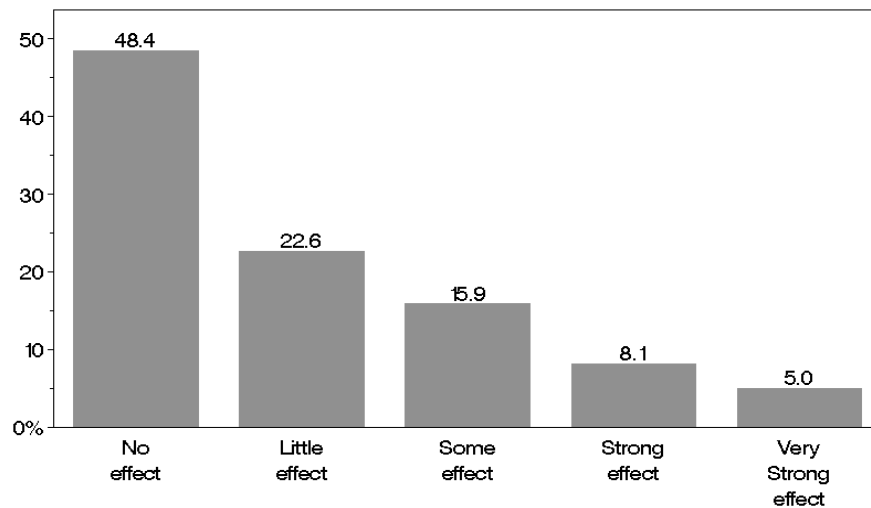
Measuring instances of racism and their effects is very difficult to do, but one approach is to ask respondents whether they have personally experienced any instances of racism and, if so, how strongly has this affected their level of self-esteem. The data in the next chart reveals that 39 per cent of Mi'kmaq adults say they have personally experienced instances of racism in the past 12 months (Chart 5.94).

**Chart 5.94**  
**Personally Experienced Racism**  
(Weighted Percentage)



For about 13 per cent of respondents experiencing racism, this has had either a strong or very strong impact on their level of self-esteem (Chart 5.95).

**Chart 5.95**  
**Impact of Racism on Self—Esteem**  
(Weighted Percentage)



Another aspect of personal wellness is the degree to which individuals feel they are in control of their lives and optimistic about being able to do things with it. In the following two charts, we report on the percentage of adults who agree or strongly agree with a number of statements measuring their degree of empowerment<sup>31</sup>. We begin with the male respondents (Chart 5.96). In general, about 80 per cent or more agree or strongly agree with statements that measure how much control they feel they have or what they can do to change their situation. Conversely, very few are of the view that they are powerless. Adult females, on the other hand, are somewhat less likely to express sentiments consistent with empowerment (Chart 5.97).

**Chart 5.96**  
**Measures of Self-Esteem - Males**  
 (Weighted Percentage Within Gender)

Statement	Strongly Agree	Agree
I can solve the problems that I have	57.8%	30.0%
No one pushes me around in life	52.4%	31.6%
I have control over the things that happen to me	32.7%	48.9%
I can do just about anything I really set my mind to	49.3%	36.4%
I often feel helpless in dealing with the problems of life	1.6%	13.1%
What happens to me in the future mostly depends on me	50.8%	34.9%
There is little I can do to change many of the important things in my life	6.5%	17.2%

**Chart 5.97**  
**Measures of Self-Esteem - Females**  
 (Weighted Percentage Within Gender)

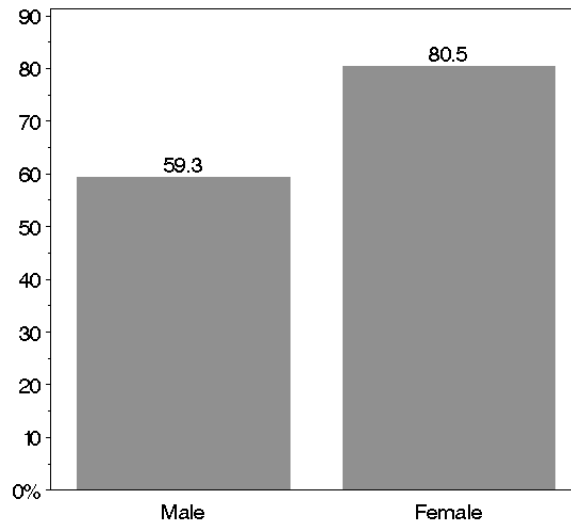
Statement	Strongly Agree	Agree
I can solve the problems that I have	35.5%	34.4%
No one pushes me around in life	41.4%	23.0%
I have control over the things that happen to me	27.6%	32.8%
I can do just about anything I really set my mind to	47.8%	33.9%
I often feel helpless in dealing with the problems of life	2.6%	14.6%
What happens to me in the future mostly depends on me	42.8%	40.5%
There is little I can do to change many of the important things in my life	10.3%	15.9%

<sup>31</sup> These questions were asked only of persons who had experienced racism in the past 12 months.



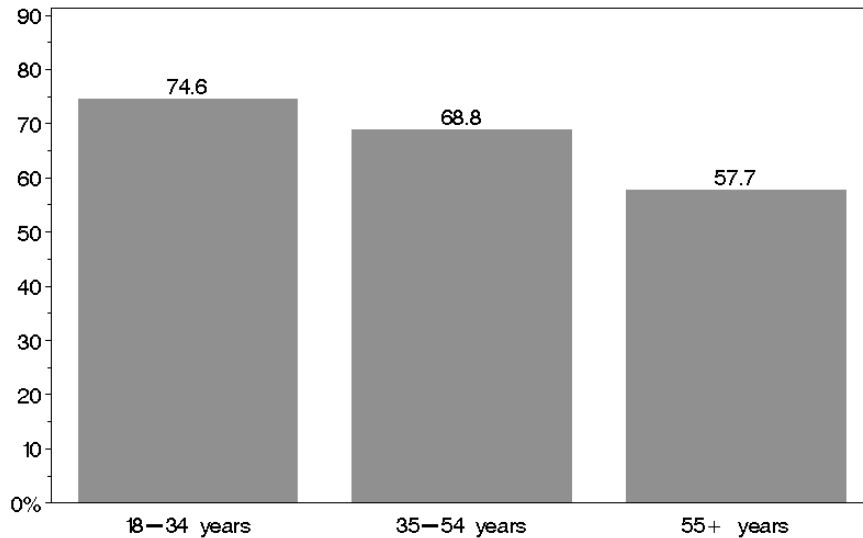
When it comes to seeking help, advice or support for emotional or mental health problems in the 12 months prior to the interview, Mi'kmaq women are much more inclined to say they have done so as Chart 5.98 reveals.

**Chart 5.98**  
**Sought Help for Emotional Problems**  
(Weighted Percentage Within Gender)



It is also evident that younger adults are more likely to talk to someone about emotional or mental health issues than are older adults (Chart 5.99).

**Chart 5.99**  
**Sought Help for Emotional Problems**  
(Weighted Percentage Within Age Group)



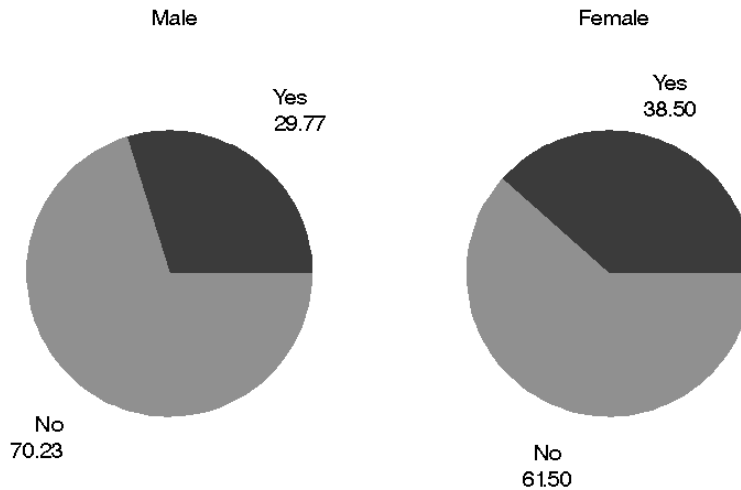
Who do they talk to when they do seek out assistance? Friends or family members are the persons most frequently contacted, followed by the family doctor (Chart 5.100).

**Chart 5.100**  
**Who Was Consulted For Help With Emotional Problems**  
 (Weighted Percentage)

Type of Support or Professional	Weighted Percentage
Friend	54.2%
Immediate family member	53.7%
Other family member	42.6%
Family doctor	31.0%
Nurse	14.4%
Counselor	14.2%
Social worker	9.9%
Traditional healer	9.0%
Community health representative	8.5%
Other	7.9%
Psychiatrist	7.0%
Psychologist	4.4%
Crisis line worker	2.3%

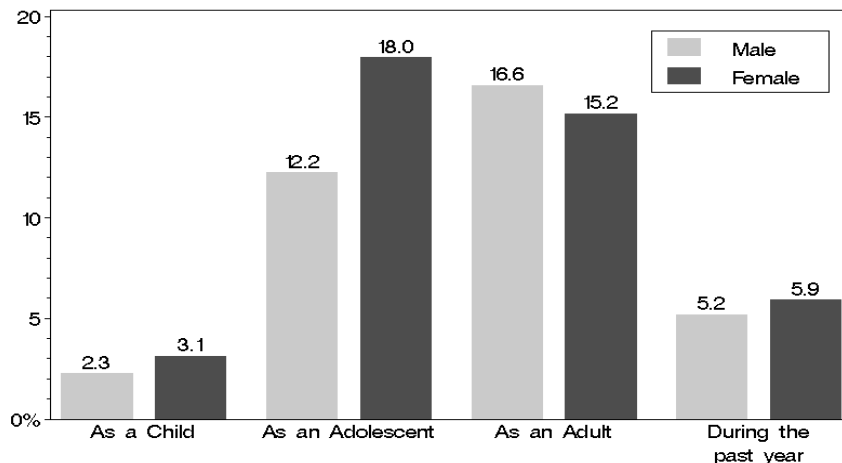
Several questions in the personal wellness section ask about feelings of depression and about suicides. Respondents were asked, for example, whether during the past 12 months there was ever a time when they felt sad, blue or depressed for two weeks or more in a row. About 30 per cent of males and 39 per cent of females admitted that this had happened to them (Chart 5.101).

**Chart 5.101**  
**Feeling Sad, Blue, or Depressed**  
 (Weighted Percentage)



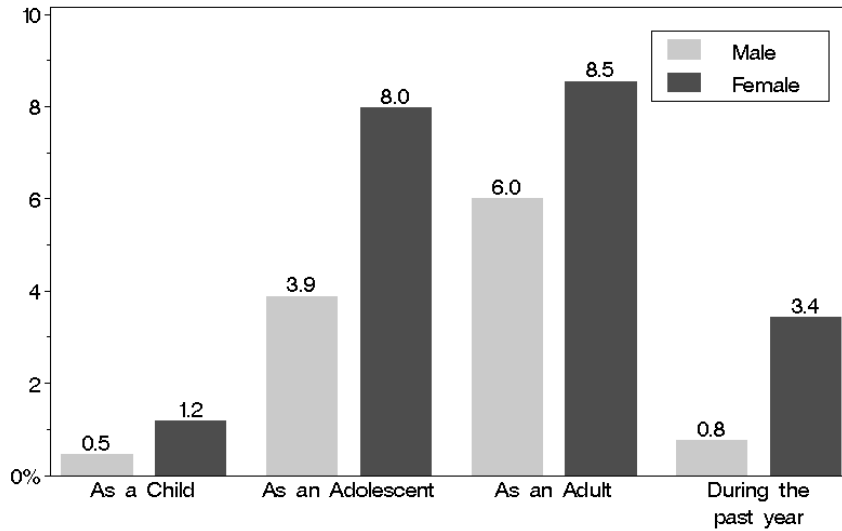
With respect to suicides, the first question asks whether the respondent has ever thought about committing suicide at various stages of his/her life. The results are reported by gender in Chart 5.102, showing that between 12 and 18 per cent of adults have thought about committing suicide in adolescence and/or in adulthood (respondents could check more than one option).

**Chart 5.102**  
**Ever Considered Suicide**  
 (Weighted Percentage)



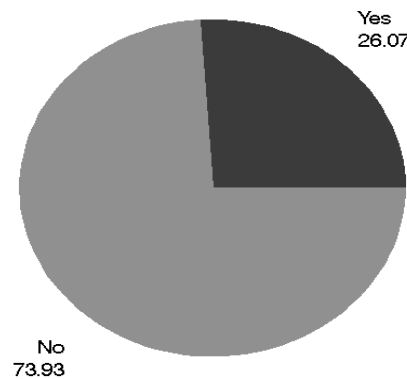
The number of adults who say they have actually tried to commit suicide is fortunately much lower but still substantial (Chart 5.103) Again, respondents could choose more than one option in the question.

**Chart 5.103**  
**Ever Attempted Suicide**  
 (Weighted Percentage)



A final question on suicides asks whether, in the past 12 months, a close friend or family member has committed suicide. This gets at the burden of grief felt in the community, when frequent suicides and other deaths accumulate. About a quarter of the adult respondents affirm that a close friend or family member has committed suicide in the year prior to the interview (Chart 5.104).

**Chart 5.104**  
**Suicide of Close Friend or Relative**  
 (Weighted Percentage)



Respondents were asked how often they were able to access companionship, assistance, guidance or other types of support when these were needed. The following chart suggests that adults living on reserve typically were able to access various kinds of support all or most of the time. The exception to this pattern had to do with having someone who could stand in for them and give them a break from their daily routines. In this instance, just over half of the respondents had someone they could turn to for this purpose, all or most of the time. There are some gender differences, usually in the direction of women being more likely to have sources of support (Chart 5.105).

**Chart 5.105**  
**Types of Support Available**  
 (Weighted Percentage Within Gender)

Type of Support	Males	Females
Someone to listen when you need to talk	67.7%	77.5%
Someone you can count on when you need help	71.8%	80.4%
Someone to take you to the doctor	75.6%	83.9%
Someone to show you love and affection	76.7%	86.1%
Someone to give you a break from daily routines	53.5%	61.0%
Someone with whom you can have a good time	72.3%	73.7%
Someone to confide in and talk about your problems	66.8%	74.2%
Someone with whom you can do something enjoyable	72.8%	75.5%

## Community Wellness and Traditional Culture

Our last question asks about the degree of progress that has been made on various issues affecting life in the community. At the high end indicating a perception of substantial progress were dimensions such as education and training opportunities, control over health, water and sewage facilities, housing, and increasing cultural awareness in schools. At the other extreme, large numbers said there had been no progress in dealing with alcohol and drug problems. Police services, recreation and leisure, and some cultural issues (such as traditional healing, the renewal of First Nations spirituality, and establishing a renewed relationship with the land) were also areas where many thought there had been no progress made (Chart 5.106).

**Chart 5.106**  
**Community Progress**  
 (Weighted Percentage)

Type of progress	Good Progress	Some Progress	No Progress
Traditional approaches to healing	13.7%	25.5%	27.2%
Renewal of spirituality	11.2%	28.3%	27.5%
Traditional ceremonial activity	16.8%	32.8%	23.9%
Renewed relationship with the land	14.2%	21.4%	32.4%
Use of First Nation language	22.1%	34.5%	23.4%
Reduction in alcohol and drug abuse	8.4%	21.2%	47.1%
Availability of First Nation health professionals	15.4%	32.6%	28.8%
Cultural awareness in schools	29.6%	37.9%	11.4%
Education and training opportunities	35.7%	34.8%	14.6%
Housing quality	20.6%	40.5%	25.0%
Water and sewage facilities	35.8%	28.9%	17.6%
First Nations control over health services	21.0%	31.4%	22.7%
Recreation and leisure facilities	18.7%	36.8%	31.8%
Police services	13.7%	25.5%	27.2%

## Conclusion to the Adult Chapter

In this chapter on the health of Mi'kmaq adults, we have presented over 100 charts or tables. What are the most interesting findings?

We were impressed that there has been a significant improvement in some of the social factors that are often linked to health outcomes – for example, in levels of high school completion especially among Mi'kmaq women but also males. Employment levels have also improved since 1997, but are still well below Nova Scotia levels. There are continuing issues in areas such as housing where over one-third of the housing stock is in need of major repairs and more than one-half have shown signs of mould and mildew in the 12 months prior to the survey.

Health conditions experienced by the adult Mi'kmaq population are in many respects similar to those encountered by other Nova Scotians, such as arthritis, high blood pressure, back pain and allergies. What stands out for Mi'kmaq adults is the high proportion with diabetes – around 20 per cent of the adult population, compared to 6 per cent for Nova Scotians generally. This is linked, of course, to obesity, nutrition and physical activity indicators. Of interest is the finding that less than half of the Mi'kmaq males with diabetes are attending diabetes clinics, and of those who do not attend, 38 per cent choose not to do so.

Other aspects of physical health include the high proportion of Mi'kmaq adults who have been injured from events such as falling, tripping, participation in sports and from physical assault. Activity limitations (meaning persons with disabilities) stand at 18 per cent. A high proportion of those with activity limitations need services such as home maintenance support, personal care and light housekeeping.

Mi'kmaq adults encountered barriers to health care with the most significant being long waiting lists, issues related to poverty (such as lack of transportation and child care costs), and lack of coverage from the Non-insured Health Benefits Program.

With respect to lifestyle patterns, perhaps the most disturbing outcome is the fact that close to two-thirds of Mi'kmaq adults were smoking at the time of the survey. There is little evidence of change since 1997, and a huge gap exists with Nova Scotia adults whose already low levels of smoking have declined further to 23 per cent.

We note also the high level of instances of racism and its impact on self-esteem. The data on depression and suicides also continues to be troubling and reveals important gender differences.

## Chapter Six: Conclusions

In this report, we have presented a large number of charts revealing findings for the Nova Scotia portion of the First Nations Regional Longitudinal Health Survey. We hope that the information will be useful to Mi'kmaq communities and organizations as well as to governments as they strive to improve the health of the on-reserve population.

We think that the data provides some encouragement in that comparisons with 1997 show some areas of improvement. The report can also be used to identify the continuing health concerns and priorities facing the population. Finally, there is a good deal of information in the report about change strategies – when and how to intervene, what factors contribute to healthy outcomes, or what strategies do the respondents themselves believe to be effective. In this conclusion, we will deal with each of these subjects in turn.

### Change Over Time: Some Good News

Drawing conclusions about change over time is a difficult exercise, but we are fortunate in having results from properly drawn random samples at two points in time: the initial survey in 1997 and the follow-up study in 2002-03, which has been the main subject of this report. It is not always possible to make comparisons, of course, because the 2002-03 questionnaires are much longer than five years earlier which means that on many dimensions, the questions were not asked in 1997. In other cases, the question may have changed significantly since 1997, making a comparison of results hazardous<sup>32</sup>.

It is encouraging to note, however, that when comparisons are possible, usually the results indicate that there has been some improvement in the situation between 1997 and 2002-03. Only rarely do the indicators show a deterioration, although in many instances there has been little change. Here are the highlights of the good news story.

- There has been an increase in the percentage of mothers who are breast feeding their children, although the latter number is still well below comparison groups.
- The percentage of children with common chronic health conditions such as allergies, ear infections and bronchitis has decreased substantially.
- As with children, among youth the incidence of chronic conditions such as allergies, asthma (among male youth) and ear problems has declined between 1997 and 2002-03.
- The percentage of female youth using alcohol has decreased

The percentage of youth smoking cigarettes has decreased substantially for both male and female youth. There has also been an improvement in the percentage of homes in which youth live that are smoke free.

---

<sup>32</sup> We note that the results we reported in 1997 were unweighted sample results whereas the 2002-03 results are population results properly weighted from sample findings. This difference should not have a major effect on the validity of the comparisons.



- The percentage of youth who say they have felt sad, blue or depressed for two weeks in a row in the past year is down for female youth. In general, there is some convergence between male and female youth on mental health measures, for example on stress levels where male youth report levels closer to female youth than they did in 1997.
- Adults show higher levels of education than they did in 1997, and also higher employment levels.
- The per cent of adults who smoke has remained consistently high, but the number of cigarettes smoked per day has decreased.

### **Continuing and New Health Concerns**

While there has been some progress made in health determinants and health outcomes, there is no shortage of information that points to serious and continuing health difficulties among the on reserve Mi'kmaq population. In many cases, the incidence of poor health outcomes is much higher than it is for the Nova Scotian or Canadian populations, and it is these issues that are natural choices when it comes to taking remedial or preventive action. For example,

- The health of Mi'kmaq children is seriously affected by high levels of smoking among Mi'kmaq mothers during pregnancy. Some 52 per cent of Mi'kmaq mothers smoked during their last pregnancy while an additional 10 per cent smoked at the start but then quit during this period. The number of women who smoked throughout their last pregnancy has not changed since 1997, and is much higher than among First Nations in Canada and non-Aboriginal women in Nova Scotia.
- While rates of breast feeding have improved, it tends to take place for relatively short periods of time – that is, for less than three months rather than the recommended six months or more.
- Chronic health conditions among children still predominantly have to do with breathing and hearing difficulties such as asthma, allergies, and ear infections. Effective action needs to take place to address these issues through a reduction in smoking in the home, for example, and steps to address the high proportion of homes with mould and mildew.
- While a high proportion of Mi'kmaq children are physically active, there is also a lot of sedentary activity reported in front of the television or the computer.
- Less than half of youth are living in homes with both their birth parents.
- A very high per cent of youth say that they have repeated a grade in school. A similar percentage indicate that they are having learning problems at school in such areas as reading, math and getting distracted.
- As with children, chronic health conditions for youth continue to feature breathing and hearing problems. Allergies, asthma, and ear infections are prominent, as are learning disabilities and attention deficit disorders.

- Injuries among youth continue at high levels but could be reduced through effective preventive action.
- A high percentage of youth take mood altering drugs, especially substances such as marijuana or hash. There appears to be an increase, too, in the use of chewing tobacco. This is especially true among male youth but it makes an appearance among female youth as well.
- A large proportion of male youth who are sexually active have many partners, from 3 to 10, thereby greatly increasing the risk of sexually transmitted diseases.
- Thoughts about suicide and attempts at it are major problems among youth. Among female youth, for example, 29 per cent have thought about it and 11 per cent have attempted it. Some 22 per cent of youth know a friend or family member who has committed suicide in the 12 months prior to the survey, so the burden of grief accumulated over time is substantial. These concerns extend to adults as well.
- Among adults, while there have been some improvements in educational and employment levels, still these and other predictors of health outcomes (such as the quality of housing) are well below provincial standards.
- Chronic health conditions have some different features among adults compared to children and youth. While allergies and asthma continue to be prominent, adults are also coping with arthritis, high blood pressure and diabetes. Indeed, among adult males, the incidence of diabetes has increased, approaching the rate of females.
- Smoking rates have not improved since 1997 – they remain in the 63 per cent range for Mi'kmaq adults. In fact, the gap with other Nova Scotians has widened as Nova Scotia takes effective action to curb smoking rates and brings its adult smoking level to 23 per cent.
- Alcohol consumption rates have also remained fairly stable, and among those who drink, heavy or “binge” drinking is of particular concern. Apart from alcohol consumption, about half of the adult males and just over a third of adult females reported taking mood altering drugs without a prescription in the 12 months prior to the survey.

### **What Does the Survey Tell Us About Possible Change Strategies?**

In contrast to 1997, the 2002-03 survey provides a wealth of information that is useful for strategic planning and program development. For example,

- The data on children and youth informs about who helps them understand their culture – it is mostly parents, of course, but grandparents, other relatives such as aunts and uncles, and school teachers also figure prominently.
- The survey contains important information about barriers to accessing health care, whether for children or adults. Long waiting lists are most frequently mentioned followed by transportation difficulties – either transport not being available or being too costly.

Other barriers include the health service not being available, or not being covered by the Non-Insured Health Benefits Program. Additional data tell us specifically what kinds of NIHB benefits are not made available – most frequently medication but also dental care, transportation services and vision care.

- Youth and adults tell us what makes them healthy, and they place emphasis on factors such as “being content”, good diet and exercise, proper rest, social support, and having various aspects of your life in balance.
- The survey provides specific information about nutrition and exercise – the extent to which people eat a nutritious and balanced diet, for example, and what kinds of junk food get in the way; and how often, how long and what kinds of physical exercise they obtain. Social support is covered as well, for example who youth would go to for help with issues such as anger management, relationship problems or help with sexually transmitted diseases. Parents and friends figure most prominently, but sometimes health professionals can also be important.
- For youth, we know from the survey how frequently they have consulted traditional healers. They have also told us about accessing dental and mental health services and taking various kinds of preventive tests or examinations, such as those having to do with hearing, vision, cholesterol and blood sugar.
- For adults, we know how often they have accessed traditional medicines and the barriers they have encountered, which mostly have to do with not knowing enough about them or where to get them. A similar percentage have consulted a traditional healer. Other questions ask about accessing various tests and examinations – for HIV/AIDS, for example, and cholesterol, vision, blood pressure and blood sugar, and rectal examinations. Mi’kmaq women also responded to questions about breast self-examinations, mammograms, and PAP smears.
- While it is helpful to know how many persons access preventive services, it is even more helpful to understand what steps they took to abandon behaviours that put their health at risk. We know from the data that youth typically make several attempts at stopping smoking, for example. Those who quit are most likely to do so in the 12-14 year age range, and the most important reasons for doing so has to do with respect for loved ones, choosing a healthier life style and peer pressure. Adults gave similar reasons except that having another health condition was deemed important as well as greater awareness of the health risk of smoking. When asked how they quit, going “cold turkey” was by far the most important method.
- Similarly with respect to practising birth control and taking measures to prevent diseases from sexual activity, our data for youth specifies the type of birth control or protection method used (mostly condoms), the frequency of use and the reasons for not taking protective measures. This information should be helpful in targeting educational and other programs.
- With respect to diabetes among adults, we learned how many adults checked their blood sugar less than once a day. There is also a large gender gap among those attending diabetes clinics and we learned about the reasons for not doing so.

- Data for adults on activity limitations reveals the services that they are able to access and also some of the gaps in services, for example the need to modify homes for ramps and hand holds.
- Adult respondents also mentioned other determinants of health that are usually not linked to health status. While only a small number had actually attended residential schools, for example, a large proportion of those who did attend said the experience had a negative impact on their health and well-being. They went on to say what aspects of the residential school experience accounted for the negative impact. In answer to another question, 37 per cent of adults indicated that they had experienced instances of racism in the previous 12 months. Of these, 13 per cent said the experience had either a strong or very strong impact on their self-esteem.
- Finally, we learned from adults where they thought progress had been made in addressing health-related issues and on what dimensions little or no progress had been achieved. Adults were positive about the changes that had occurred in areas such as cultural awareness in schools, education and training opportunities and housing improvements. They were not so impressed with efforts to reduce drug and alcohol abuse, to access traditional approaches to healing or to improve recreation and leisure facilities.

It is evident, then, that the Regional Health Survey can tell us not only about the health status of the population, in both its positive and negative aspects, but also about areas where progress has been made, what specific interventions worked, what motivated people to abandon risky behaviour, what health determinants they thought were important, what barriers they encountered in accessing health services, and what preventive actions they took. It is useful, in other words, for strategic planning.

### **Some Continuing Puzzles**

As informative as this data set is, it doesn't tell us all we need to know. As is usually the case with research, a number of puzzles remain. For example,

- Why is it that we see a high proportion of Mi'kmaq adults enrolling in post-secondary education programs but relatively few actually graduating, especially among adult males?
- Why is it that at least a portion of the youth and adult population fails to undertake preventive health measures by engaging in unprotected sex, for example, or neglecting to attend diabetes clinics?
- What lies behind the high proportion of Mi'kmaq youth who have had to repeat a grade, and what are the consequences and solutions for to this pattern?

These and other questions require further investigation. As noted in the introduction, however, this report showing descriptive results from the survey do not exhaust the useful information that can be obtained from the data. Before launching a new program of research, it is worthwhile to undertake a more in-depth analysis of the survey data in order to realize its full potential.

## References

- Alexander, G. R., & Korenbrot, C. C. (1995). The role of prenatal care in preventing low birth weight. *Future of Children*, 5(1), 103-116.
- Barker, D. J. P. (1998). *Mothers, babies and health in later life* (2nd ed.). Toronto: Churchill Livingstone.
- Bartley, M. (2004). *Health inequality: An introduction to theories, concepts and methods*, U.K.: Polity Press
- Brunekreef, B. & Forsberg, B. (2005). Epidemiological evidence of effects of coarse airborne particles on health. *European Respiratory Journal*, 26, 2, 309-318.
- Busby, J. & Taylor, T. & Marquez, B. (2004). Promoting positive social development in family childcare settings. *Early Education and Development*, 15, 4, 449-470.
- Dales, R., Burnett, R., & Zwanenburg, H. (1991). Adverse health-effects among adults exposed to home dampness and molds. *American Review of Respiratory Disease*, 143, 3, 505-509.
- Health Canada. (1999). *Nutrition for a healthy pregnancy: National guidelines for the childbearing years*. Ottawa: Minister of Public Works and Government Services Canada.
- Howes, C. & James, J. (2002). Children's social development within the socialized context of childcare and early childhood education. In P. Smith & C. Hart (Eds.). *Blackwell handbook of childhood social development*, pp. 137-155. Malden, MA: Blackwell Publishing.
- Isabel den Heyer and Fred Wien with the assistance of Jean Knockwood and Virick Francis (2001), *Mi'kmaq Students with Special Education Needs in Nova Scotia*, Sydney: Mi'kmaq Kina'matnewey, 2001.
- Kinard, M. (2002). Participation in social activities: Maternal ratings of maltreated and non-maltreated children. *American Journal of Orthopsychiatry*, 72, 1, 118-127.
- Knockwood, I. (1992). *Out of the depths: The experiences of Mi'kmaq children at the Indian Residential School at Shubenacadie, Nova Scotia*. Nova Scotia: Roseway Publishing.
- Livingston, E., Thomson, N., & Chalmers, G. (2005). Impact of smoking on asthma therapy: A critical review of clinical evidence. *Drugs*, 65, 11, 1521-1536.
- Mi'kmaq Health Research Group (1999), *The Health of the Nova Scotia Mi'kmaq Population*, Sydney: Union of Nova Scotia Indians.
- National Aboriginal Health Organization, *First Nations Regional Longitudinal Health Survey (RHS) 2002/03: Report on Research and Methods*, Ottawa: National Aboriginal Health Organization, 2005.

National Aboriginal Health Organization, *First Nations Regional Longitudinal Health Survey (RHS) 2002/03: The Peoples' Report*, Ottawa: National Aboriginal Health Organization, 2005.

Nova Scotia Department of Health, *Canadian Community Health Survey 2.1: Summary Report to the District Health Authorities*, Halifax: Nova Scotia Department of Health, 2005.

Pearson (2005). *Aboriginal Head Start Initiative: Targeting Urban and Northern Communities*. [sen.parl.gc.ca/lpearson/htmfiles/hill/v15head-e.htm](http://sen.parl.gc.ca/lpearson/htmfiles/hill/v15head-e.htm).

Paul, D. (2000). We were not the savages: A Mi'kmaq perspective on the collision between European and Native American civilizations. Halifax: Fernwood.

Solish, A. (2003). Integration of children with developmental disabilities in social activities. *Journal on Developmental Disabilities*, 10, 1, 115–121.

AGREEMENT FOR COOPERATION  
IN HEALTH



The Confederacy of Mainland Micmacs



Dalhousie University



Union of Nova Scotia Indians

MEMORANDUM OF AGREEMENT ON MI'KMAQ HEALTH

BETWEEN

THE UNION OF NOVA SCOTIA INDIANS AND THE CONFEDERACY OF  
MAINLAND MICMACS AND DALHOUSIE UNIVERSITY

**W**hereas the Union of Nova Scotia Indians, The Confederacy of Mainland Micmacs and Dalhousie University are committed to working together to understand and improve the health of the Mi'kmaq Nation; and

**W**hereas the Union of Nova Scotia Indians, The Confederacy of Mainland Micmacs and Dalhousie University possess expertise that, when shared, can more fully ensure that health initiatives will address the needs of the Mi'kmaq Community and will meet the needs of regaining control of health and the provision of health services

**T**herefore be it agreed that the Union of Nova Scotia Indians, The Confederacy of Mainland Micmacs and Dalhousie University will establish a forum in which they can collaborate for the mutual benefit of all concerned; and

**Be it further agreed** that this collaboration will be focused on activities which will:

1. enhance the capacity of the Mi'kmaq Nation to assess and understand the health determinants and health status of the Mi'kmaq Community;
2. assist with the collection of high quality health information;
3. analyze health information collected to assist in the future planning of Mi'kmaq self-determination and control of community health issues;
4. initiate and support health related research projects which are identified as being important for the Mi'kmaq Community; and
5. initiate and support educational opportunities in the future related to the health concerns of the Mi'kmaq Community.

**In Witness Whereof** the parties hereto have properly executed this Memorandum of Agreement:

President of the  
Union of Nova Scotia Indians

Executive Director of  
The Confederacy of Mainland Micmacs

President and Vice-Chancellor,  
Dalhousie University

Date: September 30, 1996