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First Nations Information Governance Centre
Le Centre de gouvernance de l'information des Premières Nations

NATIONAL REPORT OF
The First Nations Regional Health Survey
PHASE 3: VOLUME TWO





About the Report

This publication is available online at the First Nations Information Governance Centre’s website

www.fnigc.ca/RHS3report.

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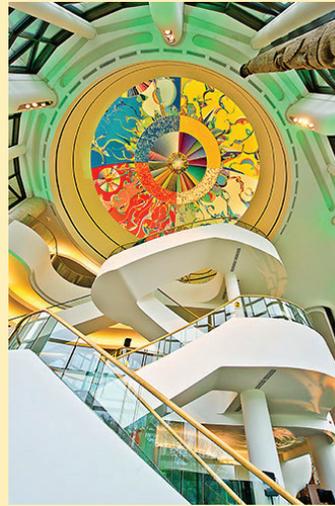
The First Nations Information Governance Centre (FNIGC) is an incorporated non-profit operating with a special mandate from the Assembly of First Nations’ Chiefs in Assembly (Resolution #48, December 2009).

FNIGC is committed to producing data that can contribute to the health and well-being of First Nations people living in our 634 communities across the country.

www.FNIGC.ca

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About the Cover



The cover of this report features Morning Star, a 1993 mural by Dene Suline artist Alex Janvier which adorns the dome of the Haida Gwaii Salon at the Canadian Museum of History in Ottawa, Ontario, Canada. The artwork covers 418 square metres and can be seen from seven stories below. Morning Star illustrates the history of the land we live in from the artist’s Dene Suline perspective, and is an expression of the hope for mutual respect.

Born of Dene Suline and Saulteaux descent in Le Goff Reserve, Cold Lake First Nations, Alberta, Janvier was raised in the Chipewyan tradition, speaking the Dene language until attending the Blue Quill Residential Indian School when he was eight-years-old. As a member of the “Indian Group of Seven,” Janvier is widely recognized as one of the most significant Indigenous artists in Canada, and over the course of his career he has added much to the cultural fabric of the nation.

A Member of the Order of Canada, Alberta Order of Excellence, and Royal Canadian Academy of the Arts, his contribution to art in Canada is immeasurable.

www.alexjanvier.com

For more information on Morning Star:

www.historymuseum.ca/morningstar



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FOREWORD

On behalf of the First Nations Information Governance Centre (FNIGC) and its Board of Directors, I am pleased to present to you the *National Report of the First Nations Regional Health Survey Phase 3: Volume Two*.

This report is the culmination of five years of hard work by thousands of passionate, dedicated people working in a variety of capacities, including survey coordination, management, and development led by the staff of FNIGC's national offices and survey deployment, coordination and data gathering led by our Regional Partners. Most importantly, we acknowledge the more than 20,000 First Nations community members who took the time to share their information with us by completing the survey questionnaire.

In the end, their decision to fill out our (often-lengthy) questionnaire helped to make this phase of the survey a resounding success. In fact, it was the most successful to-date, with nearly 24,000 surveys completed in more than 250 First Nations communities—a record in the more than 20-year history of this unique First Nations initiative.

When the first round of data collection began in 1997, the **First Nations Regional Health Survey** (FNRHS, or RHS as it came to be known) was a survey like no other: a national health survey created, conducted, and carried out by First Nations people for First Nations people. Born out of the need to fill an existing data gap about First Nations reserve and northern communities, the RHS was a truly grass-roots effort.

Pulled together by a collective of First Nations advocates and academics who had to fight for every dollar of funding from the institutions of the day, the first few years of the RHS were a struggle for recognition and respect.

Twenty years later, the RHS has earned its place as *the* reliable source of information about life in First Nations communities, with its data being used to support policy and programming at community, regional, and federal levels. And it is still the only First Nations survey of its kind, with its social, cultural, and political impact now widely acknowledged.

What you hold in your hands is the second of two volumes of the third phase of the RHS (the first volume can be downloaded from www.FNIGC.ca). Being the third version of the survey, this report allowed for another exciting first: it marks the first time in the history of the RHS that we can look at selected data trends over time.

I would like to take this time to recognize the hard work of FNIGC's national staff, the Regional Partner organizations, Regional Coordinators, data analysts, administrators, Fieldworkers, First Nations leadership, community staff, and the various committees and consultants who participated and contributed to the RHS Phase 3 process.

FNIGC would also like to acknowledge and thank the First Nations and Inuit Health Branch (FNIHB) of Health Canada (which funded the RHS), the (former) Indigenous and Northern Affairs Canada (INAC), and the Public Health Agency of Canada. We are also pleased to count the new Department of Indigenous Services Canada—which is home to FNIHB—and Crown-Indigenous Relations and Northern Affairs Canada as committed partners.

Dr. Jonathan Dewar, Executive Director, FNIGC



THE FIRST NATIONS REGIONAL HEALTH SURVEY PHASE 3: VOLUME TWO

CHAPTER ONE: INTRODUCTION

ABOUT THE FIRST NATIONS INFORMATION GOVERNANCE CENTRE

The First Nations Information Governance Centre (FNIGC) is a non-profit First Nations organization, federally incorporated under the Canada Incorporations Act in April 2010 and operating on a mandate from the Assembly of First Nations' (AFN) Special Chiefs in Assembly (Resolution #48/2009). It is governed by a Board of Directors drawn from 10 regions across Canada (representing 10 provinces and two territories).

FNIGC has a mandate to oversee data collection on First Nations reserves and in Northern communities, research, knowledge dissemination and the promotion and advancement of the First Nations principles of OCAP® on behalf of all First Nations. FNIGC reports to the Assembly of First Nations (AFN) on an annual basis. FNIGC is responsible for the implementation of its survey processes in collaboration with its regional member organizations following established protocols, policies and procedures and a holistic cultural framework.

FNIGC Vision

The First Nations Information Governance Centre envisions that every First Nation will achieve data sovereignty in alignment with its distinct worldview. (Ratified by FNIGC's Board of Directors, June 6, 2018)

FNIGC Mission

We assert First Nations' data sovereignty and support the development of information governance and management systems at the community level through regional and national partnerships. We adhere to free, prior and informed consent, respect nation-to-nation relationships, and recognize the distinct customs of nations. (Ratified by FNIGC's Board of Directors, June 6, 2018)

ABOUT THE FIRST NATIONS REGIONAL HEALTH SURVEY

Phase 3 of the First Nations Regional Health Survey (FNRHS, or RHS) was funded by the First Nations and Inuit Health Branch (FNIHB) of Health Canada.

FNIGC coordinates survey activities at the national level and is responsible for maintaining partnerships with various federal and First Nations organizations, preparing RHS-related publications and research materials, and serving as data stewards for the national RHS Phase 3 database.

While FNIGC is responsible for reporting on national-level statistics, it partners with regional First Nations organizations to coordinate activities at the regional level. These 10 Regional Partners serve as data stewards for the regional RHS Phase 3 databases.



FNIGC's Regional Partners for the RHS Phase 3 are:

- The Union of Nova Scotia Indians (which represents Nova Scotia, Prince Edward Island and Newfoundland)
- The Union of New Brunswick Indians
- The First Nations of Quebec and Labrador Health and Social Services Commission
- The Chiefs of Ontario
- The First Nations Health and Social Secretariat of Manitoba (established by the Assembly of Manitoba Chiefs)
- The Federation of Sovereign Indigenous Nations (Saskatchewan)
- The Alberta First Nations Information Governance Centre
- The First Nations Health Authority (British Columbia)
- The Dene Nation (Northwest Territories)
- The Council of Yukon First Nations

The RHS is the only national First Nations health survey in Canada and has produced important innovations in data sharing, research ethics, computer-assisted interviewing, sampling, field methods, training and culturally appropriate questionnaire content. Most significantly, the RHS process has invested in individual and organizational First Nations capacity at the community, regional and national levels. Over time, the RHS has developed into a unique collaborative initiative of First Nations regional organizations across Canada.

Moreover, the RHS is the first national survey implemented explicitly in keeping with the First Nations principles of OCAP®. As the only national health survey under complete First Nations control, the RHS has given new meaning to First Nations self-determination in research and has provided the research community with a demonstration on how

the principles of OCAP® can be successfully executed.

Before the RHS, First Nations populations living on reserve and in Northern communities had been excluded from national health surveys resulting in an information gap for many key socio-economic indicators. The challenges First Nations face are multi-dimensional and require a collective response to promote well-being and to understand and reduce health disparities. The RHS is one such response that is filling this data gap by generating regional and national evidence to improve the health care system and the determinants of health for First Nations.

Background

In 1996, the Assembly of First Nations Chiefs Committee on Health mandated that a First Nations health survey be implemented every four years across Canada. This mandate came as a result of activities that began in 1994, when three major national longitudinal surveys were launched by the federal government that specifically excluded First Nations living on-reserve and in northern First Nations communities.

The RHS began in 1997, as the First Nations and Inuit Regional Longitudinal Health Survey (now known as the RHS pilot). The survey was implemented to address First Nations and Inuit health and well-being while acknowledging the need for First Nations and Inuit to control their own health information.

The RHS Phase 1 was implemented in 2002/03 and included two new regions: Yukon and Northwest Territories. At the same time the Inuit withdrew from the RHS process. Data collection for RHS Phase 1 began in the fall of 2002 and was completed in 2003. In total, 80.1% of the target sample was achieved and 22,602 surveys were collected from 238 First Nations communities.



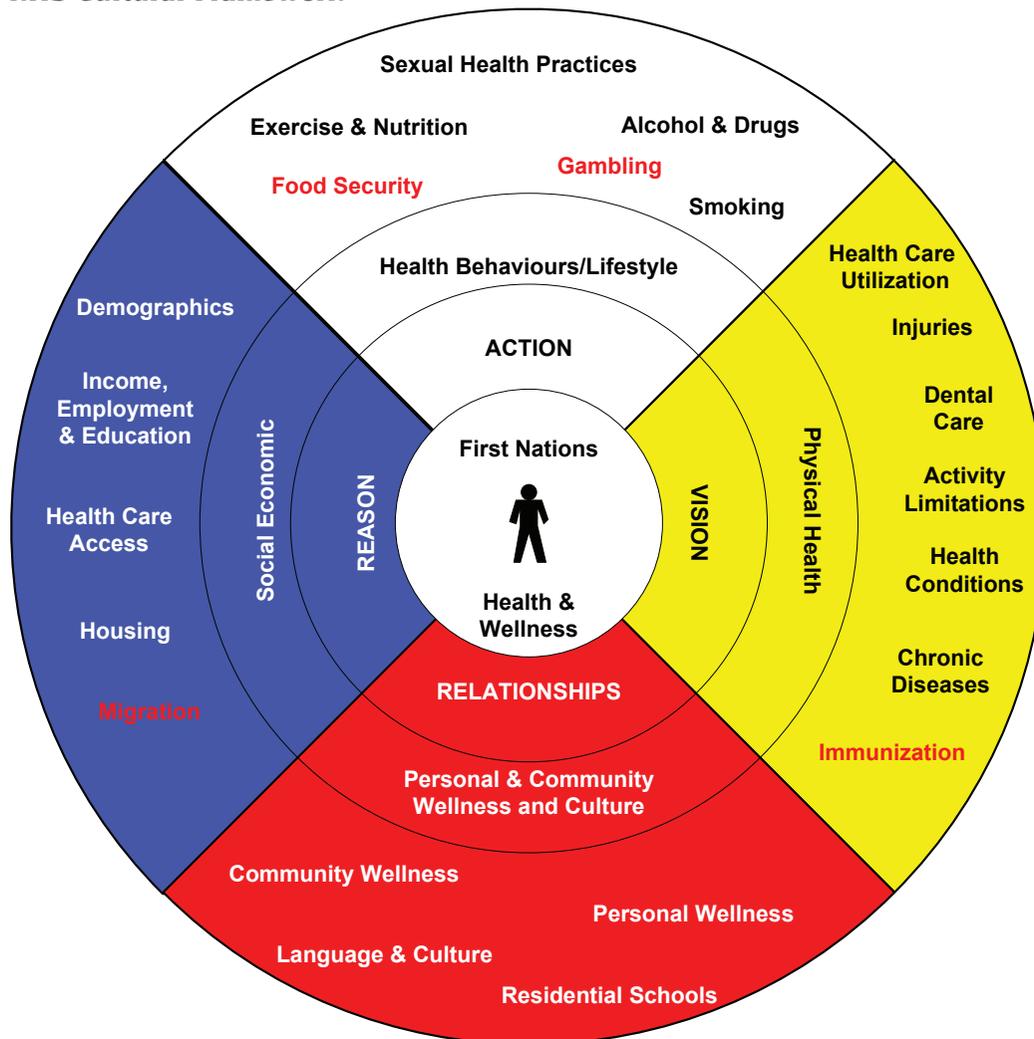
Data collection for the RHS Phase 2 began in 2008 and was completed in the fall of 2010. The sampling approach for this phase was improved to ensure adequate regional estimates. In RHS Phase 2, 72.5% of the target was achieved and more than 21,000 surveys were collected in 216 First Nations communities.

Community participation in all aspects of design, collection, and analysis ensured that the data are relevant and the governance and accountability mechanisms are appropriate.

RHS Cultural Framework

In order to frame the survey theoretically, the FNIGC commissioned the development of a cultural framework as part of the RHS Phase 1 development process. The resulting RHS Cultural Framework which informs the research process and organizes the interpretation of the data, is visually represented in Figure 1.1.

Figure 1.1, RHS Cultural Framework





Within this framework, the meaning of First Nations health and well-being is defined as “the total health of the total person within the total environment.” The concept of *total health* is defined as “all aspects and components of health and well-being seen as integrally interconnected with one another within an inclusive and inter-related and interactive web of life and living”.¹

The concept of *total person* is defined as all dimensions of personhood including body, mind, heart and spirit. These dimensions, when defined in such a way that can be practically measured in research as social determinants and outcomes, include:

- physical health, mental health, emotional health, spiritual health;
- healthy behaviour and lifestyle, healthy mental function, cultural continuity with the past and towards future opportunity;
- healthy connection to culture and healthy spirituality as a First Nations person;
- healthy home life, community life and extended family connections.

Total environment is defined as “a healthy connection and relationship with the living environment – this being constituted of the land, natural environment, cultural environment, context of activity, community, family, and the everyday living environment.”²

The goal of the RHS Cultural Framework is to assist in achieving a culturally informed interpretation process that can be presented to communities in a way that reinforces and reflects their ways of seeing, relating, knowing and being. The Cultural Framework

assists in providing a more accurate interpretation of the information shared by First Nations children, youth and adults.

RHS interpretative framework

Jim Dumont, a Traditional teacher, prepared a research document to assist in developing a cultural interpretative framework for FNIGC (Dr. Mark S. Dockstator further elaborated on this model).

The interpretative framework begins with the understanding that First Nations people use the concept of wellness, which, within a Eurocentric viewpoint, is more commonly referred to as health. While it is important to note that there are different philosophical understandings of the concepts of health and wellness, the philosophies are not necessarily mutually exclusive. The concepts are not absolutes or adversarial in nature—they are simply different.

Wellness is a very complex and multi-layered philosophy. However, it is important to articulate the complexity of this understanding in order to understand what questions to ask and how to interpret the information received by First Nations people.

First Nations wellness encompasses Indigenous knowledge, culture, language, world view and spirituality as indicators of health. These indicators are core to an overall understanding of how we, as a people, keep ourselves “balanced” and therefore healthy. This reinforces the need for the RHS Cultural Framework to be used in interpreting the information collected by First Nations people.

The model is important in explaining why certain questions, such as those relating to language and culture, are included in the context of a “health” survey. The First Nations Wellness model highlights

1 Jim Dumont, *First Nations Regional Longitudinal Health Survey (RHS) Cultural Framework*, p. 12, February 2005.

2 Jim Dumont, *First Nations Regional Longitudinal Health Survey (RHS) Cultural Framework*, p. 12, February 2005.



the need for such questions. It illustrates that you cannot have an indicator of wellness for First Nations health without also discussing culture, language, world view and spirituality.

The RHS Cultural Framework will assist in bringing balance to previous research by drawing out the positive changes related to First Nations wellness. It is important for the information presented to be useful to the First Nations reading the report in order to facilitate positive change in behaviour. The information needs to be presented in such a way so as to clearly identify the warning signs for possible wellness issues and what First Nations can do about them.

For more information about the framework, see the following FNIGC publication: [First Nations Regional Longitudinal Health Survey \(RHS\) 2002/03: Results for Adults, Youth and Children Living in First Nations Communities; \(www.fnigc.ca\)](http://www.fnigc.ca)

RHS Phase 3 survey development

As part of the RHS Phase 3 development process, the questionnaire from the previous phases of the RHS underwent extensive review and revision. Comparability, non-response and write-in answers were carefully assessed and, new themes were added to the core components based on extensive feedback. For example, the child survey now includes questions about bullying and maternal behaviours.

Input and feedback were received from regional advisory committees, regional coordinators, regional data analysts and key stakeholders including the Assembly of First Nations and Health Canada's First Nations and Inuit Health Branch (FNIHB).

Throughout the survey development process several factors were taken into consideration when decisions were made regarding content, such as:

- the utility of data to be gathered through proposed items,
- the impact on cross-sectional comparability with RHS Phase 1 and Phase 2,
- alignment with the RHS Cultural Framework,
- the impact on time to complete (respondent fatigue) and
- regional priorities.

The RHS Phase 3 contained a set of questions that addressed issues common to all First Nations people across Canada. In many regions, additional questions were developed to address issues specific to First Nations people living within their respective region.

The RHS Phase 3 was made up of three specific surveys: the child, youth and adult. The child survey collected information on children between the ages of 0- and 11-years-old. (Child surveys were completed by the primary caregiver, usually a parent). The youth surveys were completed by First Nations youth between the ages of 12 and 17. The adult surveys were completed by those aged 18 years or older.

Prior to deployment, the RHS Phase 3 underwent an ethical review process. An external Research Ethics Committee was assembled to ensure an independent review of the RHS Phase 3 survey and process and its scientific and ethical acceptability.

The Research Ethics Committee agreed by consensus that the study was ethically sound and recommendations were made. The committee met again to ensure recommended changes were made and gave their final approval on August 18, 2014.

Survey content

Table 1.1 shows the indicators included in the RHS Phases 1, 2 and 3, over time, organized by child, youth and adult surveys.



Table 1.1: RHS Indicators, Phases 1, 2 & 3

INDICATORS	CHILD	YOUTH	ADULT
After school/Extra-curricular activities	1, 2, 3	1, 2, 3	
Attitudes towards school		1, 2, 3	
Balance (physical, mental, emotional, spiritual)		1, 2, 3	1, 2, 3
Basic Services (phone, water, smoke detector, internet)			1, 2, 3
Birth weight	1, 2, 3		
Body mass index	1, 2, 3	1, 2, 3	1, 2, 3
Bottle/Breastfeeding	1, 2, 3		
Bullying/Personal safety	3	2, 3	2, 3
Caregiving			2, 3
Child care	1, 2, 3,		
Community wellness		2, 3	1, 2, 3
Demographics	1, 2, 3	1, 2, 3	1, 2, 3
Dental Health/Care/BBTD	1, 2, 3	1, 2, 3	1, 2, 3
Depression/K-10 Kessler		1, 2, 3	1, 2, 3
Diabetes	1,2	1, 2, 3	1, 2, 3
Disability	1,2		1, 2, 3
Dropout			1, 2, 3
Education	1, 2, 3	1, 2, 3	1, 2, 3
ECD attendance (including Head Start)	1, 2, 3	3	
Employment/Unemployment status			1, 2, 3
Exposure to second-hand smoke (home and car)	1, 2, 3	1, 2, 3	1, 2, 3
Food and nutrition/Traditional foods	1, 2, 3	1, 2, 3	1, 2, 3
Food Security			1, 2, 3
Future aspirations/Orientation (school or career)		1, 2	
Gambling			2, 3
General health (self-rated health)	1, 2, 3	1, 2, 3	1, 2, 3
Health and chronic conditions	1, 2, 3	1, 2, 3	1, 2, 3
Health services access and utilization/NIHB	1, 2, 3	1, 2, 3	1, 2, 3
Home care			1, 2, 3
Household characteristics and composition (crowding index)	1, 2, 3	1, 2, 3	1, 2, 3
Housing conditions			1, 2, 3
Health utilities index (HUI)			2
Immunization	2, 3		
Income and income sources			1, 2, 3



Job industry			2
Injury	1, 2, 3	1, 2, 3	1, 2, 3
Job location			2, 3
Language	1, 2, 3	1, 2, 3	1, 2, 3
Literacy	1, 2, 3		
Mastery		1, 2, 3	1, 2, 3
Maternal behaviours/Prenatal health/Prenatal exposure	1, 2, 3		
Medication use	2, 3		
Migration			2, 3
Parental characteristics (education, employment, etc.)	1, 2, 3	1, 2, 3	
Physical activity	1, 2, 3	1, 2, 3	1, 2, 3
Pregnancy or Fertility		1, 2, 3	1, 2, 3
Preventative health practices		1, 2, 3	1, 2, 3
Racism			1, 2, 3
Residential School	1, 2, 3	1, 2, 3	1, 2, 3
School attendance/Absenteeism	1, 2, 3	1, 2, 3	
School performance	1, 2, 3	1, 2, 3	
Screen time/Sedentary behaviour	1, 2, 3	1, 2, 3	2, 3
Self-esteem		1, 2, 3	
Sexual health		1, 2, 3	1, 2, 3
Sleep	3		
Smoking, alcohol and drug use	1	1, 2, 3	1, 2, 3
Social supports		1, 2, 3	1, 2, 3
Spirituality and religion			1, 2, 3
Suicidal ideation and attempts		1, 2, 3	1, 2, 3
Technology at home/Access to technology			1, 2, 3
Traditional culture and teachings	1, 2, 3	1, 2, 3	1, 2, 3
Traditional medicine	1, 2, 3	1, 2, 3	1, 2, 3
Usual hours of work			1, 2, 3
Water quality			1, 2, 3
Well-being (mental, emotional and spiritual)	1, 2, 3	1, 2, 3	1, 2, 3



About the RHS Phase 3 National Report

The *National Report of the First Nations Regional Health Survey Phase 3: Volume Two* is intended to provide an overview of the national-level results from the survey, across children, youth and adult First Nations populations.

Writers for the report were selected using a proposal-based competition which was adjudicated by an internal review committee at FNIGC. The writers included First Nations and non-First Nations academics, consultants and researchers from non-governmental organizations and universities. Each writer was provided detailed writing guidelines to ensure consistency among the chapters with respect to content and style.

Writers were given access to RHS Phase 3 data through FNIGC's First Nations Data Centre or through remote data requests, which were conducted by statistical analysts within FNIGC.

RHS Phase 3 report writers interpreted these outputs in the process of developing their results section and creating relevant tables and figures. Individual writers were responsible for providing and verifying sources of information included in the chapter besides those provided by FNIGC (i.e., information on data collection, question wording, statistical output).

For each chapter a seven-step review process was established:

1. First draft submitted to FNIGC
2. First internal technical review by (FNIGC's internal review committee) and external cultural review (by external review committee)
3. Second draft submitted to FNIGC
4. Second internal technical review and update by internal review committee
5. FNIGC's internal copy-edit
6. External copy-edit
7. Final draft

The RHS Phase 3 collected vast amounts of information regarding the health, social determinants and well-being of First Nations. Due to the breadth and scope of the information, it has been summarized and is being published in two volumes totaling 12 chapters across key themes. Both volumes are available to download on the FNIGC website (www.FNIGC.ca). Where possible, results from the child, youth and adult surveys are presented together under a common theme.

While the *National Report of the First Nations Regional Health Survey Phase 3: Volume Two* covers many themes and topics relevant to First Nations communities in Canada, it is not intended to address all of the data gathered by RHS Phase 3.

Along with the previous phases of the RHS (conducted between 2002 and 2016), RHS Phase 3 will provide a wealth of critical data pertinent to the health and well-being of First Nations living on reserve and in Northern communities in Canada and will expand our knowledge of their strengths, resiliency and living conditions.

That being said, this national report is not intended to be the last word on these important issues. As a First Nations-run organization, FNIGC is committed to produce further reports and supplemental material from the rich source of data that the RHS surveys represent.



Methodology

RHS Phase 3 survey instruments and methods

The RHS Phase 3 is a cross-sectional survey of First Nations children, youth and adults living on First Nations reserves and in Northern communities across Canada and is designed to represent this population in all provinces and territories (except Nunavut). Three surveys were developed to include corresponding health, well-being and social determinants questions for the following:

- Child (0–11 years)
- Youth (12–17 years)
- Adult (18–54; 55 and older)

First Nations community members received training from FNIGC’s Regional Partner organizations to work as fieldworkers (or, alternately, data gatherers) whose job it was to administer the surveys in their community and surrounding areas.

Surveys were typically conducted in the home using computer-assisted personal interviewing (CAPI), which in this case involved laptop computers equipped with Entryware a customized survey software. Data collection was conducted between March 2015 and December 2016. The average data collection period for each of the three surveys was 14.3 months.

Sampling strategy

The sampling frame was based on INAC Indian Registry counts from 2014 of those living on-reserve or on Crown land. According to these counts, there were 630 communities and approximately 467,800 people living on reserve and in Northern communities. The sample design used complex sampling that incorporated a two-stage sampling strategy.

The first stage involved the selection of communities to participate in the survey. First Nations communities were stratified by region, sub-region and community size. Regions consisted of 10 provinces and two territories. Sub-regions were defined by each region that reflected their own research purposes.

The size of communities was based on community population: small (less than 300 people), medium (300 to 1,500 people) or large (greater than 1,500 people). Large communities were automatically included in the sample, while medium and small communities were randomly selected with equal probability within their respective strata. Communities with a population of less than 75 were not included in the sample, and these consisted of less than 1% of the total population.

The second stage pertained to the selection of individuals within each community in the national sample. Community members were identified using band membership lists. Data were gathered to represent eight categories of the community population (four age groups by gender). The sampling rate within each community was determined as a function of the overall sub-region probability (within regions) and the probability of community selection (within a sub-region).

In total, 23,764 individuals within 253 communities were surveyed for RHS Phase 3, with a 78.1% response rate. After data cleaning and removing incomplete surveys from datasets, 23,167 individuals from 253 communities were included for analysis for a final response rate of 76.1%. In the final datasets, 6,062 children (0 to 11 years of age), 4,968 youth (12 to 17 years of age) and 12,137 adults (18 years or older) represent 94,234 children, 47,918 youth and 282,129 adults in the population, respectively. The national sample ratio was 5.5%, similar to the RHS Phase 1 and RHS Phase 2 sample ratios (5.9% and 5.3%, respectively).



Weighting and analysis

Individual responses were weighted using INAC Indian Registry counts to reflect, with greater accuracy, the representation of the population.

Estimated percentages and 95% confidence intervals (CI) were calculated using SPSS version 20. These CIs reflected the precision of estimated percentages and were produced using the complex samples statements. If the CIs around any two estimates did not overlap, the difference between groups or categories was considered statistically significant.

Low cell counts (five or fewer individuals) or high coefficients of variation (greater than 33.3%) were

suppressed to protect confidentiality and reliability of analyses (denoted by an “F” within tables). Estimates with moderate to high coefficients of variation (between 16.7% and 33.3%) were supplemented with an “E” in the results to indicate cautious interpretation.

Not all of the survey respondents answered all questions, and the degree of this “item non-response” varied from question to question. In this report, those who reported “don’t know” or who refused to answer are excluded from the estimates calculated for that specific question.



CHAPTER TWO: HEALTH-CARE ACCESS

EXECUTIVE SUMMARY

Access to quality and culturally relevant health care that serves an individual's many health needs is a pillar of well-being. Health-care workers are not only important for the early diagnosis and treatment of chronic and acute medical conditions, but they are an important point-of-contact for many First Nations community members. Unfortunately, the legacy of colonialism has meant that First Nations communities have long experienced a lack of adequate, culturally appropriate health-care services.

The findings of the RHS Phase 3 indicate that the perceived quality of care in remote and special access First Nations communities is lower than in rural and urban communities.

The main barriers to receiving health care in First Nations communities are long wait times and a lack of doctors and nurses. Nearly 1 in 10 First Nations adults that required health care in the previous 12 months did not receive all the care they needed. Among First Nations children, 2.0% required health care, but did not receive all the care they needed during this same time frame.

Nearly one-third of First Nations adults in First Nations communities had used traditional medicine in the previous year. The biggest obstacle to accessing traditional medicine was lack of knowledge, about it and where to access it. This suggests that education and knowledge-sharing might be an effective way to increase the use of traditional medicine among First Nations adults.

First Nations adults in general reported high participations levels in preventative health care,

and females participated in almost all preventative health-care measures more often than males.

Overall, the health care available in First Nations communities does not adequately meet the needs of First Nations people. Lack of available resources, inadequate coverage by Non-Insured Health Benefits (NIHB), and cultural inappropriateness are cited as barriers to receiving health care for First Nations adults.

The Truth and Reconciliation Commission of Canada: Calls to Action includes seven health-related recommendations which seek to improve the quality of care available in First Nations communities (Truth and Reconciliation Commission of Canada [TRC], 2015). These include, but are not limited to:

- recognition and implementation of the health-care rights of Indigenous peoples,
- establishment of measurable goals to close the gaps in health outcomes between Indigenous and non-Indigenous communities,
- recognition of the distinct health-care needs of Indigenous peoples,
- provision of sustainable funding for healing centres,
- recognition of the value of Indigenous healing practices,
- increased number of Indigenous health-care professionals, and,
- cultural competency training for those in the health-care field.



KEY FINDINGS

- 14.3% of First Nations adults living in urban communities considered the quality of health care available in their community to be excellent compared to 10.5% of adults living in rural communities and 5.0% of adults living in remote and special-access communities.
- 1 in 10 (9.6%) First Nations adults reported requiring health care in the previous 12 months but did not receive all the care they needed.
- Long wait times were a barrier to receiving health care for more than one quarter (27.0%) of First Nations adults who required health care in the previous 12 months, while 22.6% cited a lack of available doctors or nurses as a barrier.
- More than 1 in 5 (21.3%) First Nations adults reported not having a primary health-care provider, compared to 15.8% among the general population.
- More than one-third (34.9%) of First Nations adults reported having used traditional medicine in the previous 12 months.
- The most common barriers for First Nations adults to accessing traditional medicine were not knowing enough about traditional medicine (11.4%) and not knowing where to get it (11.3%).
- More than one-half (51.0%) of First Nations females (50- to 59-years-old) reported having had a mammogram in the previous 2 years, compared to 70.8% (aged 50–59) in the general population.
- 2 in 5 (40.6%) First Nations males aged 50–59, and 3 in 5 (60.0%) First Nations males 60-years-old or older had ever been screened for prostate cancer.
- Less than half (46.1%) of female First Nations youth reported having received the HPV vaccine, compared to nearly one quarter (22.7%) of males.
- 2.0% of First Nations children required health care in the previous 12 months but did not receive all the care they required.
- For First Nations children, a lack of doctors or nurses was a barrier to receiving health care for 14.7% of those who required it in the previous 12 months.



INTRODUCTION

Timely access to high-quality, culturally appropriate health-care services is an important pillar of well-being. Health-care services are important for the diagnosis and treatment of chronic and acute medical conditions; furthermore, health-care providers are an important point of contact with users of a health-care network, facilitating communications regarding local health-care issues, preventative care, and community health initiatives. First Nations communities have long experienced a lack of adequate health care due to remoteness and the historical trauma of colonialism (Goraya, 2016), lack of funding (Galloway, 2017), cultural insensitivity and racism (College of Family Physicians of Canada, 2016).

Traditional medicine is increasingly being recognized as an important part of health care in First Nations communities. According to the First Nations Health Authority (FNHA),

Traditional wellness is a term that encompasses traditional medicines, practices, approaches and knowledge. Traditional wellness is based on a holistic model of health, and is often overlooked in the prevention and treatment of chronic conditions and in the promotion of health and wellness. Traditional medicines and practices are found worldwide in Indigenous communities (2014, p.14).

According to the same 2014 report from the FNHA, “Where there are integrated approaches to health care, i.e. where traditional wellness is combined with mainstream approaches to health, there appear to be positive results” (FNHA, 2014, p.15). In Africa, there is evidence that traditional medicine can complement modern methods (Graz, Kitua, & Malebo, 2011), and practitioners in Canada have implemented some traditional medicine in their practices as well with positive results (Canadian Broadcasting Corporation,

2016). Valuing and respecting traditional medicine and knowledge is an important dimension of wellness for First Nations people, and traditional medicine may also be a valuable health-care option for people who would not access mainstream health-care services due to geographic inaccessibility, lack of cultural appropriateness or socio-economic reasons. Despite these strengths, barriers to implementation include a lack of cultural competency training for health professionals and a general lack of recognition of the value of these approaches.

Preventative health care is an important factor in preventing many chronic health conditions, especially cancer. Unfortunately, many of the barriers that First Nations adults encounter when attempting to access health care also prevent them from accessing preventative care. The lack of trust resulting from a history of colonization, Residential Schools and discrimination means that many First Nations adults do not seek out preventative care that might increase their chances of survival. Further, a major gap exists between First Nations males and females when it comes to utilizing or accessing preventative care.

This report will address the state of health-care access in First Nations communities under three main categories:

1. Access to health-care services: What are the usage rates and barriers to use? What is the quality of health-care services available to First Nations communities?
2. Access to traditional medicine: What are the barriers to the use of traditional medicine?
3. Access to preventative health-care services: What levels of preventative care are First Nations communities receiving?

This chapter will provide an overview of the quality and availability of health-care services in First Nations communities. Furthermore, the chapter delves deeper



into the underlying issues by looking at the barriers to health-care access (traditional and other) that prevent members of First Nations communities from accessing quality care that meets their health and wellness needs.

METHODS

The First Nations Regional Health Survey (RHS) Phase 3 questions regarding health-care access and utilization were asked in the adult, youth and child surveys.

In the adult survey, First Nations adults were asked about the barriers they experienced when accessing health-care services, traditional medicine, and the Non-Insured Health Benefits (NIHB) program services for themselves. These barriers included factors such as lack of health-care practitioners or facilities, long wait times and others (see *Table 2.2*).

The NIHB program is a national program that provides coverage for registered or Status First Nations individuals for medical services not covered by other plans, such as dental care, vision care, medical equipment, pharmaceuticals, mental-health services and transportation.

First Nations adults were also asked a series of questions about their experiences accessing health care:

- Overall, how would you rate the quality of the health-care services that are available in your community?
- Within the past 12 months, how often has your primary health-care provider (family physician/registered nurse/nurse practitioner) changed?
- When did you last...? [Consult a Traditional

Healer/Visit a doctor or community health nurse/Access a mental-health service (e.g., counselling, psychological testing).]

- In the past 12 months, did you use traditional medicine? (Traditional medicine can include herbal remedies, spiritual therapies, assistance from healers or other practices indigenous to your culture.)

In addition, a series of questions regarding their use of preventative health-care measures were asked about what varied based on the respondent's gender:

- All First Nations adults were asked whether they had a cholesterol test, a vision/eye exam, blood pressure test, blood sugar test or complete physical examination in the previous year.
- All adults were also asked if they had ever been screened for colorectal cancer.
- Adult females were asked about the last time they had a mammogram, breast exam or Pap smear.
- Adult males were asked if they ever had a physical prostate check (rectal exam) or PSA test.

First Nations youth were asked similar questions to First Nations adults:

- When did you last...? [Consult a Traditional Healer/Visit a doctor or community health nurse/Access a mental-health service (e.g., counselling, psychological testing).]
- Whether they had a cholesterol test, a vision/eye exam, blood pressure test, blood sugar test or complete physical examination in the previous year.

Additionally, youth were asked whether they had received the vaccine for human papillomavirus (HPV). HPV causes the majority of genital warts



in males and females, and the majority of cervical cancers in females. The vaccine can protect females against cervical cancer caused by some strains of HPV later in life (Public Health Agency of Canada, 2017).

Children’s parents or guardians were asked whether the child required any health care in the preceding 12 months and whether they received it. They were then asked about the barriers (if any) encountered to receiving health care for their child. These included lack of health-care practitioners, long wait times, unavailability of services or facilities, inadequacy of care and others (See *Table 2.4*).

Other factors that were looked at in conjunction with items relating directly to health-care access include community remoteness, gender, and education – all are key variables that can impact an individual’s experience in accessing health care.

Community remoteness was defined based on the geographic zones (1–4) from Indian and Northern Affairs Canada’s *Band Classification Manual* (Indian and Northern Affairs Canada, 2000). Urban communities (zone 1) are within 50 km of the nearest service centre with year-round road access; rural communities (zone 2) are between 50 km and 350 km from the nearest service centre with year-round road access; remote communities (zone 3) are more than 350 km from the nearest service centre with year-round road access; and special access communities (zone 4) have no year-round road access to a service centre. Remote and special access communities were combined for analysis.

First Nations adults were asked about the highest level of education they attained, and categories were grouped in the following manner: less than high school (those who have not completed a high school diploma); high school only (those who completed a high school diploma but indicated no further

schooling); post-secondary diploma or training (those who completed a high school diploma and indicated either incomplete post-secondary education or a post-secondary diploma or certificate); university and higher (those who completed a high school diploma and indicated completion of an undergraduate, graduate or professional degree).

RESULTS

Access to Health-Care Services

More than 1 in 10 (11.1%, 95% CI [10.2, 12.0]) First Nations adults rated the quality of health-care services available in their community as excellent.

When looking at this rating by remoteness (see *Figure 2.1*), significantly more First Nations adults living in First Nations communities classified as urban rated the quality of health-care services available in their community as excellent (14.3%, 95% CI [12.8, 15.9]) compared to those in rural areas (10.5%, 95% CI [9.1, 12.0]). In turn, a significantly higher percentage of those living in either urban or rural communities rated the quality of health-care services as excellent compared to those in remote/special access communities (5.0%, 95% CI [3.9, 6.5]).

Approximately two thirds (33.9%, 95% CI [32.2, 35.7]) of First Nations adults indicated that they had required health care in the 12 months prior to the survey. More than half (56.5%, 95% CI [54.5, 58.4]) of all First Nations adults required care and received all the health care they needed, while 9.6% (95% CI [8.3, 11.1]) required care but did not receive all the health care they needed (See *Table 2.1*).



Figure 2.1: Percentage of First Nations adult’s ratings of the quality of health-care services in their community, by community remoteness

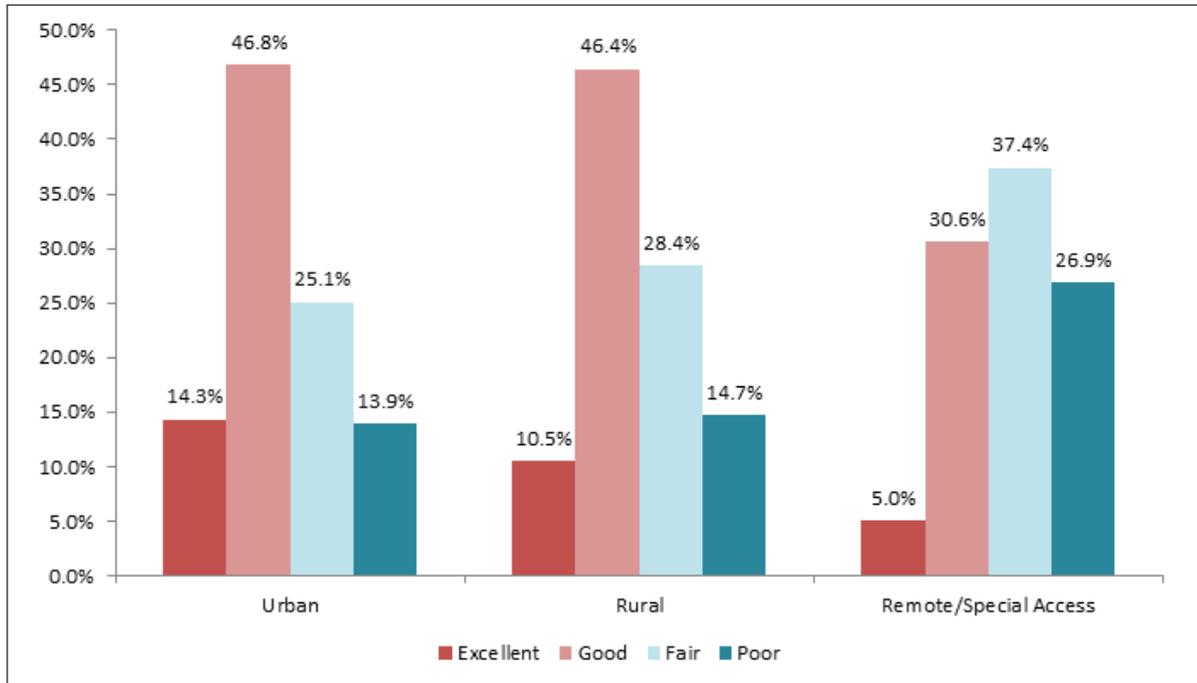


Table 2.1: Proportion of First Nations adults who required health care (e.g., from a doctor, nurse or other health professional) in the past 12 months

Did you require health care in the past 12 months?	% [95% CI]
No	33.9 [32.2, 35.7]
Yes, and I received all the health care I needed	56.5 [54.5, 58.4]
Yes, but I did not receive all the health care I needed	9.6 [8.3, 11.1]

The most frequently reported barrier to receiving health care was long waiting lists, which was followed by a lack of available doctors or nurses. Several reasons that were related to Non-Insured Health

Benefits (NIHB) were cited as barriers for First Nations adults accessing health care generally: costs not covered by NIHB, lack of knowledge around NIHB coverage, and NIHB denial of coverage (see *Table 2.2*).



Table 2.2: Barriers to receiving health care among First Nations adults who required health care in the past 12 months

Barriers	% [95% CI]
Waiting list is too long	27.0 [25.2, 29.0]
Doctor or nurse not available in my area	22.6 [20.5, 24.7]
Not covered by Non-Insured Health Benefits (NIHB)	21.8 [20.0, 23.8]
Felt health care provided was inadequate	21.2 [19.2, 23.4]
Did not know if it was covered by NIHB	19.7 [17.8, 21.8]
Could not afford direct cost of care/services	19.0 [17.1, 21.1]
Service was not available in my area	18.6 [16.4, 21.1]
Could not afford transportation costs	17.1 [15.3, 19.0]
Prior approval of Non-Insured Health Benefits (NIHB) was denied	16.2 [14.4, 18.2]
Health facility not available in my area	15.3 [13.1, 17.8]
Unable to arrange transportation	15.2 [13.6, 17.1]
Felt service was not culturally appropriate	13.2 [11.5, 15.0]
Difficulty in getting Traditional care	11.8 [10.4, 13.4]
Chose not to see health-care professional	10.3 [8.8, 12.0]
Could not afford child-care costs	6.5 [5.6, 7.5]
Other	3.5 [2.7, 4.5]

Note: Respondents could choose more than one response

Results from the RHS Phase 3 demonstrate that three-fifths of First Nations children had required health care in the previous year: 57.0% (95% CI [55.0, 59.0])

received all the care they needed, while 2.0% (95% CI [1.6, 2.5]) did not (see *Table 2.3*).

Table 2.3: Proportion of First Nations children who required health care (e.g., from a doctor, nurse or other health professional) in the past 12 months

Did the child require health care in the past 12 months?	% [95% CI]
No	41.0% [38.9, 43.0]
Yes, and the child received all the health care he/she needed	57.0% [55.0, 59.0]
Yes, but the child did not receive all the health care he/she needed	2.0% [1.6, 2.5]

The barriers noted for children receiving health care are similar to those for adults (see *Table 2.4*).



Table 2.4: Barriers to receiving health care among First Nations children who required health care in the past 12 months

Barrier	% [95% CI]
Doctor or nurse not available in my area	14.7 [12.6, 17.0]
Waiting list is too long	13.3 [11.7, 15.1]
Service was not available in my area	12.5 [10.3, 15.1]
Health facility not available in my area	11.7 [9.4, 14.5]
Felt health care provided was inadequate	10.4 [8.5, 12.6]
Not covered by Non-Insured Health Benefits (NIHB)	10.2 [8.7, 12.0]
Unable to arrange transportation	9.5 [7.9, 11.5]
Did not know if it was covered by NIHB	9.3 [7.4, 11.6]
Could not afford transportation costs	9.2 [7.9, 10.8]
Could not afford direct cost of care/services	7.2 [5.9, 8.8]
Felt service was not culturally appropriate	6.8 [5.3, 8.9]
Difficulty in getting Traditional care	6.6 [5.2, 8.3]
Prior approval of Non-Insured Health Benefits (NIHB) was denied	5.9 [4.5, 7.7]
Could not afford child-care costs	5.9 [4.9, 7.2]
Chose not to see health-care professional	2.8 [2.0, 3.9]
Other (Specify)	1.5 [1.1, 2.0]

Note: Respondents could choose more than one response

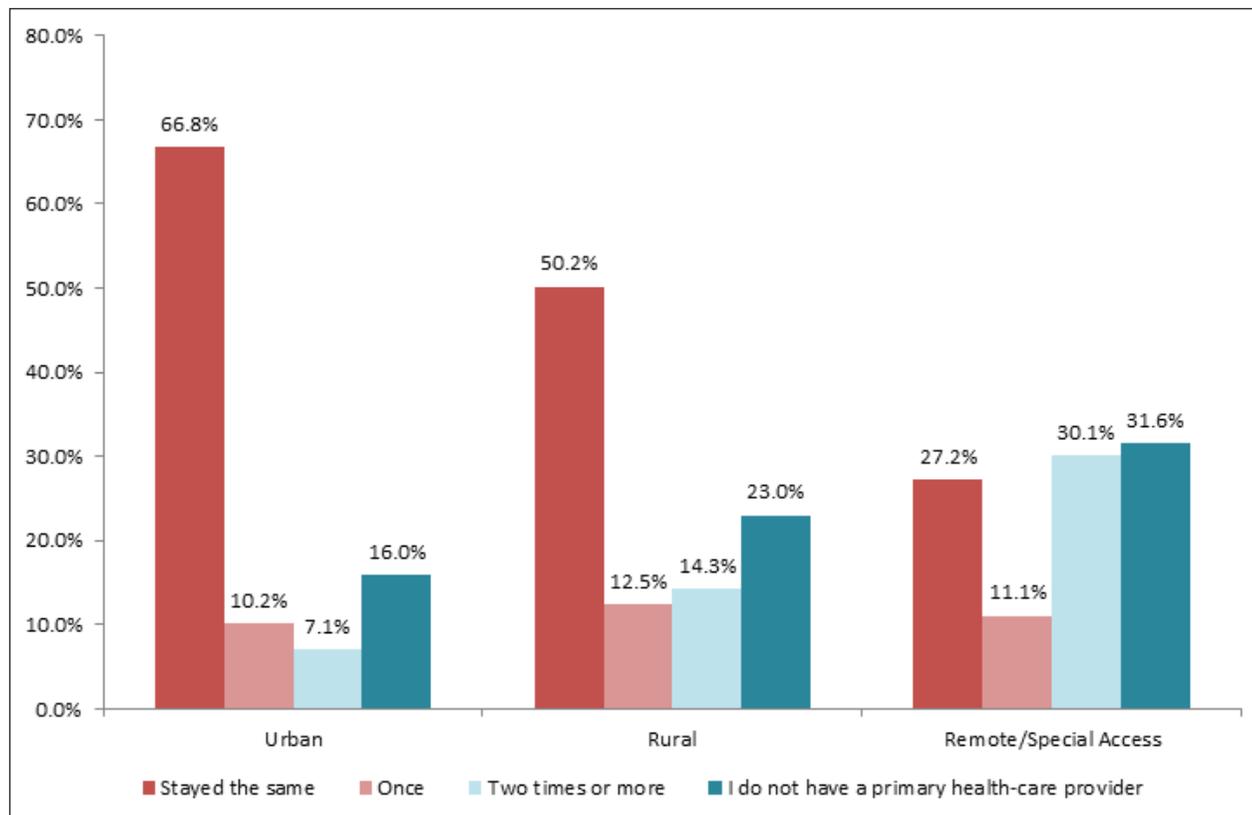
When asked about how often their primary health-care provider had changed in the preceding 12 months, 53.8% (95% CI [51.9, 55.7]) of First Nations adults reported having the same primary health-care provider (health-care provider did not change), 11.4% (95% CI [10.3, 12.6]) reported that their health-care provider changed once, 13.5% (95% CI [12.1, 15.0]) reported that their health-care provider changed two or more times; and 21.3% (95% CI [20.0, 22.8]) reported not having a primary health-care provider.

This is similar to the results found by Statistics Canada (2017), which reported that, in 2016, 19.2% of off-reserve Aboriginal Canadians aged 12 and older did not have a primary health-care provider, compared to 15.8% of the general population aged 12 and older.

The results from the RHS Phase 3 differed by community remoteness, with adults in remote or special access communities more frequently reporting that their health-care provider had changed two or more times (30.1, 95% CI [23.9, 37.1]) or that they did not have a health-care provider (31.6%, 95% CI [25.9, 37.9]). First Nations adults in urban communities were the group with the highest percentage reporting that their provider stayed the same (66.8%, 95% CI [64.0, 69.4]), and the lowest percentage reporting that they did not have a health-care provider (16.0%, 95% CI [14.3, 17.8]). Percentages of First Nations adults in rural communities fell between those in urban and remote communities (see *Figure 2.2*).



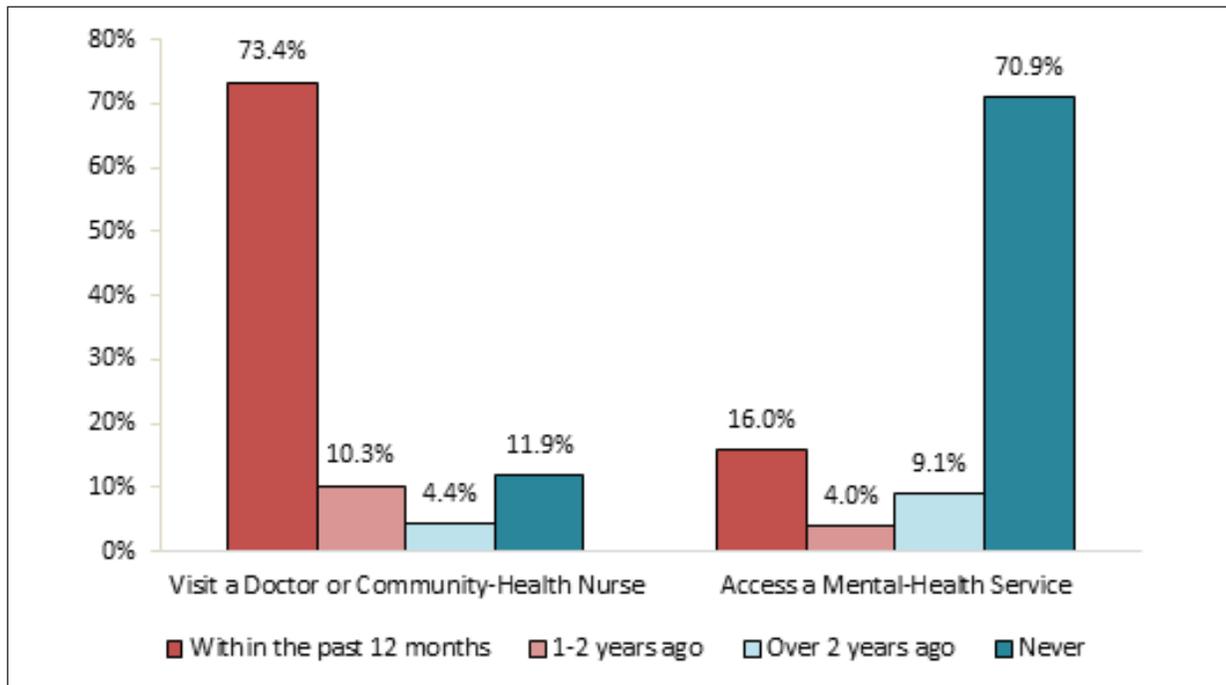
Figure 2.2: Frequency of change of health-care provider in the past 12 months among First Nations adults, by remoteness



Among First Nations adults, 73.4% (95% CI [71.6, 75.1]) had visited a doctor or community health nurse in the previous 12 months. This did not vary significantly from the 73.8% (95% CI [73.2, 74.3]) in the general Canadian population (aged 12 and older) reporting the

same in the 2016 Canadian Community Health Survey (Statistics Canada, n.d.a). Less than one-fifth (16.0%, 95% CI [14.8, 17.3]) of First Nations adults reported accessing mental-health services within the past 12 months prior to the survey (see *Figure 2.3*).

Figure 2.3: Frequency of doctor or community-health nurse visits and access to mental-health services among First Nations adults

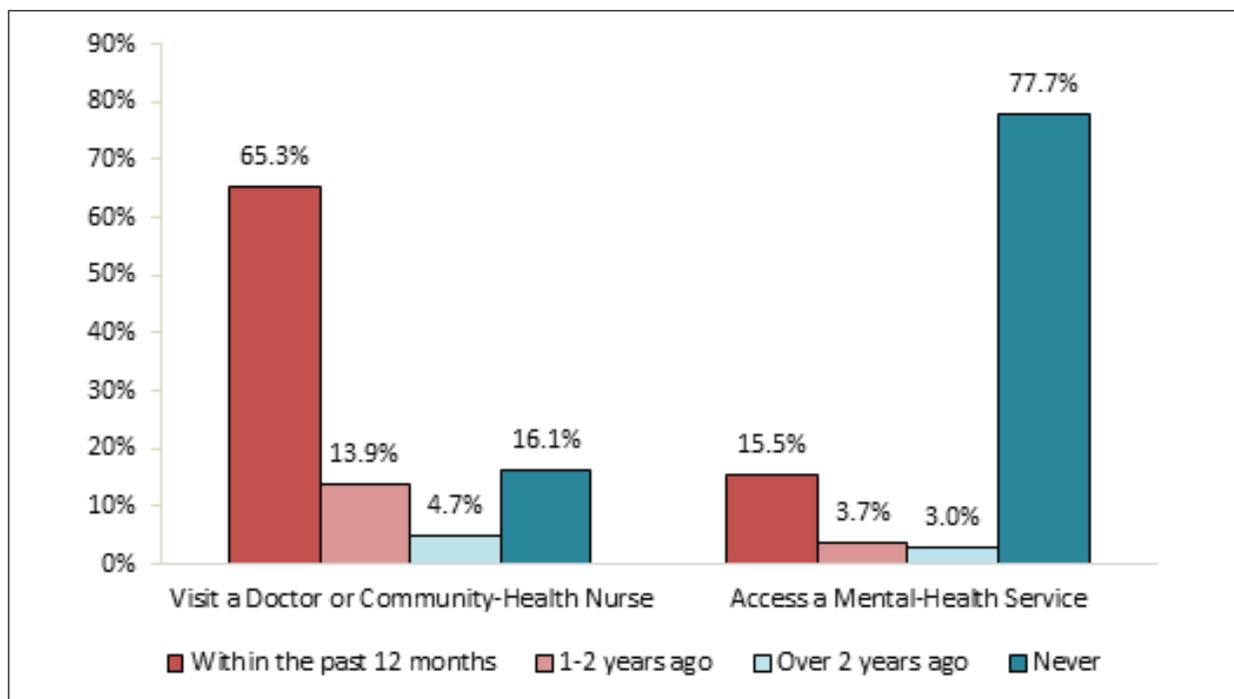


When compared with adults, fewer youth reported visiting a doctor or community health nurse in the past 12 months (65.3%, 95% CI [63.0, 67.5]), and more reported never visiting one (16.1%, 95% CI [14.1,

18.3]). More than three-quarters of First Nations youth reported never having accessed mental-health services (77.7%, 95% CI [75.7, 79.7]) (see *Figure 2.4*).



Figure 2.4: Frequency of doctor or community-health nurse visits and access to mental-health services among First Nations youth



Access to Traditional Medicines

Nearly two-fifths (37.7%, 95% CI [35.4, 40.1]) of all First Nations adults had consulted a Traditional Healer at some point in their lives, while the remaining 62.3% (95% CI [59.9, 64.6]) had never consulted one.

As shown in *Figure 2.5*, the percentage of First Nations adults accessing a Traditional Healer within the past

12 months was the highest among those with a higher level of education.

The majority of First Nations youth (77.3%, 95% CI [74.9, 79.5]) had never consulted a Traditional Healer (See *Table 2.5*).

Figure 2.5: Time last consulted a Traditional Healer among First Nations adults, by highest level of education

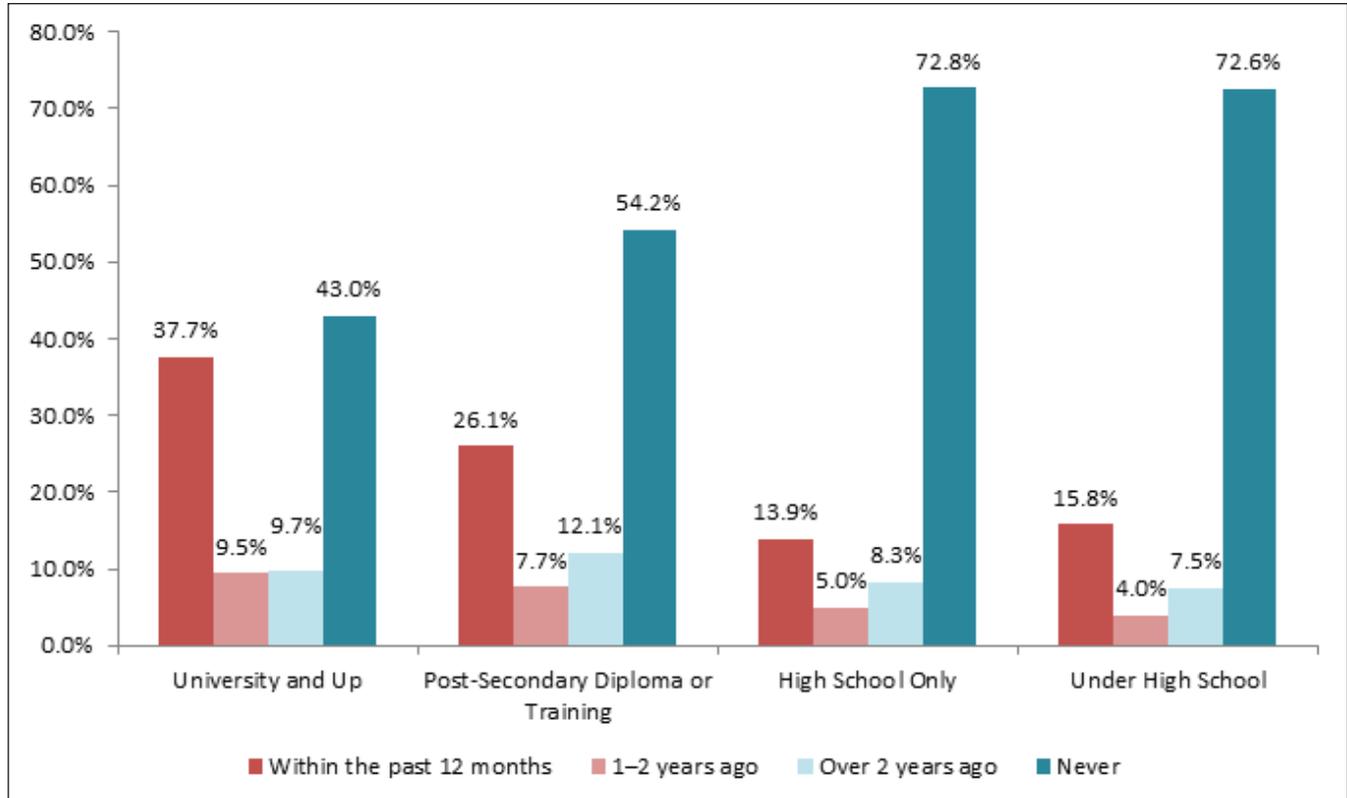


Table 2.5: Time last consulted a Traditional Healer among First Nations youth

Last Time Consulted	% [95% CI]
Never	77.3 [74.9, 79.5]
Within the past 12 months	13.1 [11.4, 15.1]
1-2 years ago	4.8 [3.8, 5.9]
More than 2 years ago	4.9 [3.8, 6.1]



More than one-third (34.9%, 95% CI [33.1, 36.8]) of First Nations adults reported using traditional medicine in the past 12 months. When asked about the difficulties in accessing traditional medicine, 43.4% (95% CI [41.1, 45.7]) reported no difficulties, and 30.0% (95% CI [28.0, 32.0]) said they were not interested in using traditional medicine. The two most commonly cited difficulties were not knowing enough about it (11.4%, 95% CI [10.3, 12.6]) and not knowing where to get it (11.3%, 95% CI [10.4, 12.4]) (see *Figure 2.6*).

The percentage of First Nations adults reporting the use of traditional medicine in the past 12 months was higher among those with higher levels of education (41.9% with a post-secondary diploma, 53.4% with university level and up compared to 23.5% with high school only, and 27.2% with less than high school). As presented in *Table 2.6*, results vary significantly among these groups with the exception of the “under high school” and “high school only” groups, meaning individuals in these groups reported similar levels of usage of traditional medicine.

Figure 2.6: Barriers to accessing traditional medicine among First Nations adults

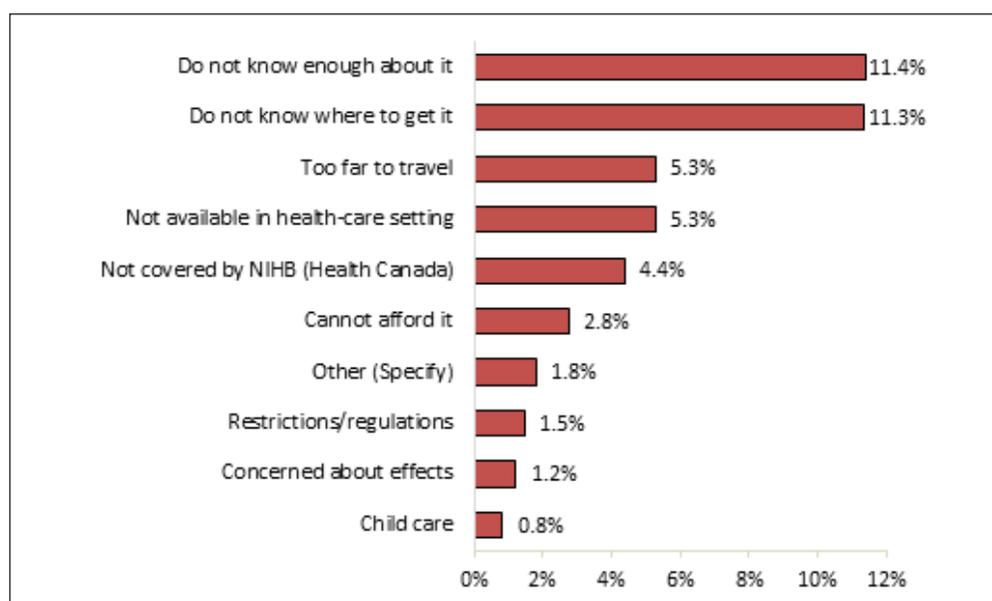


Table 2.6: Use of traditional medicine in the past 12 months among First Nations adults, by level of education

Level of Education	% [95% CI]
Under high school	27.2 [24.6, 29.9]
High school only	23.5 [20.5, 26.9]
Post-secondary diploma or training	41.9 [39.6, 44.3]
University and up	53.4 [48.8, 57.9]
Total	35.1 [33.3, 37.0]



Preventative Health-Care Services

Among First Nations adults, significantly more females than males reported having 5 out of 6 examinations mentioned in the survey (see *Table 2.7*). Only the percentage for colorectal cancer screening did not differ significantly between males and

females. The most commonly reported exam taken by First Nations adults was a blood-pressure test, (59.5%, 95% CI [58.0, 60.9]), and the least common exam was colorectal cancer screening reported by (18.1%, 95% CI [16.9, 19.4]).

Table 2.7: Percentage of First Nations adults who indicated they had the following tests or examinations

Type of Test or Exam	Male % [95% CI]	Female % [95% CI]	Overall % [95% CI]
Cholesterol test	30.1 [28.2, 32.1]	36.8 [35.1, 38.6]	33.4 [31.9, 35.0]
Vision/eye exam	44.1 [41.7, 46.6]	55.5 [53.4, 57.5]	49.8 [48.1, 51.4]
Blood-pressure test	54.2 [52.1, 56.3]	64.9 [63.1, 66.5]	59.5 [58.0, 60.9]
Blood-sugar test	40.8 [38.6, 43.0]	54.4 [52.2, 56.5]	47.5 [45.9, 49.1]
Complete physical examination	30.0 [27.8, 32.3]	37.9 [36.1, 39.7]	33.9 [32.4, 35.5]
Screening for colorectal cancer	16.9 [15.5, 18.4]	19.4 [17.7, 21.2]	18.1 [16.9, 19.4]

Almost half (46.1%, 95% CI [41.6, 50.6]) of First Nations female youth had the HPV vaccination compared to 22.7% (95% CI [19.4, 26.4]) of male youth (See *Table 2.8*).

Table 2.8: Percentage of First Nations youth who indicated they had the following tests, examinations or vaccinations

Type of Test, Exam or Vaccine	Male % [95% CI]	Female % [95% CI]	Overall % [95% CI]
Vision/eye exam	47.4 [44.0, 50.9]	53.1 [50.1, 56.1]	50.2 [47.7, 52.7]
Blood-pressure test	31.1 [27.7, 34.7]	29.9 [27.1, 32.9]	30.5 [28.0, 33.1]
Blood-sugar test	17.2 [14.8, 19.9]	19.2 [16.8, 21.8]	18.2 [16.2, 20.3]
Complete physical examination	22.2 [19.0, 25.6]	17.4 [15.0, 20.1]	19.8 [17.4, 22.5]
HPV vaccine	22.7 [19.4, 26.4]	46.1 [41.6, 50.6]	34.6 [31.5, 37.8]

Regarding breast cancer screening tests (other than a mammogram), the proportion of women having their breasts examined for lumps (tumours, cysts) by a doctor or other health professional increased with age

with older First Nations females more often reporting having this test regardless of the time frame (see *Table 2.9*).



Table 2.9: Last time First Nations adult females had breasts examined for lumps by a health professional other than a mammogram

Age Group	Less than 6 months ago	6 months to less than 1 year ago	1 year to less than 2 years ago	2 years to less than 5 years ago	5 or more years ago	Never
	% [95% CI]	% [95% CI]	% [95% CI]	% [95% CI]	% [95% CI]	% [95% CI]
18-29 Years	5.0 [3.8, 6.6]	4.4 [3.3, 5.7]	7.1 [5.3, 9.3]	7.4 ^E [5.0, 10.7]	1.6 ^E [1.0, 2.5]	74.5 [71.1, 77.7]
30-39 Years	8.6 ^E [5.7, 12.7]	7.5 [5.7, 9.9]	13.2 [9.9, 17.5]	8.8 [6.9, 11.2]	9.2 [7.5, 11.1]	52.6 [46.8, 58.4]
40-49 Years	8.9 [7.1, 11.2]	10.2 [8.0, 12.8]	16.7 [13.6, 20.4]	12.4 [9.8, 15.6]	11.9 [9.6, 14.6]	39.9 [35.2, 44.7]
50-59 Years	11.4 [9.3, 13.9]	17.8 [14.8, 21.3]	20.4 [17.6, 23.5]	16.8 [13.9, 20.2]	8.4 [6.6, 10.8]	25.1 [21.8, 28.8]
60+ Years	11.9 [9.8, 14.3]	14.9 [12.3, 17.9]	22.1 [19.3, 25.1]	16.5 [14.1, 19.3]	18.0 [13.7, 23.3]	16.6 [14.4, 19.2]

^E High sampling variability, interpret with caution

The same pattern is noted for mammograms, as a higher percentage of older females reported having a mammogram compared to younger females for all time periods (see *Table 2.10*).

In the general population, 70.8% of females aged 50–59 had a mammogram within the last two

years, according to results from the 2008 Canadian Community Health Survey (Statistics Canada, n.d.b), compared to 51.0% of First Nations women aged 50–59, when the estimates are combined for those who had a mammogram within the last 2 years (see *Table 2.10*).



Table 2.10: Last time First Nations adult females had a mammogram

Age Group	Less than 1 year ago	1 year to less than 2 years ago	2 years to less than 3 years ago	3 years to less than 5 years ago	5 or more years ago	Never had one
	% [95% CI]	% [95% CI]	% [95% CI]	% [95% CI]	% [95% CI]	% [95% CI]
18-29 Years	2.5 ^E [1.7, 3.7]	4.7 ^E [3.3, 6.8]	2.7 ^E [1.7, 4.1]	1.1 ^E [0.6, 1.9]	0.9 ^E [0.5, 1.6]	88.1 [85.2, 90.5]
30-39 Years	5.3 [4.0, 7.0]	10.7 ^E [7.1, 15.8]	3.7 ^E [2.5, 5.6]	1.9 ^E [1.2, 3.0]	3.6 [2.6, 4.9]	74.8 [69.8, 79.2]
40-49 Years	12.4 [10.0, 15.2]	13.4 [10.7, 16.6]	7.4 [5.7, 9.7]	2.9 ^E [1.9, 4.3]	10.0 [7.8, 12.7]	53.9 [49.5, 58.3]
50-59 Years	26.0 [22.4, 29.9]	25.0 [22.1, 28.1]	11.2 [8.9, 14.0]	5.9 [4.6, 7.6]	9.4 [7.6, 11.7]	22.5 [19.0, 26.4]
60+ Years	26.3 [22.7, 30.3]	22.9 [20.0, 26.1]	13.2 [11.0, 15.8]	6.3 [5.0, 7.9]	20.6 [16.1, 26.0]	10.7 [8.8, 13.1]

^E High sampling variability, interpret with caution

Overall, only 10.8% (95% CI [9.6, 12.2]) of First Nations adult females reported never having a Pap smear, a figure comparable to the 2012 figure of 9.8% for the general female population (aged 21–69) reported in a 2015 Statistics Canada report (Navaneelan, 2015). Similarly, 68.5% of First Nations females reported having a Pap smear in the previous three years,

compared to three quarters of the general Canadian population (Navaneelan, 2015). Results from the RHS Phase 3 demonstrated that more younger First Nations females reported having recent Pap smears compared to older females. Pap smear rates peaked in the 30–39 age-group, where 80.3% reported having a Pap smear in the past 3 years (see *Table 2.11*).

Table 2.11: Last time First Nations adult females had a Pap smear

Age Group	Less than 1 year ago	1 year to less than 2 years ago	2 years to less than 3 years ago	3 years to less than 5 years ago	5 or more years ago	Never had one
	% [95% CI]	% [95% CI]	% [95% CI]	% [95% CI]	% [95% CI]	% [95% CI]
18-29 Years	41.5 [38.1, 45.0]	24.6 [21.7, 27.8]	7.6 ^E [5.3, 10.7]	3.1 ^E [2.1, 4.5]	2.1 ^E [1.3, 3.2]	21.1 [18.2, 24.4]
30-39 Years	39.5 [34.4, 44.9]	28.8 [24.8, 33.2]	12.0 ^E [8.2, 17.2]	4.2 ^E [2.9, 6.1]	8.1 ^E [5.1, 12.6]	7.3 ^E [4.7, 11.2]
40-49 Years	31.9 [27.6, 36.6]	28.7 [25.4, 32.3]	14.6 [11.1, 18.9]	6.5 [5.0, 8.4]	12.4 [9.9, 15.3]	5.9 [4.5, 7.8]
50-59 Years	22.4 [19.2, 26.1]	23.9 [20.4, 27.8]	14.1 [11.8, 16.9]	9.0 [7.0, 11.4]	23.5 [20.5, 26.9]	7.0 ^E [4.9, 10.0]
60+ Years	16.6 [13.6, 20.1]	13.5 [11.4, 16.0]	10.0 [7.9, 12.7]	8.5 [6.7, 10.7]	42.5 [37.4, 47.7]	8.9 [7.1, 11.2]

^E High sampling variability, interpret with caution



Among First Nations male adults aged 40–49, (22.0%, 95% CI [18.1, 26.4]) reported having a rectal exam or PSA test. Prevalence for the 50–59 (40.6%, 95% CI [36.5, 44.9]) and 60+ (60.0%, 95% CI [55.5, 64.3]) age groups were higher, but it was only in the 60+ age group that a majority indicated having undergone

prostate screening (see *Table 2.12*). The percentage of First Nations males reporting prostate checks or PSA tests was similar to those reported in the RHS Phase 2: 26.2% for male adults aged 40-49, 44.1% for males aged 50-59, and 52.9% for males aged 60 and older.

Table 2.12: Physical prostate check (rectal exam) or PSA test among First Nations adults, by age

Age Group	%	[95% CI]
18-29 Years	3.6 ^E	[2.3, 5.5]
30-39 Years	8.1	[6.0, 10.8]
40-49 Years	22.0	[18.1, 26.4]
50-59 Years	40.6	[36.5, 44.9]
60+ Years	60.0	[55.5, 64.3]

Note: ^E High sampling variability, interpret with caution

Although the number of First Nations youth that reported receiving the HPV vaccine did not vary significantly with age, it did by gender: 46.1% (95% CI

[41.6, 50.6]) of females had the vaccination compared to 22.7% (95% CI [19.4, 26.4]) of males (see *Table 2.13*).

Table 2.13: Proportion of First Nations youth who received an HPV vaccine, by age and gender

Age Group	Male % [95% CI]	Female % [95% CI]	Overall % [95% CI]
12-14 Years	20.3 [16.2, 25.3]	40.0 [33.6, 46.7]	30.4 [25.8, 35.3]
15-18 Years	24.7 [20.3, 29.7]	51.4 [46.3, 56.5]	38.1 [34.4, 42.0]
Overall	22.7 [19.4, 26.4]	46.1 [41.6, 50.6]	34.6 [31.5, 37.8]



DISCUSSION

First Nations adults residing in First Nations communities classified as urban considered the quality of health care available to them better than those from rural and remote or special access communities. This is in-line with prior research, including the National Aboriginal Health Organization (2003), which found a negative correlation between perceived health-care quality and community remoteness. The issue of poor relative health-care quality in remote and special access communities is also discussed at length in a 2015 report from the Office of the Auditor General of Canada. The report found the health care being provided in more remote First Nations communities was not adequately serving the needs of those constituents. In response to this report, Health Canada committed to improving access to quality health care in these communities by implementing a long list of improvements to health-care service delivery that take into account their needs; these included providing better training for nurses, increasing engagement with First Nations communities around their specific health-care needs, and ensuring equality of service for communities in remote locations compared with other communities in similar geographical locations (Office of the Auditor General of Canada, 2015).

In a similar vein, the barriers that most affect First Nations people's access to quality health care—a lack of doctors and nurses and long wait times—reflect a lack of health-care resources at the community level. This may have contributed to the 9.6% of all First Nations adults having had some form of unmet health care need in the 12 months prior to completing the survey. Several NIHB-related reasons were also cited as barriers to access. The NIHB has come under scrutiny in the past for a variety of reasons, notably not doing an adequate job of education around what is covered, how much is covered, and what is not

covered (Loyer & Small Legs, 2014).

First Nations children fared better when accessing health services, with only 2.0% of children reporting a need for health care that went unmet. The TRC's *Calls to Action*, has seven recommendations which aim to improve the health outcomes of First Nations adults through increased funding, engagement with local communities, education for health practitioners and the recognition of Traditional Healing practices (TRC, 2015). These Calls to Action, either directly or indirectly, would address some of the major barriers preventing First Nations people from accessing the care they need.

Although First Nations adults living in First Nations communities had visited health-care providers in the past 12 months at similar rates to the general population, they were less likely to report having a primary health-care provider. Access to a primary health-care provider is an important determinant of health due to the opportunity for primary providers to build trust, serve as points of entry to other necessary care, provide community oriented care and recommend preventative health measures as necessary (Shi, 2012; Starfield, Shi, & Macinko, 2005). The lack of primary health-care providers in many First Nations communities is a key part of the general lack of quality care available to First Nations people.

Regarding the use of mental-health services, the number of First Nations adults using these within the past 12 months (16.0%) may seem low. However, some research suggests that First Nations adults are actually more willing than the general Canadian population to seek mental-health supports when they are in need (Khan, 2008).

More than one third of First Nations adults used traditional medicine in the preceding 12 months. While traditional medicine is considered to be an



important part of well-being for First Nations people (First Nations Health Authority, 2014), the most frequently reported barriers to accessing traditional medicine were a lack of knowledge about what it is and where to access it.

In its *Calls to Action*, the TRC recommends that the value of traditional medicine be recognized and respected among those who can effect change in the Canadian health-care system (2015). The results of the RHS Phase 3 suggest that education and knowledge-sharing among First Nations adults could be beneficial for achieving this goal.

First Nations females are more likely than males to participate in preventative health screenings, and they do so at roughly the national average for breast exams and Pap smears. Indeed, more than two-thirds of First Nations adult females reported having a Pap smear in the past three years, as recommended by the Society of Obstetricians and Gynaecologists of Canada (Navaneelan, 2015). First Nations adult males reported low rates of prostate cancer screening compared to recommended guidelines. Although suitable data for comparison to the general population is not available, the mental barriers to prostate screening for males regarding masculinity and intrusiveness are well-documented (James, Wong, Craig, Hanson, Ju, et al., 2017). While Prostate Cancer Canada recommends that regular prostate exams begin when males are in their 40s, only 22.0% of First Nations adult males aged 40–49 reported ever having a rectal exam or PSA test. The lack of available health practitioners in First Nations communities contributes to this. Prostate cancer screening can lead to early detection and survival rates for prostate cancer, which 1 in 7 Canadian males will be diagnosed with in their lifetime (Prostate Cancer Canada, 2017).

The prevalence of HPV vaccination among First Nations female youth (46.1%) is lower than Canadian

national rates, which range from 55.6% in the Northwest Territories to 93.0% in Newfoundland (Canadian Partnership Against Cancer, 2017). A 2017 study, however, found the national uptake rate to be closer to 55.9%, still well below the government target of >85% (Bird, Obidiya, Mahmood, Nwankwo, & Moraros, 2017). Concerted vaccination programs for boys are a fairly recent development, and sufficient national data on uptake is not yet available.

CONCLUSIONS

Inequality of access to health care for First Nations communities compared to the rest of Canada, and especially for remote and special access and rural communities compared to urban First Nations communities, is a significant barrier to First Nations adults receiving the health care that meets their needs. Unavailability of health-care professionals and long wait times are characteristic of the lack of health-care resources available to First Nations communities in Canada. The TRC's *Calls to Action* contain seven recommendations which would go some way towards a health-care system that could respond to the needs of First Nations adults. Some of these include better funding, education, engagement with First Nations and a commitment to increasing the number of Aboriginal professionals working in health care, especially in First Nations communities (TRC, 2015). Future research in the area of health-care access in First Nations communities must be framed in the context of these Calls to Action and whether they are being implemented fully. More specifically, research may look deeper at the need for and barriers to access for mental-health services.

The most commonly reported barrier to accessing traditional medicine was a lack of knowledge, which suggests that some form of educational program aimed at promoting the use of traditional medicine in First Nations communities could be successful in



increasing the number of individuals accessing these types of services. This education, in combination with respect and acceptance among those in the health-care profession in Canada, as outlined in the TRC *Calls to Action* (TRC, 2015), would be a big step towards a health-care system that is culturally appropriate and respectful of First Nations Traditions and Knowledge.

Work remains to be done to increase the rate of preventative health screening among First Nations males, especially regarding prostate cancer screening. The TRC *Calls to Action* could have an impact in this regard, especially if these managed to accomplish the

goals of increasing the number of Indigenous health practitioners in First Nations communities as well as trust between health professionals and their First Nations constituents. Furthermore, research could be done to analyze any barriers to prostate screening that are unique to the experiences of First Nations males.

As identified in the final report of the TRC, there is a need for greater health-care resources in First Nations communities. Perhaps more importantly, though, there is a need for health care which meets the cultural, medical and human needs of First Nations adults, youth and children.



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CHAPTER THREE: LANGUAGE AND CULTURE

EXECUTIVE SUMMARY

First Nations people have distinct languages and cultures that are based on the unique relationships between Indigenous Peoples and their Traditional Territories. Understanding the current state of First Nations languages and cultures will point the way towards their continued vitality, thereby strengthening individual and collective health and wellness.

Results from the RHS Phase 3 show that First Nations children, youth and adults are connected to their culture. The majority are participating in community cultural events, almost all are eating traditional foods, and many children and youth are participating in traditional cultural activities outside of school hours. Almost all children and youth have people who help them understand their culture, including parents, grandparents and educators. Connection to culture among children, youth and adults has remained fairly stable since the RHS Phase 2.

The majority of First Nations children, youth and adults also have knowledge of a First Nations language; however, relatively few use a First Nations language most often in their daily lives. These results point to the need for continued efforts to use and strengthen First Nations languages. One vehicle for continued revitalization of language and culture is through early childhood education programs like Aboriginal Head Start on Reserve (AHSOR). Results from the RHS Phase 3 show that prior attendance at an AHSOR is significantly associated with a greater connection to language and culture among First Nations children and youth.

First Nations continue to reinforce their interconnectedness while passing on their knowledge of language and culture to future generations through

attending community and cultural events, being able to connect to one's First Nations language and identity, and being a part of ceremonies and other cultural activities. These activities help people to feel physically, emotionally, mentally and spiritually well as individuals and as part of a collective.

KEY FINDINGS

Children

- First Nations children have a strong connection to culture, with more than one quarter (26.2%) reporting that they always or almost always participated in their community's cultural events and nearly a half (45.2%) reporting that they participated sometimes.
- Three-quarters of First Nations grandparents (72.6%), two-thirds of parents (66.0%), and nearly half of teachers, daycare providers and early childhood educators (47.6%) were reported as helping First Nations children understand their culture. Only 4.0% of First Nations children had no one to help them understand their culture.
- More than two-thirds of First Nations children (68.1%) have some knowledge of a First Nations language; however, the majority (88.4%) reported using English most often in their daily lives. A small proportion (6.3%) reported using a First Nations language most often in their daily lives.
- Attendance at an Aboriginal Head Start on Reserve (AHSOR) program was shown to be associated with a greater connection to language and culture among First Nations children. Compared to First Nations children who have never attended an AHSOR, a higher percentage of children who have attended had any knowledge of a First Nations language (76.9% compared to



61.2%), always or almost always participated in community cultural events (34.3% compared to 20.9%), participated in traditional activities on a weekly basis outside of school hours (21.9% compared to 7.7%) and had eaten traditional foods in the year prior to the survey (95.7% compared to 87.0%).

Youth

- First Nations youth reported having a strong connection to culture, with 1 in 5 (19.9%) always or almost always participating in their community's cultural events and more than half (51.3%) sometimes participating. Nearly one-quarter of youth (24.7%) reported that cultural or traditional activities made them healthy.
- Nearly two thirds of grandparents (63.6%), more than half of parents (54.4%) and more than one third of school teachers (38.1%) were reported to have helped First Nations youth understand their culture. A very small proportion (3.6%) of First Nations youth had no one to help them understand their culture.
- Three-quarters of First Nations youth (75.8%) had any knowledge of a First Nations language; however, the majority (88.9%) reported using English most often in their daily lives. A small proportion (6.0%) reported using a First Nations language most often in their daily lives.
- Attendance at an AHSOR program was shown to be associated with a greater connection to language and culture among First Nations youth. Compared to First Nations youth who had never attended an AHSOR, a higher percentage of youth who had attended have some knowledge of a First Nations language (84.5% compared to 72.1%), always or almost always participate in community cultural events (25.0% compared to 17.3%), participate in traditional activities on a weekly basis outside of school hours (18.6% compared to 11.5%), and have eaten traditional

foods in the year prior to the survey (96.3% compared to 90.2%).

Adults

- First Nations adults reported having a strong connection to culture, with 1 in 5 (19.1%) always or almost always participating in their community's cultural events and nearly half (48.1%) sometimes participating. More than one third of adults (36.6%) reported that cultural or traditional activities contribute to their overall health.
- Nearly three-quarters of First Nations adults (71.0%) agree or strongly agree that traditional spirituality is important to them, while the overwhelming majority (96.8%) reported having eaten traditional foods in the past year.
- The majority of First Nations adults reported either a very strong (33.1%) or somewhat strong (47.5%) sense of belonging to their community.
- The majority of First Nations adults (87.9%) reported having some knowledge of a First Nations language. Of those who had knowledge of a First Nations language, nearly one-third (30.1%) could speak it fluently.
- More than three-quarters of First Nations adults (76.5%) reported using English most often in their daily lives, while few (15.3%) used a First Nations language.

INTRODUCTION

First Nations people have distinct languages and cultures across Turtle Island (Dene, Ojibwe, Cree, etc.). These are based on the unique relationships between Indigenous Peoples and their Traditional Territories (Battiste, 2010; McIvor, Napoleon, & Dickie, 2009). Indigenous Elders, Knowledge Keepers and scholars have stated that, based on the interactions of First Nations people with their traditional territorial lands and environments, unique



languages and cultures developed that assisted in their daily tasks and contributed to the health and well-being of First Nations people (Battiste, 2010; Fiedeldey-Van Dijk et al., 2017; National Collaborating Centre for Aboriginal Health, 2010; Oster, Grier, Lightning, Mayan, & Toth, 2014).

First Nations languages are the vehicle to transmit First Nations culture from generation to generation, and within generations. These languages express unique world views that have some common elements like interconnectedness with the land, environment and other beings and are rooted in social communities that further expand these languages and cultures (Kirkness, 1998). In many First Nations communities, language and culture are intrinsically linked to each other and to First Nations Traditional Territories. As such, these languages and cultures contain unique knowledge for that particular territory, culture and people that can be lost when the words are translated to English or French (Kitchen, Cherubini, Trudeau, & Hodson, 2009; Wiltse, 2011).

Language and culture permeate all aspects of an Indigenous person's life (The National Collaborating Centre for Aboriginal Health, 2010). Elder Jim Dumont and the National Native Addictions Partnership Foundation (2014) eloquently described how language and culture are related to wellness, explaining that a person's wellness is:

expressed through a sense of balance of spirit, emotion, mind and body. Central to wellness is belief in one's connection to language, land, beings of creation and ancestry, supported by a caring family and environment... Within an Indigenous worldview, being rooted in family, community and within creation as extended family is the foundation of belonging and relationships ... Physical well-being is that way of behaving and doing that actualizes the intention and desire of the spirit in the world. This and the

knowledge that the spirit has something to do in the world generates a sense of purpose, conscious of being part of something that is much greater than they are as an individual (p. 4).

Many scholars have examined how language and culture can act as a protective factor for First Nations people. They have found that cultural continuity, (the degree to which one is integrated with one's culture), can be an important protective factor that improves health and well-being (Chandler, 2008; Fiedeldey-Van Dijk et al., 2017; Kay-Raining Bird, 2011; McIvor et al., 2009; Royal Commission on Aboriginal Peoples, 1996). McIvor et al. (2009) stated that First Nations people who used their Indigenous language and culture had positive affects on their health and well-being, specifically in the areas of "land and health, traditional medicine, spirituality, traditional foods, traditional activities and language" (p. 6). Communities that engage in traditional activities, language revitalization—through language lessons and use of a First Nations language in daily life—and teach interconnectedness tend to have a stronger sense of belonging, improved cultural continuity and fewer incidents of suicide among youth (Chandler, 2008).

Inter- and intra-generational traumas—such as Indian Residential Schools, Sixties and Millennial Scoops, and the Pass system—are continuing to affect the languages and cultures of First Nations people, which then affects their health and well-being at individual, family and community levels (Brasfield, 2001; Kirmayer, Gone, & Moses, 2014; National Collaborating Centre for Aboriginal Health, 2010).

The intergenerational traumas discussed above began from British Crown or Canadian government policies and legislation, which used structures and systems (like education) intended to erode, denigrate, and eradicate First Nations languages, cultures, knowledge, and ways of knowing.



In 2012, the Canadian government established the Truth and Reconciliation Commission of Canada (TRC) to examine the Residential School experiences. At its completion, the *Truth and Reconciliation Commission of Canada: Calls to Action* call upon the federal government to help with the revitalization and preservation of Indigenous languages and cultures: “[t]he preservation, revitalization, and strengthening of Aboriginal languages and cultures are best managed by Aboriginal people and communities” (2015b, #14 (iv), p.2). Through attending community and cultural events, being able to connect to one’s First Nations identity and participating in community and cultural events or activities such as ceremonies, First Nations continue to reinforce their interconnectedness while passing on the knowledge of language and culture to future generations. These activities help people to feel physically, emotionally, mentally, and spiritually well, as individuals and as part of a collective.

As part of many First Nations world views, learning is a lifelong experience that includes learning about one’s self as an individual and as part of a collective, which occurs through language and interaction with culture (Battiste, 2010). It is important to embed language and culture within an educational curriculum as well as in community daily life to assist children and youth with using their First Nations language regularly (Snowshoe et al., 2014). As such, it is important for children to learn to think in the original languages to restore Indigenous ways of knowing. For First Nations children, the AHSOR program (first introduced in 1994 in First Nations communities) is designed to provide children with one to three years of programming that incorporates six core components that include language, culture and health promotion into the daily curriculum (Mashford-Pringle, 2012). Children who attend programs that provide First Nations languages and cultures as part of the curriculum, like AHSOR, can begin to build a positive sense of identity linked to a

strong sense of belonging to community at a young age (Chabot, 2005; Mashford-Pringle, 2012). Children who are able to explore in a safe and welcoming environment are more likely to develop a positive sense of belonging and advance school success and optimal health and well-being (Gray Smith, 2006; Mashford-Pringle, 2017).

This chapter presents results from the RHS Phase 3 that describe how First Nations adults, youth and children are currently participating in cultural activities, using First Nations languages and receiving support for connecting with their language and culture. Understanding the current state of engagement with First Nations languages and cultures will point the way towards the continued reinforcement and vitality of these languages and cultures, thereby strengthening individual and collective health and wellness.

METHODS

Separate surveys were conducted for First Nations children (aged 0–11), youth (aged 12–17) and adults (aged 18 and older). Results for each of these age groups are analyzed and reported separately. Where possible, the current results are compared to those from the previous phases of the RHS. Note that the RHS language questions were revised for the RHS Phase 3, making it difficult to directly compare the current language results to those from previous phases.

Children

The primary caregivers of First Nations children completed the survey on behalf of their child. To measure the child’s connection to culture, primary caregivers were asked if it is important to them that traditional cultural events are part of their child’s life. They were also asked about their child’s



frequency of consumption of local traditional foods (if applicable), the frequency of their child’s participation in traditional cultural activities (such as singing, drumming and dancing outside of school hours) and who helps their child understand culture (grandparents, Elders, teachers, etc.).

To gauge First Nations language use, primary caregivers were asked if it is important to them that their child learn a First Nations language and whether their child had any knowledge of a First Nations language (even if only a few words). They were also asked about their child’s ability to understand, speak, read and write their First Nations language, which language is used by their child most often in daily life, and whether the child had ever attended an AHSOR program.

Youth

Youth were asked directly about the importance of traditional cultural events in their lives. They were also asked about their participation in community cultural events, their frequency of consumption of local traditional foods (if applicable), the frequency of their participation in traditional activities (such as singing, drumming and dancing outside of school hours), what factors they feel contribute to their overall health (i.e., “what makes you healthy?”), including traditional cultural activities, and who helps them to understand their culture (grandparents, Elders, teachers, etc.).

To gauge First Nations language use, youth were asked about the importance of learning a First Nations language, whether they had any knowledge of a First Nations language (even if only a few words), their ability to understand, speak, read and write their First Nations language, and which language they use most often in daily life. Youth were also asked to indicate if they had attended an AHSOR program as a child.

Adult

To measure their connection to culture, First Nations adults were asked the frequency of participation in their community’s cultural events, the importance of traditional spirituality in their lives, the frequency of their consumption of local traditional foods (if applicable), when they had last consulted a Traditional Healer and their sense of belonging to their local community. Adults were also asked to indicate the factors that they feel contribute to their overall health (i.e., “what makes you healthy?”), including cultural/traditional activities.

To measure First Nations language use, they were asked if they had any knowledge of a First Nations language (even if only a few words), their ability to understand, speak, read, and write their First Nations language and which language they use most often in daily life.

RESULTS

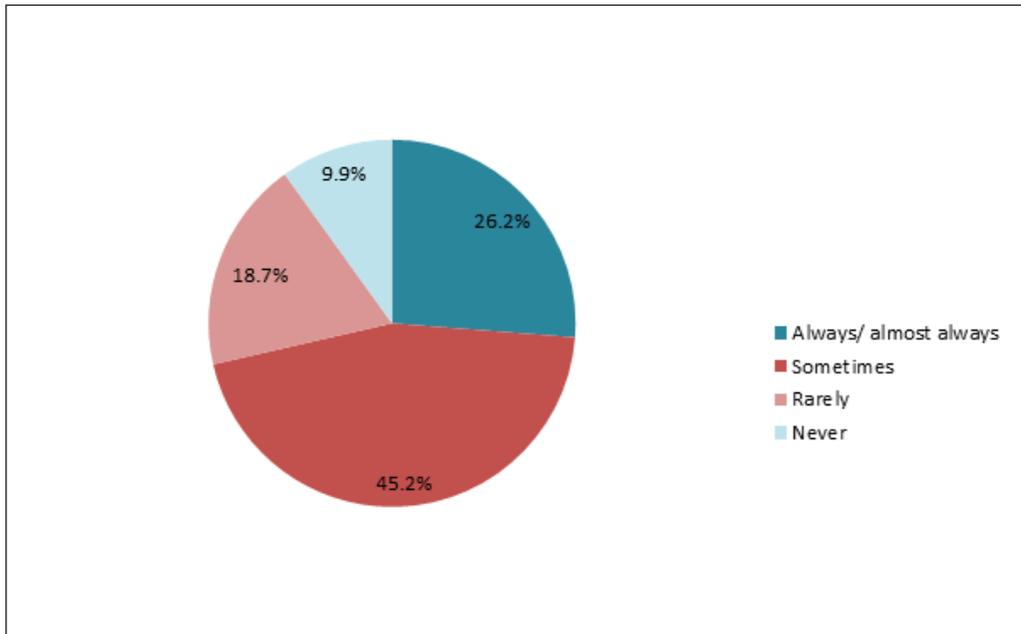
Children

Connection to culture

The vast majority of primary caregivers (84.7%, 95% CI [82.6, 86.6]) agreed or strongly agreed that it was important to have traditional cultural events as part of their child’s life. Although the question and response options were slightly different, this result is similar to the RHS Phase 2 where 53.6% (95% CI [51.1, 56.1]) of primary caregivers felt that traditional cultural events were very important and 33.5% (95% CI [31.3, 35.7]) felt that these were somewhat important in their child’s life. When asked how often their child participates in the community’s cultural events, 26.2% (95% CI [23.7, 29.0]) said always/almost always, 45.2% (95% CI [42.5, 47.9]) said sometimes, 18.7% (95% CI [17.2, 20.2]) said rarely, and 9.9% (95% CI [8.8, 11.2]) said never (see *Figure 3.1*).



Figure 3.1: Frequency of participation in community cultural events among First Nations children



In addition, 13.3% of children (95% CI [11.8, 14.8]) participate in traditional activities such as singing, drumming and dancing outside of school at least once a week, 18.9% (95% CI [17.2, 20.8]) participate less than once a week and 67.8% (95% CI [65.5, 70.0]) never participate in traditional activities outside of school hours. Again, these results are similar to the RHS Phase 2 where 69.1% (95% CI [66.8, 71.4]) of children never participated in traditional activities outside of school hours. Further, the majority of children (90.6%, 95% CI [89.3, 91.8]) had eaten traditional foods often or a few times in the past year prior to the RHS Phase 3 survey.

It is important for First Nations children to have someone who will help them connect with their culture. When asked who helps their child understand their culture, the most common responses were grandparents (72.6%, 95% CI [70.8, 74.4]), followed by parents (66.0%, 95% CI [63.5, 68.3]) and teachers, daycare providers, early childhood educators (47.6%, 95% CI [45.2, 50.1]). Of note, only 4.0% (95% CI [3.3, 4.8]) of children have no one to help them understand their culture (see *Table 3.1*). This is similar to previous phases of the RHS, where 3.3% of children (95% CI [2.7, 4.1]) in RHS Phase 2 and 5.2% (95% CI [4.2, 6.4]) in RHS Phase 1 had no one to help them understand their culture.



Table 3.1: Who helps First Nations children understand their culture

Who Helps Child Understand Culture	%	[95% CI]
Grandparents	72.6	[70.8, 74.4]
Parents	66.0	[63.5, 68.3]
Aunts/Uncles	44.2	[41.7, 46.7]
Other relatives	35.5	[32.9, 38.1]
Friends	16.5	[14.6, 18.7]
Teachers/Daycare providers/Early childhood educators	47.6	[45.2, 50.1]
Community Elders	23.5	[21.4, 25.7]
Other community members	12.5	[11.0, 14.1]
No one	4.0	[3.3, 4.8]
Other	1.4 ^E	[0.9, 2.0]

Note: ^E High sampling variability, interpret with caution.

Language

Primary caregivers rated how important it is to them that their child learns a First Nations language, with 88.7% (95% CI [87.3, 90.0]) reporting that they agree or strongly agree that their child learning a First Nations language is important to them. Although the question and response options were slightly different, this is similar to the RHS Phase 2 where 64.1% (95% CI [61.9, 66.3]) of primary caregivers reported that learning a First Nations language was very important and 28.4% (95% CI [26.3, 30.5]) reported that it was somewhat important.

The current results indicate that the majority of children (68.1%, 95% CI [65.7, 70.5]) had at least some knowledge of a First Nations language. Of those who had knowledge of a First Nations language, the majority could understand a few words (62.6%, 95% CI [59.9, 65.2]), while 5.8% (95% CI [4.9, 6.8]) had a fluent

understanding of the First Nations language, 6.7% (95% CI [5.4, 8.2]) had an intermediate understanding, 23.1% (95% CI [21.2, 25.1]) had a basic understanding and 1.9% (95% CI [1.4, 2.6]) reported that they could not understand the language. Similarly, the majority could speak a few words (62.0%, 95% CI [59.0, 64.9]), while 4.8% (95% CI [4.0, 5.8]) were fluent speakers, 3.5% (95% CI [2.9, 4.3]) were intermediate speakers, 17.7% (95% CI [15.7, 20.0]) were basic speakers and 11.9% (95% CI [9.4, 14.9]) could not speak their language.

Note that in the RHS Phase 2 the question was slightly different, as it asked if the child could understand or speak their First Nations language; whereas in the RHS Phase 3, primary caregivers were asked if the child had any knowledge of a First Nations language (even if only a few words). In the RHS Phase 2, 49.7% (95% CI

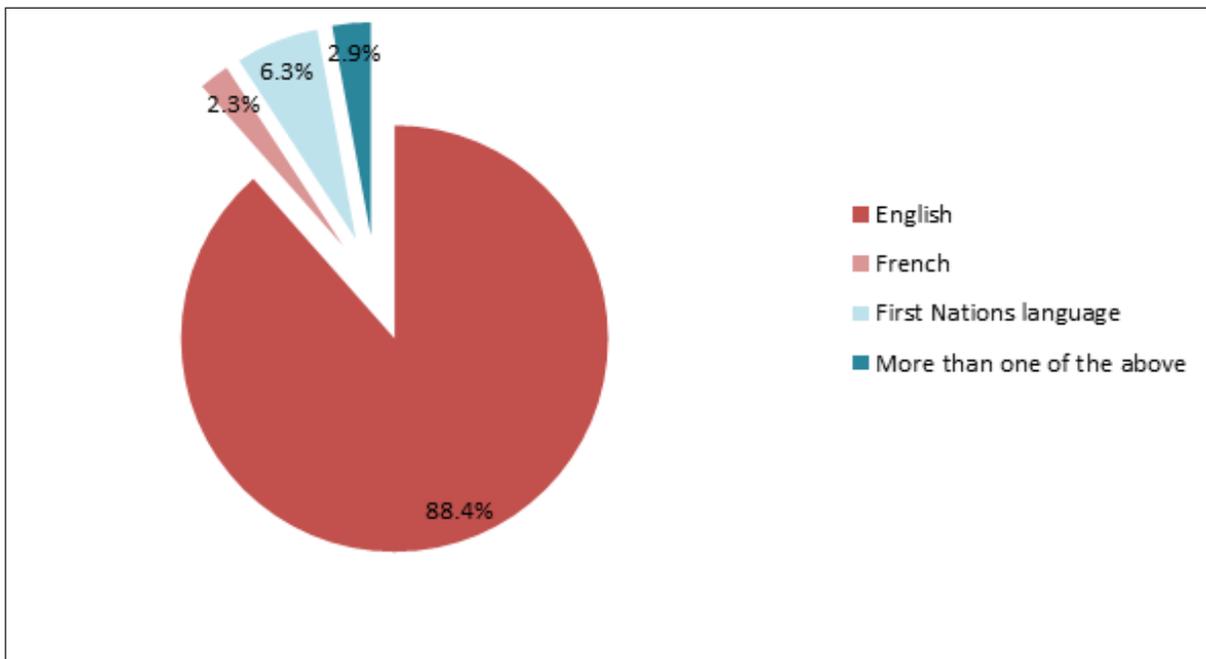


[47.5, 51.9]) of primary caregivers reported that their children could understand or speak a First Nations language. Of these, 14.2% could speak or understand at an intermediate or fluent level and 85.8% could speak or understand at a basic level.

The current results show that although almost all children had some knowledge of a First Nations language, most still used English most often in their daily lives. Specifically, of the children who were old enough to use a language, 88.4% (95% CI [87.2, 89.6]) used English most often in their daily lives compared to 6.3% (95% CI [5.6, 7.1]) who used a First Nations language, 2.3% (95% CI [1.9, 2.8]) who used French

and 2.9% (95% CI [2.3, 3.6]) who used more than one language mentioned above (see *Figure 3.2*). Of those who used more than one of the above mentioned languages, 79.0% (95% CI [71.5, 84.9]) used English and a First Nations language and 12.0%^E (95% CI [8.1, 17.3])¹ used French and a First Nations language. Note that in the RHS Phase 2 the structure of this question was different, as it asked primary caregivers to “mark all that apply,” rather than asking them to choose only one option for the language that the child uses most often in daily life. In the RHS Phase 2, 25.0% (95% CI [23.2, 26.8]) of primary caregivers reported that their First Nations language was used most often in their child’s daily life.

Figure 3.2: Language used by First Nations children most often in daily life



Note: Percentages add up to less than 100% because a very small proportion of respondents reported using an “other” language most often in daily life. This value was suppressed due to a very high sampling variability.

1 Note: ^E High sampling variability, interpret with caution.



Aboriginal Head Start on Reserve

When asked if their child had ever attended an Aboriginal Head Start on Reserve (AHSOR) program, 39.5% (95% CI [36.8, 42.2]) of primary caregivers reported that their children had. A closer examination of the relationship between attendance at an AHSOR and language and culture is described in *Table 3.2*. A significantly higher percentage of children who had attended AHSOR (76.9%, 95% CI [73.7, 79.8]) had some knowledge of a First Nations language compared to those who had never attended (61.2%, 95% CI [58.0, 64.2]). There was a similar pattern of results for children having a connection to their culture. A significantly higher percentage of children who had attended AHSOR always or almost always participated in their community’s cultural

events (34.3%, 95% CI [30.9, 37.8]) compared to children who had never attended AHSOR (20.9%, 95% CI [18.1, 24.1]). A significantly higher percentage of children who had attended AHSOR (21.9%, 95% CI [19.4, 24.6]) took part in traditional activities such as singing, drumming and dancing outside of school hours at least once a week compared to those who never attended AHSOR, where only 7.7% (95% CI [6.3, 9.3]) took part in these activities at least once a week. Further, a significantly higher percentage of children who had attended AHSOR (95.7%, 95% CI [94.4, 96.6]) had eaten traditional food a few times or often in the past year prior to the survey compared to 87.0% (95% CI [84.9, 89.0]) of children who had never attended AHSOR.

Table 3.2: Language and culture among First Nations children by attendance at Aboriginal Head Start on Reserve

	Attended Aboriginal Head Start on Reserve		Never attended Aboriginal Head Start on Reserve	
	%	[95% CI]	%	[95% CI]
Has any knowledge of a First Nations language	76.9	[73.7, 79.8]	61.2	[58.0, 64.2]
Always/almost always participates in community cultural events	34.3	[30.9, 37.8]	20.9	[18.1, 24.1]
Takes part in traditional activities at least once a week (outside of school hours)	21.9	[19.4, 24.6]	7.7	[6.3, 9.3]
Eats traditional food often or a few times in the past 12 months prior to the survey	95.7	[94.4, 96.6]	87.0	[84.9, 89.0]

Youth

Connection to Culture

The majority of youth (80.2%, 95% CI [78.5, 81.8]) agreed or strongly agreed that traditional cultural events were important in their lives. Although the question was asked slightly differently, this is similar to the RHS Phase 2 where 85.7% (95% CI [84.2, 87.1])

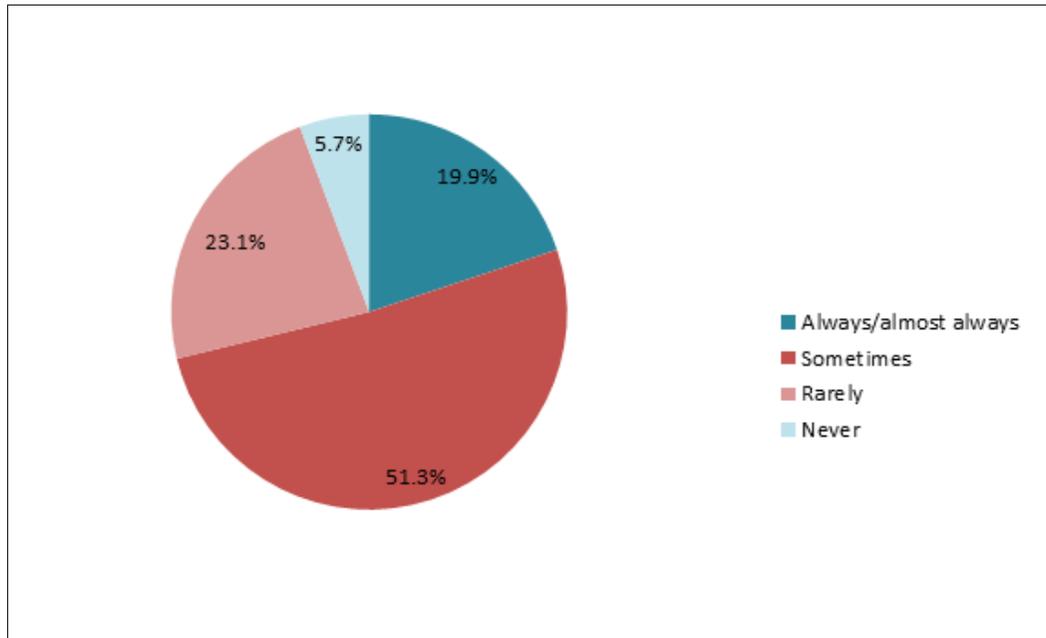
of youth reported that traditional cultural events were very or somewhat important in their lives. When asked how often they participate in community cultural events, 19.9% (95% CI [18.2, 21.8]) said always or almost always, 51.3% (95% CI [49.4, 53.3]) said sometimes, 23.1% (95% CI [21.3, 25.0]) said rarely and 5.7% (95% CI [4.6, 7.0]) said never (see *Figure 3.3*).



Again, this is similar to the RHS Phase 2 where 74.2% (95% CI [72.1, 76.1]) of youth reported always, almost always or sometimes participating in community cultural events. The current results indicate that 13.4% (95% CI [11.4, 15.7]) of youth participate in traditional activities, such as singing, drumming and dancing outside of school hours at least once a week, 24.5% (95% CI [22.4, 26.7]) participate less than a

week and 62.1% (95% CI [59.4, 64.7]) never participate in traditional activities outside of school hours. The majority of youth (92.6%, 95% CI [91.2, 93.9]) had also eaten traditional foods in the past year. Interestingly, nearly one-quarter of youth (24.7%, 95% CI [22.4, 27.1]) reported that cultural/traditional activities contributed to their overall health.

Figure 3.3: Frequency of participating in community cultural events among First Nations youth



It is important for First Nations youth to have someone who helps them connect with and learn about their culture. When asked who helps them understand their culture, the most commonly reported responses were grandparents (63.6%, 95% CI [61.5, 65.8]), followed by parents (54.4%, 95% CI [51.3,

57.5]) and school teachers (38.1%, 95% CI [35.7, 40.5]). Of note, only 3.6% (95% CI [3.1, 4.2]) of youth have no one who helps them understand their culture (see *Table 3.3*). This is slightly lower than in the RHS Phase 2, where 4.9% (95% CI [4.3, 5.7]) of First Nations youth had no one to help them understand their culture.



Table 3.3: Who helps First Nations youth understand their culture

Who Helps Youth Understand Culture	%	[95% CI]
Grandparents	63.6	[61.5, 65.8]
Parents	54.4	[51.3, 57.5]
Aunts and uncles	35.7	[33.1, 38.5]
Other relatives	27.9	[24.9, 31.1]
Friends	14.3	[12.5, 16.3]
School teachers	38.1	[35.7, 40.5]
Community Elders	27.7	[25.1, 30.4]
Other community members	12.9	[11.0, 15.0]
No one	3.6	[3.1, 4.2]
Other	1.0 ^E	[0.6, 1.7]

Note: ^E High sampling variability, interpret with caution.

Language

The majority (80.6%, 95% CI [78.7, 82.4]) of First Nations youth strongly or somewhat agreed that speaking a First Nations language is important to them. Although the question was asked slightly differently, this is similar to the RHS Phase 2, where 86.1% (95% CI [84.5, 87.5]) of youth felt that it was very or somewhat important to learn a First Nations language.

Three-quarters of all youth who did not use a First Nations language most often in daily life (75.8%, 95% CI [73.5, 78.0]) in the current survey had some knowledge of a First Nations language. Of those who had knowledge of a First Nations language, the majority could understand a few words (56.6%, 95% CI [53.4, 59.9]), while 7.7% (95% CI [6.7, 9.0]) had a fluent understanding of their First Nations language, 7.0% (95% CI [5.8, 8.5]) had an intermediate understanding, 27.3% (95% CI [24.1, 30.7]) had a basic understanding and only 1.3%^E (95% CI [1.0, 1.9])² could not understand their First Nations language at all.

Similarly, the majority could speak a few words (57.5%, 95% CI [54.8, 60.2]), while 6.4% (95% CI [5.4, 7.7]) were fluent speakers, 6.5% (95% CI [5.4, 7.7]) were intermediate speakers, 22.3% (95% CI [20.1, 24.6]) were basic speakers and 7.3%^E (95% CI [5.2, 10.2])³ could not speak in a First Nations language at all. In terms of reading and writing in a First Nations language, many First Nations youth who had knowledge of a First Nations language could read a few words (43.2%, 95% CI [40.3, 46.1]). Fewer (3.5%, 95% CI [2.7, 4.5]) could read fluently, while 4.9% (95% CI [4.0, 5.9]) could read at an intermediate level, 22.0% (95% CI [19.9, 24.3]) had basic reading abilities and 26.4% (95% CI [22.6, 30.7]) could not read in a First Nations language at all. Similarly, 39.2% (95% CI [35.9, 42.5]) of First Nations youth who had knowledge of a First Nations language could write a few words. Fewer (2.9%, 95% CI [2.2, 3.9]) could write fluently, while 3.8% (95% CI [3.2, 4.6]) could write at an intermediate level, 21.8% (95% CI [19.5, 24.4]) had basic writing abilities and 32.3% (95% CI [28.1, 36.7]) could not write in a First Nations language at all.

2 Note: ^E High sampling variability, interpret with caution.

3 Note: ^E High sampling variability, interpret with caution.

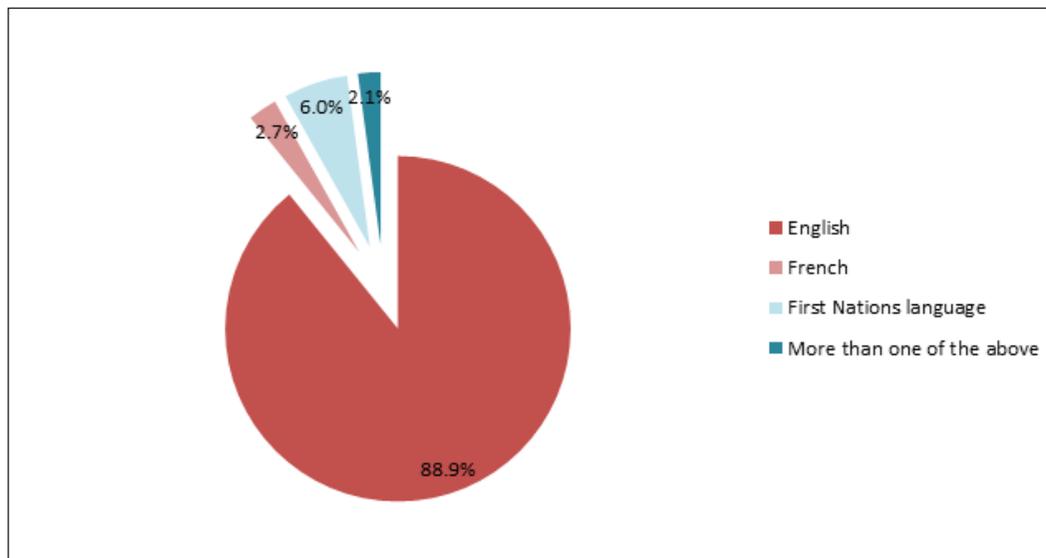


While not directly comparable to the current results due to differences in wording of the question, results from the RHS Phase 2 showed that 56.3% (95% CI [53.6, 59.0]) of First Nations youth could understand or speak a First Nations language.

The current results indicate that although most youth had some knowledge of a First Nations language, a majority still used English most often in their daily lives (88.9%, 95% CI [87.8, 90.0]) compared to 6.0% (95% CI [5.3, 6.9]) who used a First Nations language most often, 2.7% (95% CI [2.3, 3.2]) who used French most often and 2.1% (95% CI [1.7, 2.6]) who used more than one language mentioned above most often (see *Figure 3.4*).

Of those who used more than one of the above languages, 69.7% (95% CI [60.4, 77.6]) used English and a First Nations language and 18.8%^E (95% CI [13.2, 26.1])⁴ used French and a First Nations language. Note that in the RHS Phase 2, the structure of this question was different, as it asked youth to “mark all that apply,” rather than asking them to choose only one option for language that they use most often in daily life. In the RHS Phase 2, 21.5% (95% CI [19.7, 23.3]) of First Nations youth reported that the First Nations language was one that they used most often in their daily life.

Figure 3.4: Language used by First Nations youth most often in daily life



Note: Percentages add up to less than 100% because a very small proportion of respondents reported that they used an “other” language most often in daily life. This value was suppressed due to a very high sampling variability.

4 Note: ^E High sampling variability, interpret with caution.



Aboriginal Head Start on Reserve

When First Nations youth were asked if they had ever attended an Aboriginal Head Start on Reserve (AHSOR) program, 33.9% (95% CI [29.7, 38.3]) reported that they had. A closer examination of the relationship between AHSOR attendance and language and culture is described in *Table 3.4*. A significantly higher percentage of youth who had attended AHSOR (84.5%, 95% CI [80.8, 87.5]) had some knowledge of a First Nations language compared to those who had never attended (72.1%, 95% CI [69.4, 74.6]).

There was a similar pattern of results for youth who had a connection to culture. A significantly higher

percentage of youth who had attended AHSOR always or almost always participated in their community’s cultural events (25.0%, 95% CI [20.4, 30.2]) compared to youth who had never attended (17.3%, 95% CI [15.4, 19.3]). A significantly higher percentage of youth who had attended AHSOR took part in traditional activities such as singing, drumming and dancing outside of school hours at least once a week (18.6%, 95% CI [13.9, 24.4]) compared to those who never attended AHSOR and took part in these activities at least once a week (11.5%, 95% CI [10.0, 13.3]). Further, almost all youth who had attended AHSOR (96.3%, 95% CI [94.4, 97.6]) had eaten traditional food often or a few times in the past year prior to the survey compared to 90.2% (95% CI [87.9, 92.0]) of youth who had never attended.

Table 3.4: Language and culture among First Nations youth by attendance at Aboriginal Head Start on Reserve

	Attended Aboriginal Head Start on Reserve		Never attended Aboriginal Head Start on Reserve	
	%	[95% CI]	%	[95% CI]
Has any knowledge of a First Nations language	84.5	[80.8, 87.5]	72.1	[69.4, 74.6]
Always/almost always participates in community cultural events	25.0	[20.4, 30.2]	17.3	[15.4, 19.3]
Takes part in traditional activities at least once a week (outside of school hours)	18.6	[13.9, 24.4]	11.5	[10.0, 13.3]
Eaten traditional food often or a few times in the past 12 months prior to the survey	96.3	[94.4, 97.6]	90.2	[87.9, 92.0]



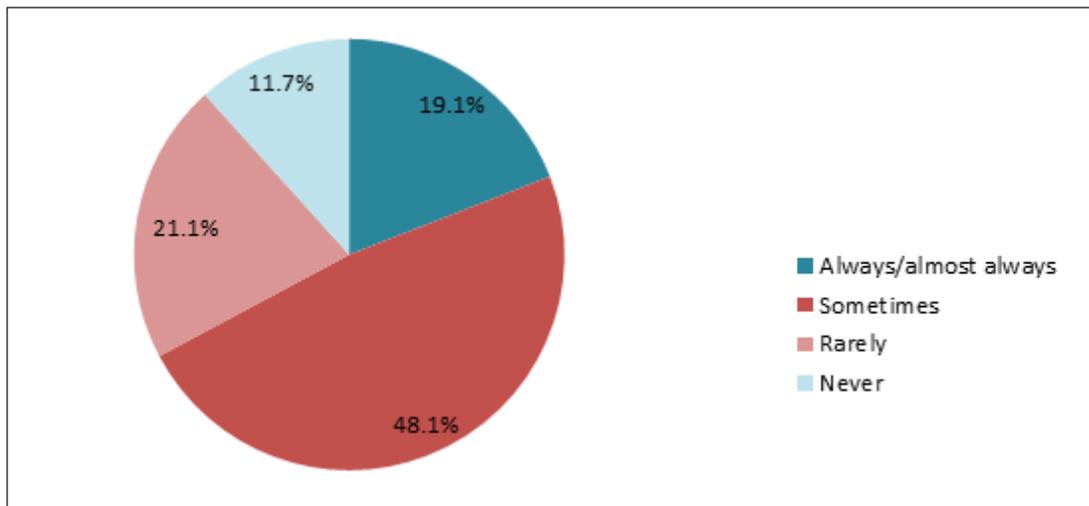
Adults

Connection to culture

Almost one fifth of First Nations adults (19.1%, 95% CI [17.7, 20.6]) participate always/almost always in their community's cultural events. An additional 48.1% (95% CI [46.7, 49.6]) sometimes participate, 21.1% (95% CI [19.8, 22.5]) rarely participate, and 11.7% (95% CI [10.6, 12.8]) never participate (see *Figure 3.5*). This is very similar to the RHS Phase 2

where 20.7% (95% CI [19.5, 22.1]) reported always/almost always participating in their community's cultural events, 46.4% (95% CI [45.0, 47.7]) reported sometimes participating, 20.4% (95% CI [19.1, 21.7]) reported rarely participating and 12.5% (95% CI [11.4, 13.7]) reported never participating.

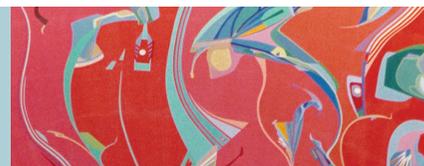
Figure 3.5: Frequency of participation in community cultural events among First Nations adults



More than one-third of First Nations adults (36.6%, 95% CI [34.3, 39.0]) reported that cultural or traditional activities contributed to their overall health. The majority of adults (71.0%, 95% CI [69.2, 72.8]) also agreed or strongly agreed that traditional spirituality is important to them. This was lower than the result from the RHS Phase 2 where 79.9% (95% CI [78.6, 81.2]) said that traditional spirituality was very or somewhat important. In the current survey, almost all First Nations adults (96.8%, 95% CI [96.1, 97.3]) reported having eaten traditional foods often or a few times in the past year prior to the survey. Specifically, 87.4% (95% CI [85.5, 89.1]) had eaten

traditional meats (i.e., land-based animals, fish, other water-based foods, game birds and small-game animals), 83.8% (95% CI [82.5, 85.0]) of adults had eaten traditional vegetation (i.e., berries or other wild vegetation and wild rice) and 94.6% (95% CI [93.9, 95.2]) had eaten other traditional foods (e.g., bannock or fry bread, corn soup and meat, fish or vegetable broth) a few times or often in the past 12 months prior to the survey.

First Nations adults were asked when they last consulted a Traditional Healer. More than one-fifth of adults (21.8%, 95% CI [19.8, 23.9]) had consulted



a Traditional Healer in the past 12 months prior to the survey, which is very similar to the RHS Phase 2 finding of 21.0% (95% CI [19.4, 22.7]) and higher than the RHS Phase 1 finding of 14.8% (95% CI [12.7, 17.0]) in the 12 months prior to the respective surveys. The RHS Phase 3 results show that 62.3% (95% CI [59.9, 64.6]) reported never consulting a Traditional Healer, similar to the findings in the RHS Phase 2 (63.0%, (95% CI [60.9, 65.1])) where a majority of adults had never consulted one.

Further, one-third (33.1%, 95% CI [31.5, 34.7]) of First Nations adults reported having a very strong sense of belonging to their local community and nearly half (47.5%, 95% CI [46.0, 49.1]) had a somewhat strong sense of belonging. Another 14.4% (95% CI [13.4, 15.6]) had a somewhat weak sense of belonging and 5.0% (95% CI [4.3, 5.7]) had a very weak sense of belonging to their local community.

Language

The majority of First Nations adults (87.9%, 95% CI [86.7, 89.0]) had some knowledge of a First Nations language. Of those who had knowledge of a First Nations language, one-third had a fluent understanding (33.6%, 95% CI [31.8, 35.4]) or could understand a few words (33.2%, 95% CI [31.3, 35.2]), while 12.0% (95% CI [10.8, 13.3]) had an intermediate understanding, 20.4% (95% CI [19.1, 21.8]) had a basic understanding and 0.8% (95% CI [0.6, 1.1]) could not understand at all. Similarly, nearly one-third of adults could speak a First Nations language fluently (30.1%, 95% CI [28.5, 31.7]), nearly two-fifths could speak just a few words (36.4%, 95% CI [34.6, 38.3]), whereas 10.5% (95% CI [9.4, 11.6]) were intermediate speakers, 19.5% (95% CI [18.2, 20.9]) were basic speakers and 3.5% (95% CI [2.7, 4.7]) could not speak the language at all.

In terms of reading and writing a First Nations language, nearly one-third of First Nations adults

who had knowledge of the language could read a few words (32.9%, 95% CI [31.2, 34.7]). Fewer (9.3%, 95% CI [8.3, 10.5]) could read fluently, while 8.0% (95% CI [7.2, 8.9]) could read at an intermediate level, 20.2% (95% CI [18.8, 21.7]) had basic reading abilities and 29.6% (95% CI [27.8, 31.4]) could not read their First Nations language at all. Similarly, 31.9% (95% CI [30.3, 33.6]) of First Nations adults who had knowledge of a First Nations language could write a few words. A few (7.1%, 95% CI [6.1, 8.1]) could write fluently, while 5.7% (95% CI [4.9, 6.6]) could write at an intermediate level, 15.8% (95% CI [14.7, 17.0]) had basic writing abilities and 39.5% (95% CI [37.7, 41.4]) could not write their First Nations language at all.

Although not directly comparable due to differences in the wording of the question, the RHS Phase 2 results showed that 69.6% (95% CI [66.8, 72.2]) of First Nations adults were able to understand or speak their First Nations language. Of these, 61.0% (95% CI [58.7, 63.3]) could understand their First Nations language at an intermediate or fluent level and 56.9% (95% CI [54.5, 59.3]) could speak at an intermediate or fluent level.

Most First Nations adults have some knowledge of their First Nations language, although the majority speak English most often in their daily life (76.5%, 95% CI [75.0, 77.9]), while 2.1% (95% CI [1.7, 2.5]) speak French most often, 15.3% (95% CI [14.1, 16.5]) speak a First Nations language most often, 5.4% (95% CI [4.8, 6.1]) speak more than one language mentioned above most often and 0.7% (95% CI [0.5, 1.0]) spoke an “other” language most often (see *Figure 3.6*). Of those who used more than one of the above languages, 90.1% (95% CI [87.3, 92.4]) spoke English and a First Nations language and 5.5% (95% CI [4.0, 7.6]) spoke French and a First Nations language. In addition, 2.1%⁵ (95% CI [1.4, 3.3])⁵ spoke English and French, while 2.2%⁶ (95% CI [1.3, 3.7])⁶ spoke French, English and a First Nations language.

5 Note: ^E High sampling variability, interpret with caution.

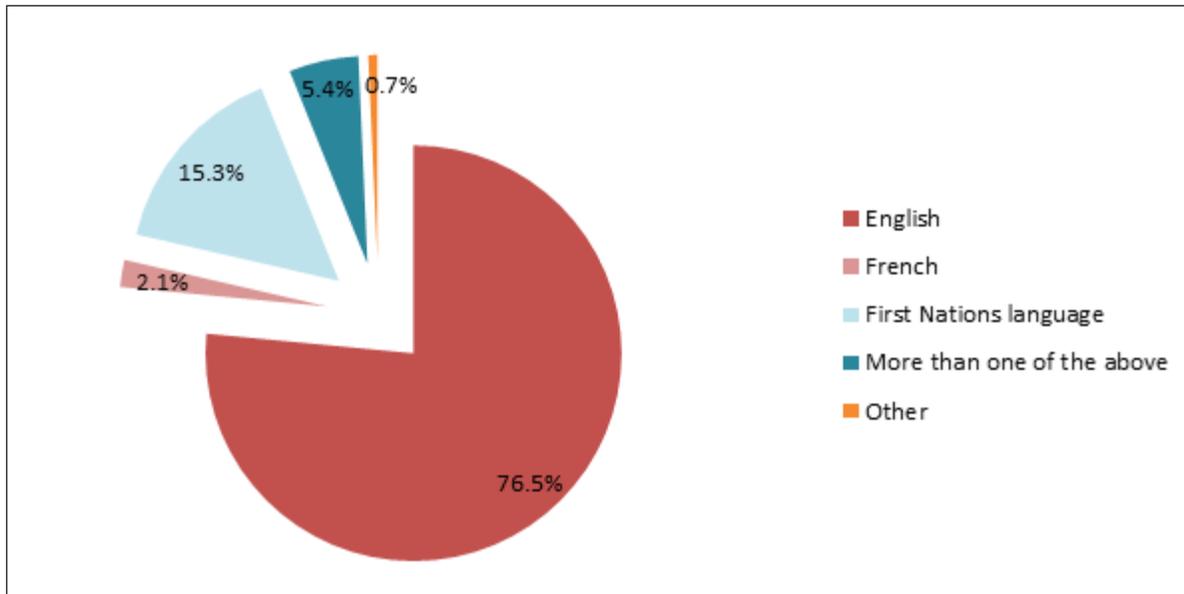
6 Note: ^E High sampling variability, interpret with caution.



Note that in the RHS Phase 2 the structure of this question was different, as it asked adults to “mark all that apply,” rather than asking them to choose only one option for language that they use most often in

daily life. In the RHS Phase 2, 36.2% (95% CI [33.7, 38.8]) of adults reported that a First Nations language was used most often in their daily life.

Figure 3.6: Language used by First Nations adults most often, in daily life



DISCUSSION

Children

After generations of colonial-induced traumas and government policies that were intended to remove First Nations languages and cultures, these findings suggest that First Nations children still have a connection to their language and culture. The majority of children are participating in community cultural events, almost all are eating traditional foods (at least they have eaten a few times in the year prior to the survey) and nearly one-third are participating in traditional or cultural activities outside of school hours. Primary caregivers are recognizing and reinforcing the importance of having their children speak a First Nations language and participate in traditional or cultural activities. Almost all the children have people who help them understand

their culture, including parents, grandparents and educators. First Nations children are also learning their First Nations language, with nearly 70% of them having at least some knowledge of a First Nations language. The children’s connection to culture has not changed considerably since the previous phases of the RHS.

Although most First Nations children have some knowledge of a First Nations language, few are using it most often in daily life. These results point to the need for a continued focus on the day-to-day use of First Nations languages. Specifically, there is a need to continue to increase the number of people who can speak a First Nations language at intermediate



or fluent levels, as the languages hold valuable knowledge that will be lost if these are not continually being taught and spoken (Battiste, 2010; McIvor et al., 2009).

One vehicle for continued revitalization of language and culture among young children is through preschool programs like Aboriginal Head Start on Reserve (AHSOR). Results from the RHS Phase 3 show that attendance at AHSOR is associated with a greater connection to language and culture among First Nations children. A higher proportion of children who attended AHSOR have knowledge of their First Nations language, participate in community cultural events, participate in traditional activities on a weekly basis and eat traditional foods. These results make sense, as one of the six core components of AHSOR is language and culture.

Learning and knowing one's language and culture are the foundations for creating individual and collective identities that will directly or indirectly support First Nations children by building interconnectedness and holism (Auger, 2016; Kirkness, 2000; Kirmayer et al., 2014; McIvor et al., 2009; Oster et al., 2014). Further research is needed to determine the impact that AHSOR has on the long-term physical and mental health of First Nations children and if the program assists communities with language preservation and cultural revitalization.

Youth

Like First Nations children, the majority of First Nations youth are connected to their language and culture. They are participating in their community's cultural events and in traditional cultural activities outside of school hours. Almost all youth report that they have people who help them understand their culture, including parents, grandparents and teachers.

First Nations youth are also recognizing the

importance of language and culture for their own wellness. The vast majority of youth agreed or strongly agreed that speaking a First Nations language and participating in traditional cultural activities are important for them. In addition, nearly one-quarter of youth reported that cultural or traditional activities contribute to their overall health. These findings are consistent with past research. Snowshoe et al. (2014) found that "cultural connectedness, or the degree to which one is integrated within his or her culture" (p. 250), has positive associations with improved general health, mental health and well-being.

Almost all First Nations youth are eating traditional foods. Food is an important part of Indigenous cultures, with traditional teachings around the collection and preparation of those foods, including the use of some foods as medicines. In future research, it is important to examine if the youth are involved in traditional teachings around gathering, preparation, and use of traditional foods in addition to food consumption.

More than three-quarters of First Nations youth have some knowledge of a First Nations language; however, very few use it most often in their daily lives. For many First Nations communities, English is the language used most in schools and businesses, which can explain why there are fewer youth using a First Nations language in their daily life (Fontaine & Assembly of First Nations, 2012). Burnaby (1996) stated that some families and communities may choose to use English, as it is the language most often used when dealing with government and outside businesses and organizations. Communities may use English more in daily activities, which may reduce the possibilities for youth to learn or use a First Nations language when they are interacting in the community at large. It is therefore important to have language and cultural components available to youth in school and around the community, as well as having a variety of people available to assist youth with practising



language and understanding culture (First Nations Information Governance Centre, 2014; Fontaine & Assembly of First Nations, 2012; McIvor et al., 2009; National Collaborating Centre for Aboriginal Health, 2010). There appears to be a desire by First Nations youth to learn and speak a First Nations language, making it important for communities to work with their youth to provide opportunities not only for the acquisition of the language, but to speak it with others on a regular basis so that they can become fluent speakers.

Among First Nations youth, prior attendance at an AHSOR program was associated with a greater connection to language and culture. A higher proportion of youth who had attended an AHSOR program when they were children also participated in community cultural events, in traditional activities on a weekly basis, and have eaten traditional foods at least a few times in the year prior to the survey. Remarkably, attending a preschool program that has a focus on language and culture appears to impact one's connection to language and culture later in life. These results point to the importance of early childhood programs and the need to improve access to such programs among First Nations children. The current results indicate that only 39.5% of children and 33.9% of youth had attended AHSOR. Enabling greater access to AHSOR would contribute to a continued connection to one's language and culture throughout life.

Adults

First Nations adults have a strong connection to language and culture, with the majority participating in their community's cultural events and most agreeing or strongly agreeing that traditional spirituality is important in their lives. In addition, nearly two fifths of adults report that cultural or traditional activities contribute to their overall health. Participation in community cultural events

is an act of resistance and cultural reclamation that assists with self-determination and collective identity (National Collaborating Centre for Aboriginal Health, 2010; Whalen et al., 2016). Furthermore, participation in cultural activities can affect the social, physical, emotional, mental and spiritual aspects of one's life, which means that each of these activities can assist with changing the health and well-being of First Nations adults.

Engaging in cultural events can also increase the use of First Nations languages, as many cultural activities are founded within First Nations languages (Battiste, 2010; McIvor et al., 2009). Nearly 90% of First Nations adults have some knowledge of a First Nations language. Of those who have knowledge of a First Nations language, nearly one-third have a fluent understanding of it. Similarly, nearly one third of First Nations adults could speak a First Nations language fluently. In contrast to children and youth, more adults are able to converse fluently in a First Nations language. Adults are also more likely than children and youth to use a First Nations language most often in daily life. It is important to continue to encourage revitalization of Indigenous languages and nurture spaces for using the languages in a positive and supportive manner, especially among young people (McIvor et al., 2009; Whalen et al., 2016). As Battiste (2010) stated, Indigenous languages are in danger and need more daily speakers in order for them to survive.

Almost all First Nations adults have eaten traditional food in the past year prior to the survey. Adults consumed different types of traditional foods almost equally. According to Whalen et al. (2016), eating traditional foods is a connection to land that is a part of culture and, ultimately, improves the general and mental health and well-being of First Nations people. "Health and well-being are closely linked to foods and diets provided by food systems" (Kuhnlein, 2014, p. 2415) and sustainable food systems are part of Indigenous cultures, which have stories, songs,



ceremonies and knowledge that have developed spanning thousands of years of interactions with the land (Best Start Resource Centre, 2010; De Leeuw & Greenwood, 2011). Therefore, eating traditional foods can be connected to culture, and in some areas to language, which is important for the health and well-being of First Nations people (Assembly of First Nations, 2007; Kuhnlein, 2014).

Although many First Nations have consulted Traditional Healers, the majority of First Nations adults (62.3%) reported that they had never consulted one. Colonial spaces and traumas like Residential Schools and Indian hospitals (racially segregated hospitals that were originally tuberculosis sanatoria but later operated as general hospitals), or the systemic racism found in the current health-care system, may influence decisions people make about their health needs (Allan & Smylie, 2015). These findings suggest that there is a large percentage of the First Nations adult population who are not consulting Traditional Healers, which may be due to inter- and intra-generational trauma and colonialization which led First Nations to turn away from healing cultural practices. As part of an ideal health-care delivery system, First Nations people would be able to access Traditional Healers and medicines as well as biomedical doctors and nurses, either separately or together, which would assist in cultural revitalization as well as providing a broader view of what constitutes health and well-being (Jacklin, 2007; Mashford-Pringle, 2013; Royal Commission on Aboriginal Peoples, 1996; Warry, 1998).

A strong and positive sense of belonging, identity, and connection to language and culture have all been stated as protective factors that can lead to improved individual and collective health and well-being (Battiste, 2010; Brasfield, 2001; Kay-Raining Bird, 2011; Kirmayer et al., 2014; McIvor et al., 2009).

More than 80% of First Nations adults reported

having a very strong or somewhat strong sense of belonging to their local community. These results point to the strength that can come from a sense of community belonging. Familial and community ties help to improve cultural and linguistic revitalization, which can be protective factors and improve the status of one's health and mental health (Auger, 2016; First Nations Information Governance Centre, 2014; Kirmayer et al., 2014; Long, Downs, & Gillette in Sight & Konen, 2006).

CONCLUSION

Results from the RHS Phase 3 show that First Nations children, youth, and adults are connected to their languages and cultures. As noted by the Royal Commission for Aboriginal Peoples (1996), by participating in traditional culture through community cultural events, visiting Traditional Healers, using traditional medicines and foods, speaking a First Nations language, and valuing the importance of traditional spirituality, First Nations people are connecting to their language and culture through activities that are part of being with and on the land. A continued and strengthened connection to language and culture is important for spiritual, emotional, mental and physical health and well-being.

The TRC's *Calls to Action* (2015a) specifically address the need to reclaim, revitalize and embed First Nations languages in communities and provide opportunities for cultural activities. Ensuring the continued reclamation and strengthening of language and culture in communities means focusing on children and youth. The earlier that First Nations children are provided with language and culture the more likely that they will build a positive sense of their First Nations identity, thereby contributing to the cultural continuity of the community (Auger, Howell, & Gomes, 2016; Kay-Raining Bird, 2011; Oster et al., 2014).



When younger First Nations people learn First Nations languages and cultures, these can act as protective factors and help to instill a positive sense of belonging and identity that can then influence general and mental health and well-being (McIvor et al., 2009). This is key for healing from inter- and intra-generational traumas forced upon First Nations communities by colonial policies like Residential Schools, Sixties Scoop and others (Kirmayer et al., 2014).

As parents, caregivers, siblings, and extended family are children's first teachers, it is important to support those people who will be raising the child (Best Start Resource Centre, 2010; 2011). It is also important to provide opportunities for First Nations children and youth to participate in traditional or cultural activities, and this includes support for early childhood programs like Aboriginal Head Start on Reserve, of which language and culture are foundational components. Language and culture revitalization also involves continuing to ensure that First Nations language and culture are integral parts of day-to-day community life.



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CHAPTER FOUR: NUTRITION AND FOOD SECURITY

EXECUTIVE SUMMARY

The sharing of knowledge and food has been integral to maintaining traditional food systems of First Nations. This chapter presents the RHS Phase 3 findings for nutrition for First Nations adults, youth and children and food security for among First Nations adults.

The majority (90.0%) of First Nations adults reported that traditional food was shared with their household. Three quarters of the First Nations adults living in remote (76.5%) or special access (75.0%) communities reported often eating traditional foods in the 12 months prior to the survey. Large land-based animals were the most often consumed protein-based traditional foods for First Nations adults, youth and children.

However, it has been documented that First Nations people have higher rates of food insecurity than the general population and that those living in First Nations communities face unique food security challenges. The RHS Phase 2 (2008/10), the first national survey to document national levels of food insecurity among First Nations, showed that more than half (54.2%) of First Nations adults were food insecure.

While the percentage of First Nations adults that are food insecure has slightly decreased, it remains an alarming and urgent health issue. Data from the RHS Phase 3 indicate that half (50.8%) of First Nations adults reported that their households experienced food insecurity and that more than 2 in 5 (43.2%) of those households with children were classified as food insecure. Despite this, 41.1% of First Nations adults reported that they always or almost always ate nutritious, balanced meals, an increase from the

30.6% reported in the RHS Phase 2.

More First Nations adults were categorized as severely food insecure when they never had traditional food shared with their household (17.4%) compared to those who had traditional food shared “often” by someone (11.0%). Most importantly, between the RHS Phase 2 and Phase 3, the rates of food insecurity have changed minimally.

It is critical for health researchers and policy makers to take note of this data, as understanding patterns of food security for First Nations people over time can inform the development and evaluation of national policies and programs related to food, health and well-being.

KEY FINDINGS

- More than half (59.1%) of First Nations adults who had traditional food shared with their household often reported that they always/almost always ate nutritious, balanced meals.
- A significantly higher percentage of First Nations adults living in remote communities (76.5%) reported often eating traditional foods compared to those living in rural (65.3%) or urban (63.4%) communities.
- Nearly one quarter (22.5%) of First Nations adults reported fishing in the three months prior to the survey, while nearly one fifth (18.3%) reported hunting or trapping and 16.8% reported berry picking or other food gathering.
- More than 1 in 10 (13.5%) First Nations children and nearly one fifth (19.3%) of First Nations youth reported fishing in the three months prior to the



survey. Hunting or trapping was reported by a higher percentage of youth (16.6%) than children (7.4%) in the past three months. Nearly one sixth of First Nations children (15.6%), and 1 in 10 youth (13.2%) participated in berry picking or other food gathering.

- The proportion of First Nations adults always/ almost always eating nutritious, balanced meals increased slightly with age. More than half (53.0%) of those aged 60 years or older reported always/ almost always consuming nutritious, balanced meals compared to more than one third (34.7%) among those aged 18–29.
- Nearly half (49.2%) of First Nations households were categorized as food secure, while the remaining half were moderately (37.7%) or severely (13.1%) food insecure. In the RHS Phase 2, the percentages were similar: 45.7% of First Nations households were food secure, 38.3% were moderately food insecure and 14.1% severely food insecure.
- Of those households with children, more than half (56.8%) were classified as food secure.
- More than three quarters (77.5%) of First Nations adults, 72.9% of First Nations youth and 78.7% of First Nations children reported eating protein (such as beef, chicken, pork, fish, seafood, deer, moose, eggs, beans and tofu) once a day or more. The proportion for First Nations adults did not change significantly from RHS Phase 2 (78.6%), despite the addition of moose and deer as explicit examples of protein-rich foods in the RHS Phase 3.
- Nearly 1 in 10 First Nations adults (9.6%) reported that they never or hardly ever consumed milk, yogurt, cheese, or fortified soy beverages.
- More than one quarter (27.5%) of First Nations adults did not consider the main water supply in their homes safe for drinking year-round.
- More than one third (37.5%) of First Nations adults, more than two fifths (42.4%) of youth and nearly one quarter of children (23.5%) reported consuming soft drinks once or more per day.
- Nearly all (96.8%) First Nations adults had eaten traditional food often or a few times in the 12 months prior to the survey.
- The majority of First Nations youth (92.6%) and children (90.6%) had eaten traditional food a few times or often in the 12 months prior to the survey.
- Large land-based animals (30.4%) were the most often consumed protein-based traditional foods among First Nations adults, followed by freshwater fish (24.8%), game birds (10.9%), small game (9.9%), and saltwater fish (8.3%).
- Similar to adults, large land-based animals were the most frequently consumed protein-based traditional food for First Nations youth (26.4%) and children (23.3%), followed by freshwater fish, game birds, small game, and saltwater fish.
- More than two fifths (42.6%), of First Nations adults often ate bannock or fry bread, 26.2% often ate berries or other wild vegetation, 9.8% ate wild rice, and 7.0% ate corn soup in the 12 months prior to the survey.
- The RHS Phase 3 nutrition results were very similar to the RHS Phase 2 findings: more than two thirds of First Nations adults (68.2%) consumed vegetables at least once per day; nearly in 10 adults reported that they never or hardly ever consumed milk or milk products (9.6%); and 9 in 10 had traditional food shared with their household in the 12 months (90.0%) prior to the survey.



INTRODUCTION

Food security can only be truly realized by addressing the challenges faced by First Nations people to achieve a nutritious diet that upholds Traditional Knowledge and utilizes food for mental, physical, social, and environmental health. Eating patterns arise from complex and holistic food acquisition and distribution systems that provide health benefits beyond nutrition. In understanding the transition that has occurred over the past several generations as a result of colonial systems, researchers and policy influencers have focused on understanding the levels of food insecurity among First Nations households.

In the past decade, food insecurity has been documented as an urgent issue for First Nations, both on and off reserve, and is more prevalent than in the general population, resulting in high rates of health- and diet-related complications (Che & Chen, 2001; Cidro et al., 2015; Skinner et al., 2014; Tarasuk et al., 2016; Willows et al., 2011). The RHS Phase 2 was the first national survey to measure income-related food security in First Nations communities, finding that more than half (54.2%) of all First Nations households were food insecure.

Measures of food insecurity differ in their conceptualizations and for what purpose a given measurement tool may best be used. Food security measurement tools, such as the index used in the RHS Phase 2 and Phase 3, measure only the most severe, hunger-specific elements of the food insecurity experience (Jones et al., 2013), seeking information on behaviours and conditions that characterize households having difficulty meeting their food needs. Similar to other national surveys, like the Canadian Community Health Survey, Cycle 2.2, the results provide a measure of food insecurity in the household by asking individual self-identifying Aboriginal adults to report on it for their household. It has been argued that this measurement fails to capture the cultural elements of food sovereignty

(Power, 2008) such as food sharing, among other factors. In the RHS Phase 2, 85.5% of First Nations adults indicated having had traditional food shared with their household often or sometimes, and 22.1% participated in hunting or trapping in the past year prior to the survey. In the RHS Phase 3, participation in traditional food acquisition activities (e.g., hunting or trapping, fishing, and berry picking) over the past three months before the survey was explored and is discussed in this chapter.

It is important to acknowledge that policies such as the *Indian Act*, the implementation of “Indian Reserves”, and the Indian Residential School system have all played a major role in decreasing individual and community participation in local food systems for many First Nations people—for example, by disrupting the ability to access harvesting grounds and waterways—and continue to shape the types and amounts of foods that are eaten (Martin, 2012). It is known that Indigenous strengths in food systems are closely knit with language and participatory action (Morrison, 2011).

There is a moral imperative to reconnect people to their food systems. From the RHS Phase 1 to the RHS Phase 2, findings indicated that the prevalence of hunting, trapping, and gathering of traditional food had decreased. However, there are examples of resurgence among youth participating in food sovereignty as demonstrated through community food security projects supported by the Northern Manitoba Food, Culture, and Community Collaborative (NMFCCC), whereby more than half of the initiatives include youth participation (NMFCCC, 2016). In a 2018 *New York Times* article about the resurgence of Indigenous foods in food establishments, a number of Indigenous chefs were featured: a chef from the Algonquin Nation noted that the revival of Indigenous food is part of a broader national effort to improve nutrition in Indigenous communities, where “the removal of people from their land has contributed to poorer health



conditions, sedentary lifestyles and the proliferation of processed and junk food” (Bilefsky, 2018, para. 19). Another Indigenous chef in the article remarked that “because of the political reconciliation, there is a culinary reconciliation and renaissance [of food]” (para. 10).

This chapter examines nutrition patterns among First Nations adults, youth and children and measures reported household food security among the adult First Nations population living in First Nations communities by analyzing data collected in the RHS Phase 3.

METHODS

This chapter presents results related to food, nutrition and food security for First Nations adults, youth and children living in First Nations communities. Questions in the RHS Phase 3 focused on nutrition practices and the frequency in which select store-bought and traditional foods were consumed. Questions focusing on food security were only included in the adult survey. For this reason, no similar results are reported for youth and children.

A number of indicators related to food and water security were analyzed. These included whether or not First Nations homes had a refrigerator and a stove for cooking or heating, and whether families struggled to meet their basic living requirement for food over the 12 months prior to the survey and, if so, how frequently they experienced this struggle. First Nations adults were also asked whether the main water supply in their homes was considered safe for drinking year-round and if they used any other sources of drinking water.

First Nations adults were asked nine questions to examine food security in their households; of these, three questions were asked only of adults who lived in households with one or more children. These

questions were asked of the adult population 18 years and older (in the adult survey) and were asked of individuals, not households. Therefore, it is possible that two or more individuals who responded to the survey could come from the same household. These questions focus on the behaviours and conditions that characterize households during their difficulty of meeting food needs without the monetary means to purchase more. The nine food security questions were also asked in the RHS Phase 2 and are similar to some of the questions from the 18-item Household Food Security Survey Module that was used in the Canadian Community Health Survey, Cycle 2.2, 2004 (Health Canada, 2007a). First Nations households were classified as food secure, moderately food insecure or severely food insecure based on how many of the food insecure conditions they reported. The statistics reported in this chapter are based on this measure.

Categories of geographic remoteness include: urban (Zone 1) = located within 50 km of the nearest service centre with year-round road access; rural (Zone 2) = located between 50 km and 350 km from the nearest service centre with year-round road access; remote (Zone 3) = located greater than 350 km from the nearest service centre with year-round road access; and special access (Zone 4) = no year-round road access (INAC, 2000). Community size was defined by population: large (population with 1,500 and more), medium (population between 300 and 1,499) and small (population between 75 and 299).

While research has documented a high level of income-related food insecurity among Indigenous households, the RHS Phase 3 questions for First Nations adults, youth and children regarding culture, traditional foods and lifestyle were also explored to help understand the findings from an Indigenous world view (see *Table 4.1*).



Table 4.1: Key variables

Variable	Description	Response options
NUTRITION		
Eating habits	On average, how often do you/the child eat or drink the following foods? <i>Choose the answer that best describes the way you normally eat/drink.</i> Milk, yogurt, cheese or fortified soy beverage; Meat and alternatives; Vegetables; Fruit; Bread, pasta, rice and other grains; 100% fruit juice; Soft drinks/pop/artificially flavoured juice; Fast food; Sweets	Two or more times a day/Once a day, A few times a week, About once a week, Never/Hardly ever
Participation in harvesting activities	Have you/the child done any of the following activities in the past 3 months? Hunting; Trapping; Fishing; Berry picking or other food gathering. In the past 3 months [prior to the survey], how many times did you/the child participate in the activity? How many minutes do you/the child generally spend doing each activity in the average session?	Yes, No Hunting and trapping were combined to make one variable. The average number of times (from continuous answer) and the average number of minutes (from continuous answer) spending the respective activity were calculated among those who reported participating in the activity.
Eating habits: traditional foods	In the past 12 months, how often have you/the child eaten the following traditional foods? Respondents indicate how often they or the child eat each of 12 common types of traditional Indigenous foods in Canada. (e.g., land-based animals, fresh or saltwater fish, other water-based foods, sea-based animals, game birds, small game, berries or other wild vegetation, bannock or fry bread, wild rice and corn soup) Please note that some of these foods may not be considered traditional for all individuals or regions.	Often, A few times, Not at all
Nutritious, balanced meals	In the past 12 months, how often did you/the child eat nutritious, balanced meals? <i>Note: Balanced meals contain a variety of food groups; for example, a selection of protein, grains, vegetables and fruits and dairy products.</i>	Always/Almost always, Sometimes, Rarely/Never
Traditional food sharing	In the past 12 months, how often did someone share traditional food with your/the child's household?	Often, Sometimes, Rarely, Never



FOOD SECURITY		
Household food security (Adult only)	<p>Composite variable with 9 statements (6 for adults and 3 for households with children) that may be used to describe the food situation for First Nations households in the past 12 months prior to the survey.</p> <p><i>Example: In the past 12 months, were you ever hungry but didn't eat because there wasn't enough money for food?</i></p>	<p>Often true, Sometimes true, Never true</p> <p>Almost every month, Some months but not every month, Only one or two months</p> <p>Yes, No</p> <p>Classification of food security status in the RHS follows the Health Canada standard. The sum of affirmative answers is the person's raw score on food security, with a raw score of 1 to 4 indicating moderate food insecurity and 5 to 6 indicating severe food insecurity (Health Canada, 2007b).</p>

Additional variables were analyzed to create a well-rounded picture of factors associated with food security. These variables are found in Table 4.2.

Table 4.2: Other associated variables

Variable	Description	Response options
Amenities in the home (Adult only)	Does your home have... A refrigerator; A stove for cooking and/or heating	Yes, No
Main water supply safe for drinking (Adult only)	Do you consider the main water supply in your home safe for drinking year-round?	Yes, No
Other sources of drinking water (Adult only)	Do you use any other sources of drinking water? Mark all that apply: No other sources, Bottled water; Filtered tap water; Water from another house; Boiled tap water; River, lake or stream; Distilled water; Other	Yes, No
Meeting basic living requirements for food (Adult only)	Did you ever struggle to meet the basic living requirement: Food?	No, A few times a year, Monthly, More than once a month



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Participation in other outdoor activities	<p>Have you/the child done any of the following activities in the past 3 months? Outdoor gardening/Yardwork</p> <p>In the past 3 months [prior to the survey], how many times did you/the child participate in the activity?</p> <p>How many minutes do you/the child generally spend doing each activity in the average session?</p>	<p>Yes, No</p> <p>The average number of times (from continuous answer) and the average number of minutes (from continuous answer) spending the respective activity were calculated among those who reported participating in the activity.</p>
Cutting the size of meals or skipping meals (Adults only)	In the past 12 months [prior to the survey], did you or other adults in your household ever cut the size of your meals or skip meals because there wasn't enough money for food?	Yes, No
Frequency of cutting size of meals or skipping meals (Adults only)	For adults who answered yes to cutting the size of meals or skipping meals, how often did this occur in the past year [prior to the survey]?	Almost every month, Some months but not every month, Only one or two months
House crowding (Adult only)	Generated by counting the total number of people (children, youth and adults) in the household divided by the number of rooms	One or less person per room (not crowded), More than one person per room (crowded)
General health (Reported for Adults only)	In general, would you say that your health is...?	Excellent, Very good, Good, Fair, Poor
Mental health (Reported for Adults only)	In general, would you say your mental health is...?	Excellent, Very good, Good, Fair, Poor
Household income (Reported for Adults only)	For the previous year, please think of your total household income from all sources before deductions	Less than \$20,000 (including no income), \$20,000-\$29,999, \$30,000-\$39,999, \$40,000-\$49,999, \$50,000 or greater



RESULTS

Nutrition

Nearly all First Nations adults reported having a refrigerator (98.4%, 95% CI [97.8, 98.8]) and a stove (98.6%, 95% CI [98.0, 99.0]) for cooking or heating in their homes. More than one quarter (27.5%, 95% CI [25.1, 30.1]) did not consider the main water supply in their homes safe for drinking year-round. Nearly 70% (69.1%, 95% CI [66.7, 71.5]) of First Nations adults consumed bottled water as a source of drinking water.

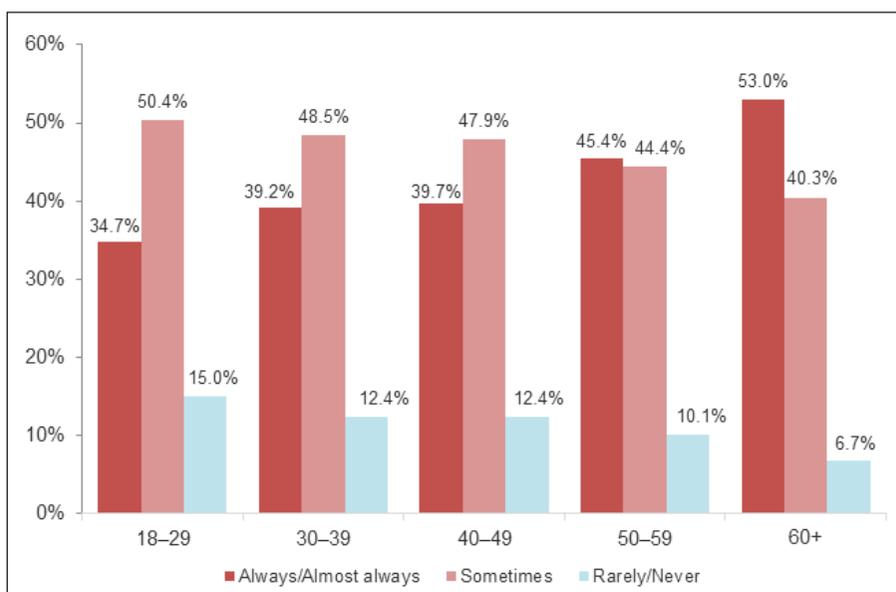
Two fifths (41.1%, 95% CI [38.6, 43.7]) of First Nations adults reported always/almost always eating nutritious, balanced meals and nearly half (47.0%, 95% CI [44.7, 49.2]) reported they sometimes did. The remainder reported rarely (10.7%, 95% CI [9.8, 11.8]) or never (1.1%, 95% CI [0.9, 1.4]) eating nutritious, balanced meals in the 12 months prior to the survey.

The percentage of adults always/almost always eating nutritious, balanced meals increased slightly with age. Significant differences were found between the 18–29 age group (34.7%, 95% CI [31.3, 38.2]) and those aged

50–59 (45.4%, 95% CI [42.5, 48.4]), as well as those aged 60 and older (53.0%, 95% CI [49.4, 56.6]). Note that the difference between the 50–59 and 60+ age groups was also statistically significant (see *Figure 4.1*).

Although the patterns for reporting a healthy diet by age group among adults between the RHS Phase 1 and RHS Phase 2 were similar, significantly more adults reported always/almost always consuming nutritious, balanced meals in the RHS Phase 3 (41.1%, 95% CI [38.6, 43.7]) than in RHS Phase 2 (30.6%, 95% CI [29.1, 32.1]), and significantly fewer reported rarely or never eating healthy in the RHS Phase 3 (11.9%, 95% CI [10.8, 13.0]) compared to results in the RHS Phase 2 (17.6%, 95% CI [16.7, 18.8]). However, the proportion of adults always/almost always consuming balanced meals were similar in the RHS Phase 3 (41.1%) compared to the RHS Phase 1 (35.4%, no 95% CI available) and are the same for those reporting rarely or never eating nutritious, balanced meals (11.9% in both RHS Phase 3 and RHS Phase 1).

Figure 4.1: Percentage of First Nations adults reporting eating nutritious, balanced meals, by age





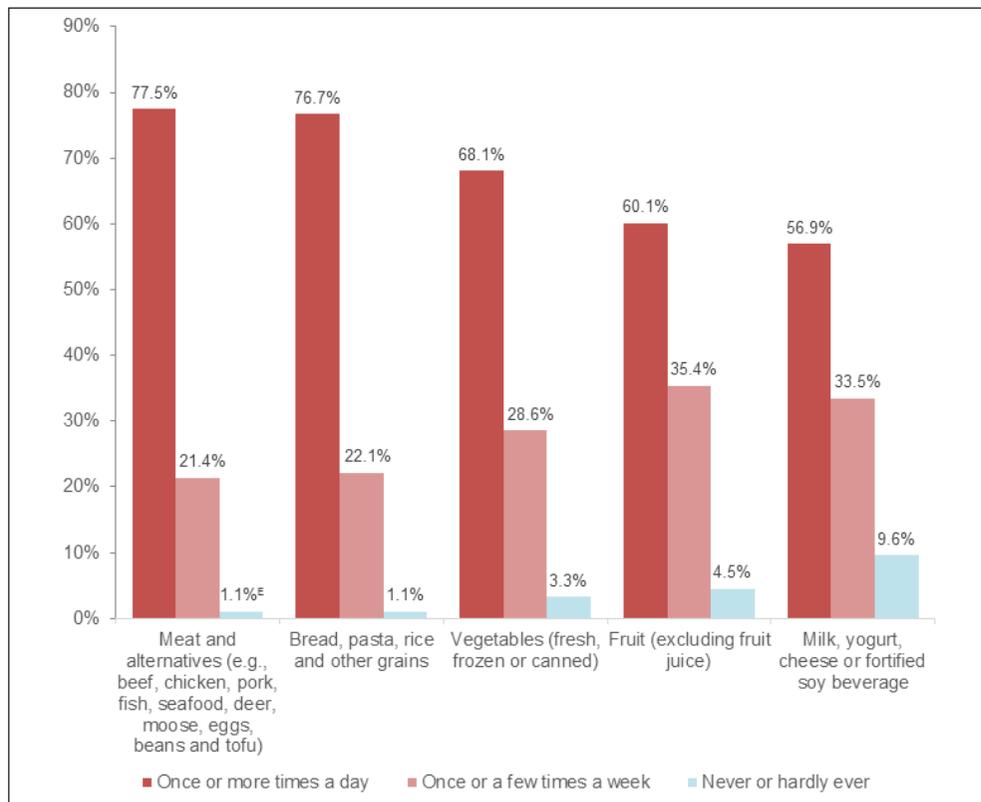
Meat and alternatives (such as beef, chicken, pork, fish, seafood, deer, moose, eggs, beans and tofu) was the most commonly reported food group eaten at least once a day by First Nations adults (77.5%, 95% CI [76.1, 78.8]), youth (72.9%, 95% CI [70.5, 75.2]) and children (78.7%, 95% CI [76.2, 81.1]) (see *Figures 4.2, 4.3 and 4.4* for adults, youth and children, respectively).

Nutrition results were very similar to the RHS Phase 2 findings. For example, the proportion of First Nations adults reporting often eating meat and alternatives did not change significantly from the RHS Phase 2

(78.6%, 95% CI [76.9, 80.3]), despite the addition of moose and deer as explicit examples of protein-rich foods in the RHS Phase 3.

For First Nations adults, meat and alternatives were followed by bread, pasta, rice and other grains (76.7%, 95% CI [75.2, 78.3]); vegetables including fresh, frozen or canned (68.2%, 95% CI [66.4, 69.9]); fruit excluding fruit juice (60.1%, 95% CI [58.2, 61.9]); and milk, yogurt, cheese, or fortified soy beverage (56.9%, 95% CI [55.3, 58.5]). Nearly 1 in 10 adults reported that they never or hardly ever consumed milk, yogurt, cheese, or fortified soy beverages (9.6%, 95% CI [8.5, 10.9]) (see *Figure 4.2*).

Figure 4.2: Percentage of First Nations adults reporting frequency of eating or drinking from food group categories



Note: [‡] High sampling variability, interpret with caution.

The frequency of eating or drinking from the various food group categories among First Nations youth

and children are reported in *Figures 4.3 and 4.4*, respectively.



Figure 4.3: Percentage of First Nations youth reporting frequency of eating or drinking from food group categories

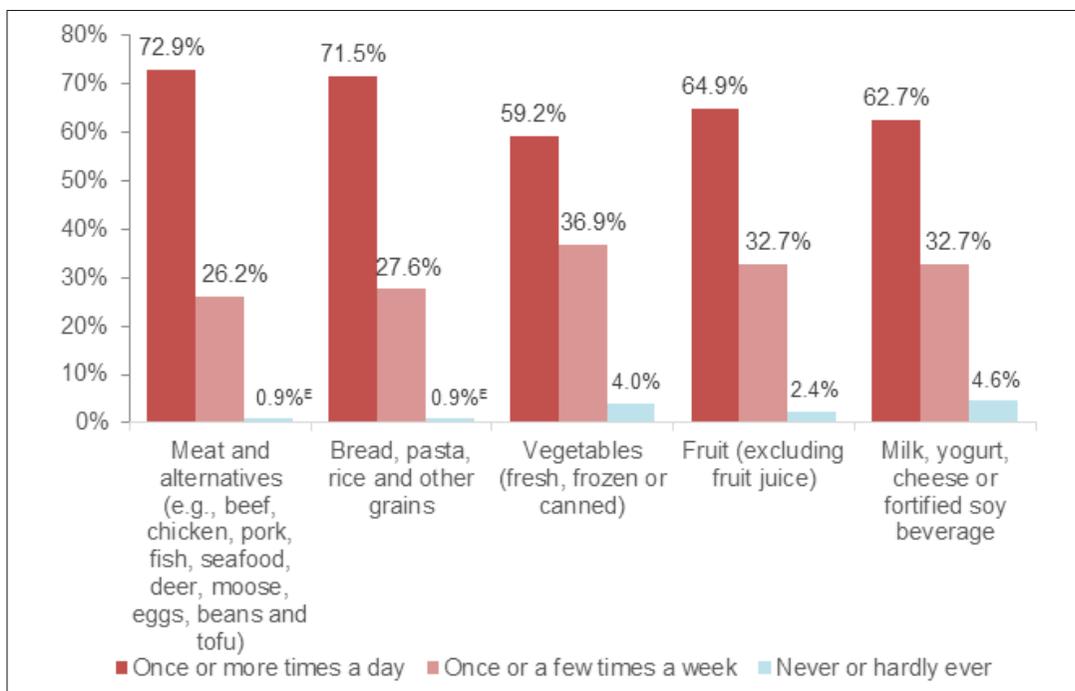
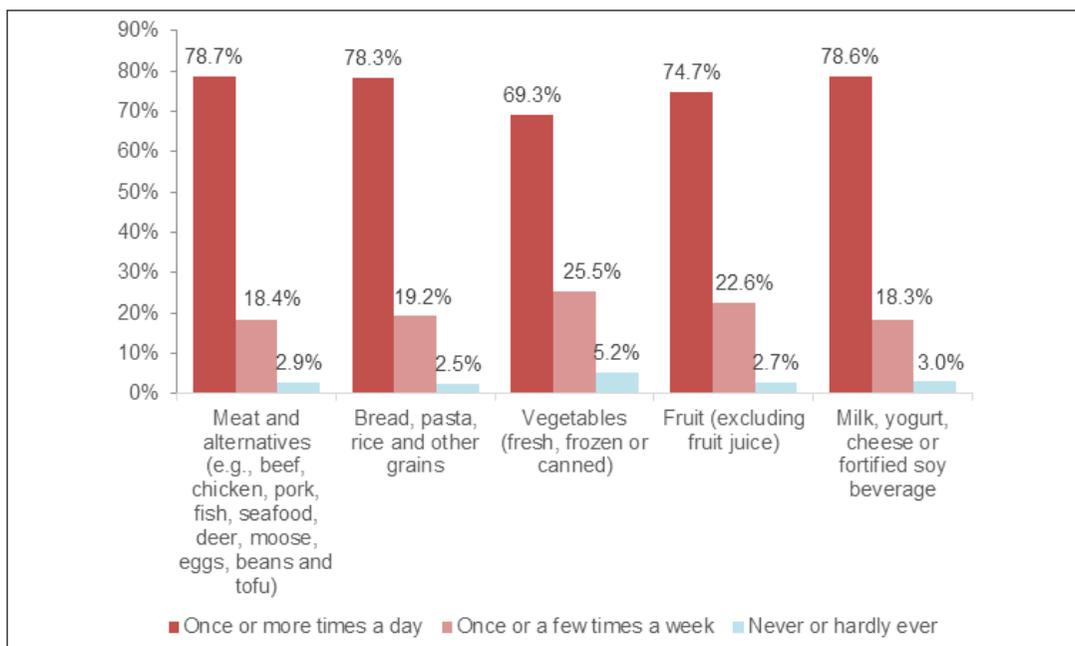


Figure 4.4: Percentage of First Nations children reporting frequency of eating or drinking from food group categories

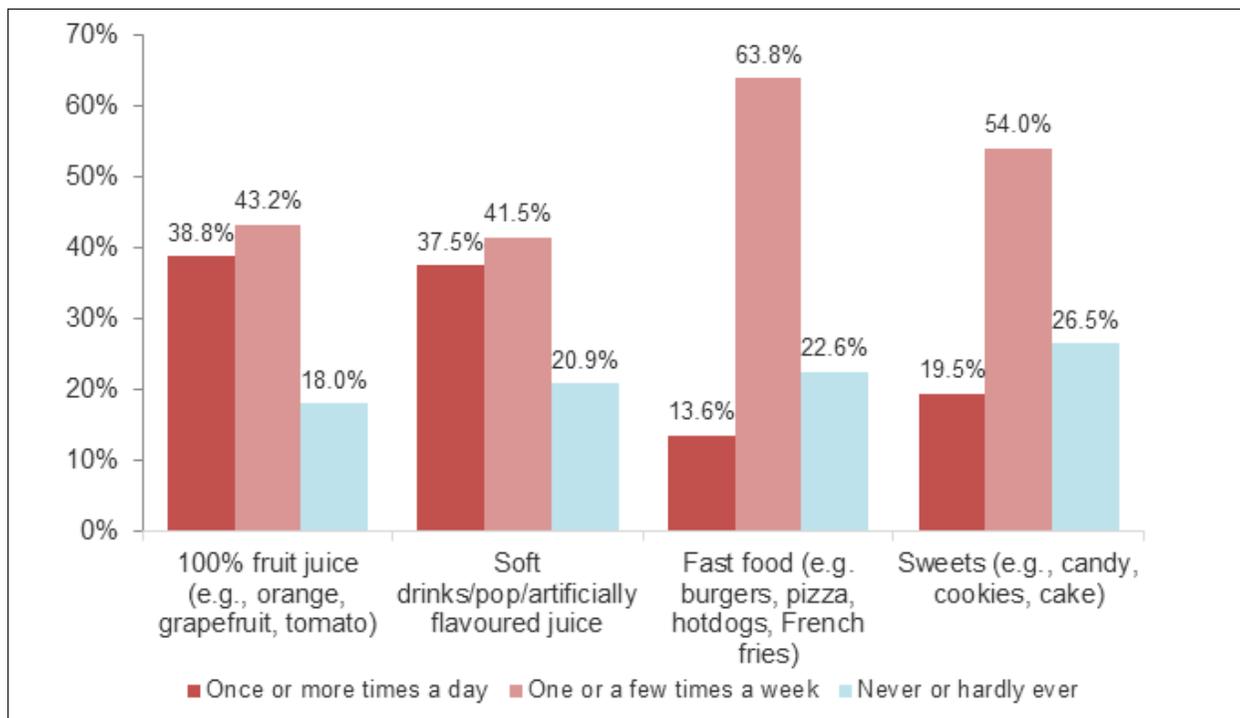




Nearly two fifths (38.8%, 95% CI [37.3, 40.4]) of all First Nations adults reported drinking 100% fruit juice once or more per day, while a further 43.2% (95% CI [41.4, 45.0]) reported consuming it once or a few times a week. Moreover, 37.5% (95% CI [35.6, 39.5]) of First Nations adults reported consuming soft drinks once or more per day, with an additional 41.5% (95% CI [39.6,

43.5]) consuming pop once or a few times per week. More than one fifth (22.6%, 95% CI [21.2, 24.0]) of First Nations adults reported never or hardly ever eating fast foods (such as burgers, pizzas, hotdogs and french fries), while 63.8% (95% CI [62.0, 65.5]) ate once or a few times per week and 13.6% (95% CI [12.4, 15.0]) ate at least once per day (see *Figure 4.5*).

Figure 4.5: Percentage of First Nations adults reporting frequency of eating or drinking fruit juices, soft drinks, fast foods and sweets



More than half of youth (50.2%, 95% CI [47.5, 52.8]) and children (56.1%, 95% CI [54.0, 58.3]) reported drinking 100% fruit juice once or more times a day. Nearly one quarter (23.5%, 95% CI [21.6, 25.5]) of children and more than two fifths (42.4%, 95% CI [39.2, 45.6]) of youth consumed soft drinks/pop/artificially flavoured juices once or more times a day. Fast foods were consumed once or a few times a week by two thirds of

youth (67.8%, 95% CI [65.3, 70.2]) and children (66.0%, 95% CI [63.5, 68.3]). Daily consumption of sweets was reported for more than one fifth of youth (22.3%, 95% CI [20.2, 24.5]) and one sixth of children (16.6%, 95% CI [15.2, 18.1]) (see *Figures 4.6 and 4.7*).



Figure 4.6: Percentage of First Nations youth reporting frequency of eating or drinking fruit juices, soft drinks, fast foods and sweets

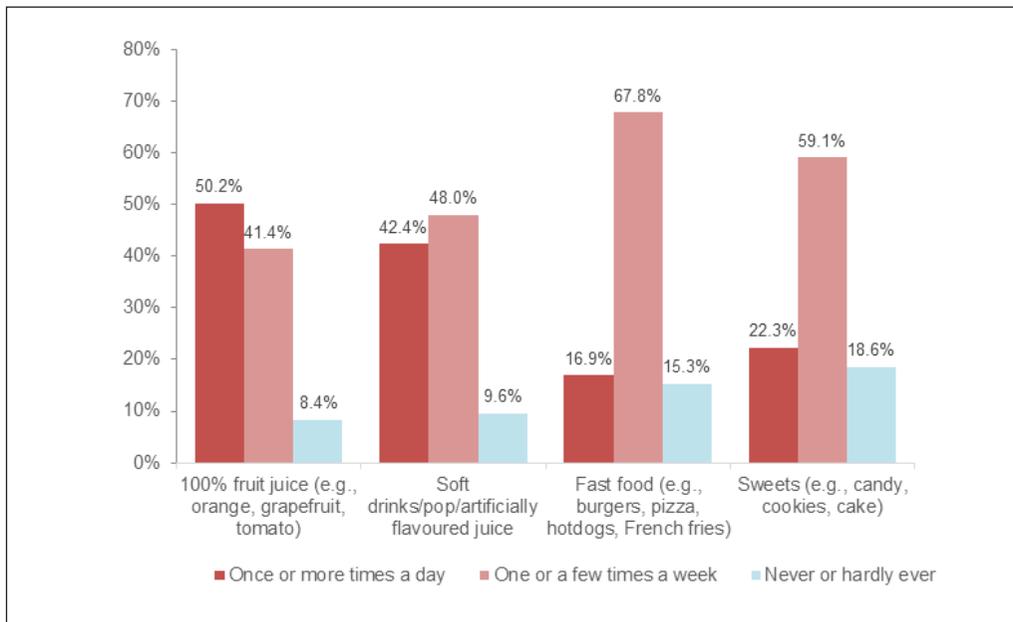
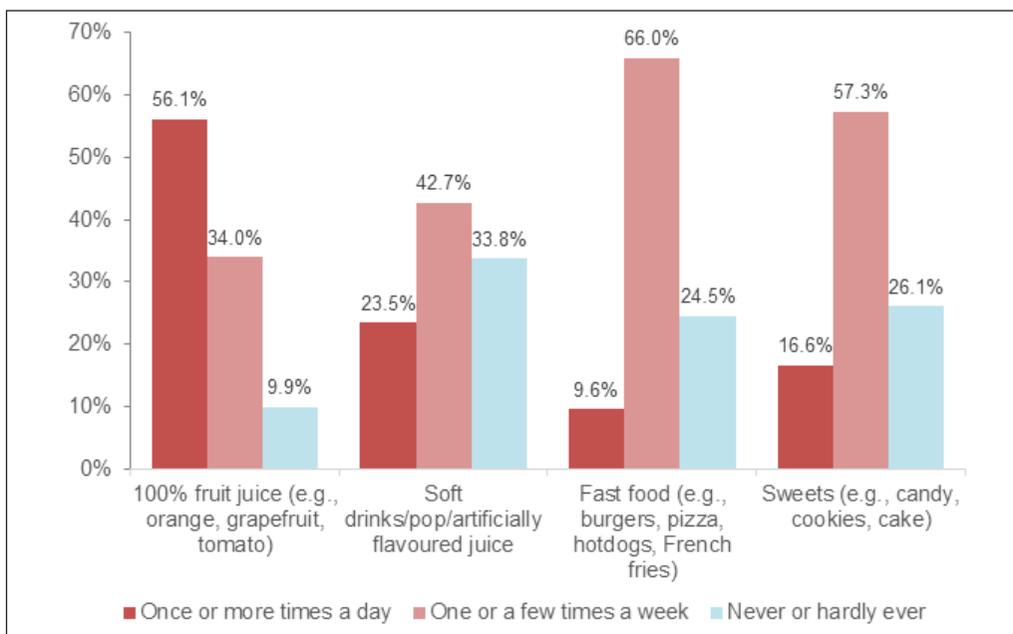


Figure 4.7: Percentage of First Nations children reporting frequency of eating or drinking fruit juices, soft drinks, fast foods and sweets





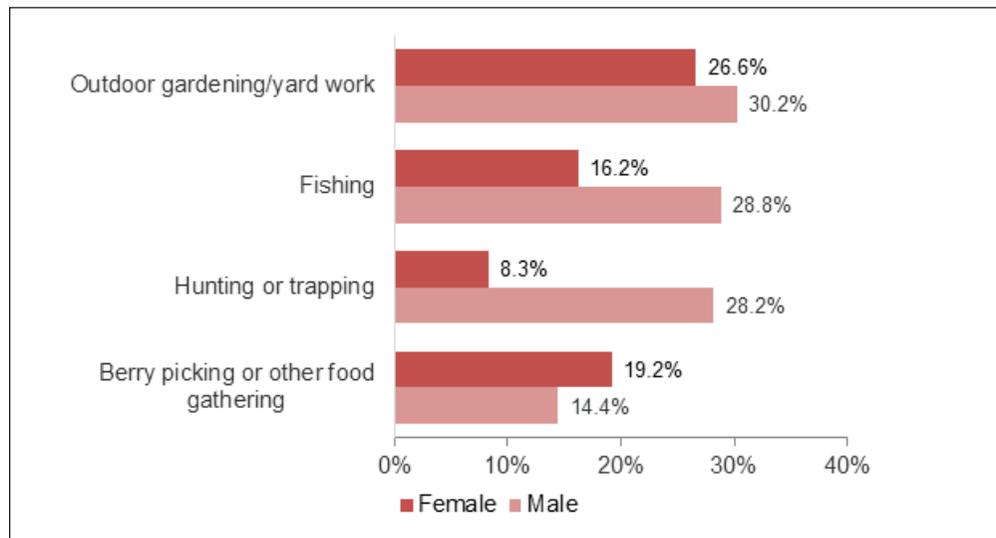
Traditional Food

More than one quarter (28.4%, 95% CI [26.8, 30.1]) of First Nations adults participated in outdoor gardening or yardwork in the past three months prior to the survey. More than one fifth (22.5%, 95% CI [21.0, 24.1]) of First Nations adults reported fishing, while 18.3% (95% CI [16.8, 19.8]) reported hunting or trapping and 16.8% (95% CI [15.4, 18.3]) reported berry picking or other food gathering in the three months prior to the survey.

percentage of females reporting berry picking or other food gathering (19.2%, 95% CI [17.3, 21.3]) than males (14.4%, 95% CI [12.9, 16.1]). Significantly higher percentages of males reported fishing (28.8%, 95% CI [26.6, 31.2]) and hunting or trapping (28.2%, 95% CI [25.8, 30.7]) than females (16.2%, 95% CI [14.5, 18.1] and 8.3%, 95% CI [7.1, 9.7], respectively). More males participated in outdoor gardening or yardwork (30.2%, 95% CI [28.0, 32.6]) than females (26.6%, 95% CI [24.9, 28.4]), but this was not significant (see *Figure 4.8*).

Females and males reported different participation rates for these activities, with a significantly higher

Figure 4.8: Percentage of First Nations adults who participated in harvesting and gardening activities in the past three months prior to the survey, by sex

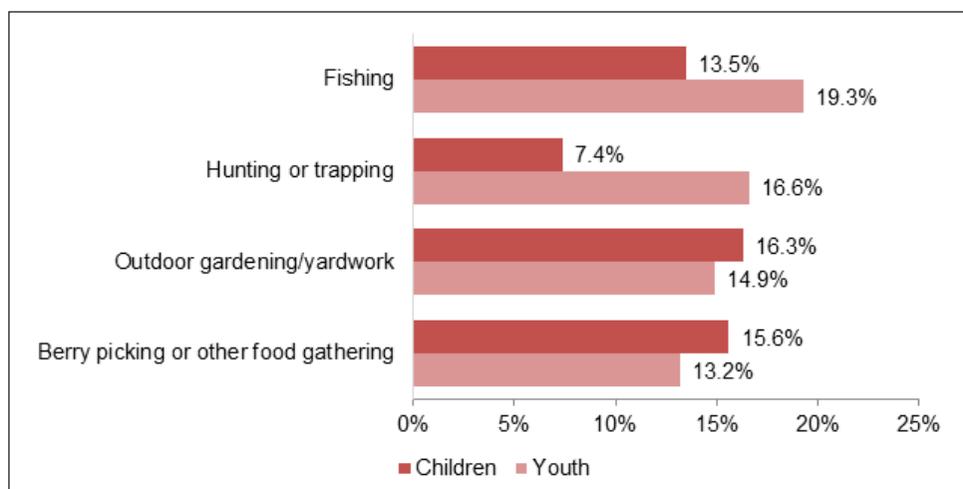


Among adults who had participated in each activity, the average number of minutes participating in fishing, hunting or trapping, berry picking and gardening/yardwork in the past three months were 123.4 (95% CI [115.0, 131.7]), 165.7 (95% CI [157.6, 173.8]), 75.5 (95% CI [70.4, 80.6]) and 78.2 (95% CI [74.8, 81.6]), respectively. It was not possible to compare harvesting activities between previous RHS phases as a time reference of 12 months instead of 3 months prior to the surveys was used.

Although not directly comparable, a lower percentage of First Nations children (13.5%, 95% CI [12.0, 15.1]) reported participating in fishing compared to youth (19.3%, 95% CI [16.7, 22.1]), and a lower percentage of children participated in hunting or trapping in the past 3 months (7.4%, 95% CI [6.4, 8.5]) compared to youth (16.6%, 95% CI [15.1, 18.3]) (see *Figure 4.9*).



Figure 4.9: Percentage of First Nations youth and children who participated in harvesting and gardening activities in the past 3 months



Among youth who had participated in each activity, the average number of minutes participating in fishing, hunting or trapping, outdoor gardening/yardwork and berry picking in the past three months was 98.7 (95% CI [93.5, 103.8]), 138.8 (95% CI [129.7, 147.8]), 62.2 (95% CI [57.2, 67.3]) and 63.3 (95% CI [57.8, 68.8]), respectively. For children who had participated in each activity, the average number of minutes participating in fishing, hunting or trapping, outdoor gardening/yardwork, and berry picking in the past three months was 89.4 (95% CI [81.6, 97.3]), 119.3 (95% CI [105.4, 133.3]), 50.3 (95% CI [47.5, 53.1]) and 55.2 (95% CI [51.2, 59.3]), respectively.

Nearly all (96.8%, 95% CI [96.1, 97.3]) First Nations adults had eaten traditional food often or a few times in the past 12 months. Large land-based animals (moose, caribou, bear, deer, bison, etc.) were the most commonly reported protein-based traditional food often consumed in the past 12 months (30.4%) by First Nations adults, followed by: freshwater fish (24.8%), game birds such as goose or duck (10.9%), small game such as rabbit or muskrat (9.9%), and saltwater fish (8.3%). Very few First Nations adults often ate sea-based animals such as whale or seal

(1.0%^E). In addition, more than two fifths (42.6%) often ate bannock or fry bread, 26.2% often ate berries or other wild vegetation, 9.8% ate wild rice and 7.0% ate corn soup (see *Table 4.3*).

The majority of First Nations youth (92.6%, 95% CI [91.2, 93.9]) and children (90.6%, 95% CI [89.3, 91.8]) had eaten traditional food a few times or often in the past 12 months. Similar to adults, for First Nations youth and children, large land-based animals were the most commonly reported often consumed protein-based traditional food, followed by freshwater fish, game birds and saltwater fish (see *Table 4.3*).

There may be an increasing trend in the proportion of youth and children reporting consumption of some traditional foods in the RHS Phase 3 compared to the RHS Phase 2. For example, in the RHS Phase 2 the percentages of youth and children who reported often consuming large land-based animals were 23.0% for youth and 18.7% for children, freshwater fish were reported at 15.4% for youth and 12.7% for children and game birds at 8.2% for youth and 4.1% for children.



Table 4.3: Percentage of First Nations adults, youth and children who reported often consuming traditional foods in the past 12 months

Traditional Food	Adults		Youth		Children	
	%	[95% CI]	%	[95% CI]	%	[95% CI]
Protein-based traditional food						
Large land-based animals	30.4	[28.0, 32.8]	26.4	[23.7, 29.4]	23.3	[21.0, 25.9]
Freshwater fish	24.8	[22.5, 27.2]	18.6	[15.9, 21.6]	15.0	[13.1, 17.1]
Game birds	10.9	[9.1, 13.1]	10.4	[8.1, 13.3]	7.7	[6.1, 9.6]
Small game	9.9	[8.6, 11.3]	6.9	[5.3, 9.0]	5.7	[4.4, 7.2]
Saltwater fish	8.3	[7.5, 9.2]	4.3	[3.6, 5.1]	4.1	[3.6, 4.8]
Other water-based foods (shellfish, eels, clams, seaweed, etc.)	4.8	[4.3, 5.5]	2.9	[2.3, 3.5]	2.1	[1.8, 2.5]
Sea-based animals	1.0 ^E	[0.6, 1.5]	0.8 ^E	[0.5, 1.4]	0.6 ^E	[0.4, 0.8]
Other traditional food						
Bannock or fry bread	42.6	[40.3, 44.8]	46.0	[43.0, 49.0]	42.7	[40.3, 45.1]
Berries and other wild vegetation	26.2	[24.6, 28.0]	23.2	[21.0, 25.6]	23.1	[21.2, 25.1]
Meat, fish or vegetable broth	22.7	[21.0, 24.5]	19.2	[17.0, 21.5]	15.8	[14.4, 17.4]
Wild rice	9.8	[8.7, 10.9]	8.4	[7.2, 9.7]	6.4	[5.4, 7.7]
Corn soup	7.0	[6.0, 8.1]	6.9	[5.6, 8.3]	4.5	[3.8, 5.4]
Other	3.6	[3.0, 4.3]	3.4	[2.8, 4.2]	2.2	[1.7, 2.9]

Note: ^E High sampling variability, interpret with caution.

The majority (90.0%, 95% CI [88.5, 91.4]) of First Nations adults reported having someone share traditional food with their household (at least rarely) in the 12 months prior to the survey (see *Figure 4.10*). Of those, more than half (59.1%, 95% CI [54.6, 63.4]) reported that they always/almost always ate

nutritious, balanced meals. In the RHS Phase 2, there was also a majority (85.5%, 95% CI [84.0, 87.0]) of adults who reported they had someone share traditional foods often or sometimes with their household.

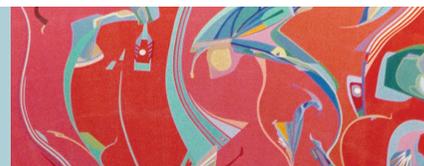
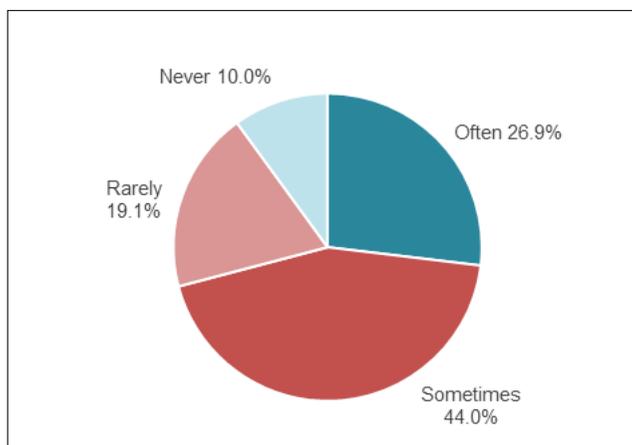


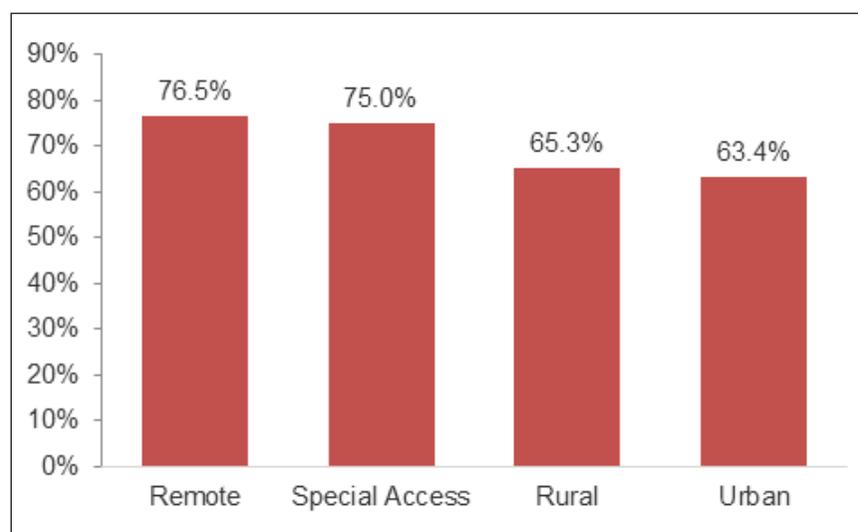
Figure 4.10: Percentage of First Nations adults who had traditional food shared with their household in the past 12 months



Significantly greater percentages of First Nations adults living in small (70.8, 95% CI [66.8, 72.4]) and medium-sized communities (69.5, 95% CI [66.4, 72.4]) with populations from 75–299 and 300–1,499 people, respectively, reported often having eaten traditional foods in the past 12 months prior to the survey compared to large communities with 1,500 people or more (61.7%, 95% CI [59.5, 63.9]).

About three quarters of First Nations adults living in remote (76.5%, 95% CI [70.0, 81.9]) or special-access (75.0%, 95% CI [66.1, 82.3]) communities reported often eating traditional foods compared to a lower proportion in rural (65.3%, 95% CI [63.4, 67.1]) or urban (63.4%, 95% CI [60.5, 66.2]) communities. Note that only the differences between remote and rural or urban communities were statistically significant (*see Figure 4.11*).

Figure 4.11: Percentage of First Nations adults reporting often eating traditional food, by community remoteness



Food Security

Nearly 1 in 10 (11.3%, 95% CI [10.0, 12.7]) First Nations adults reported often struggling (i.e., having to borrow money) once a month or more to meet the basic living requirements for food in the 12 months prior to the survey.

More than one fifth (22.9%, 95% CI [18.2, 28.4]) of First Nations adults who reported struggling to meet basic living requirements for food one month or more during the 12 months prior to the survey reported rarely or never eating nutritious, balanced meals.

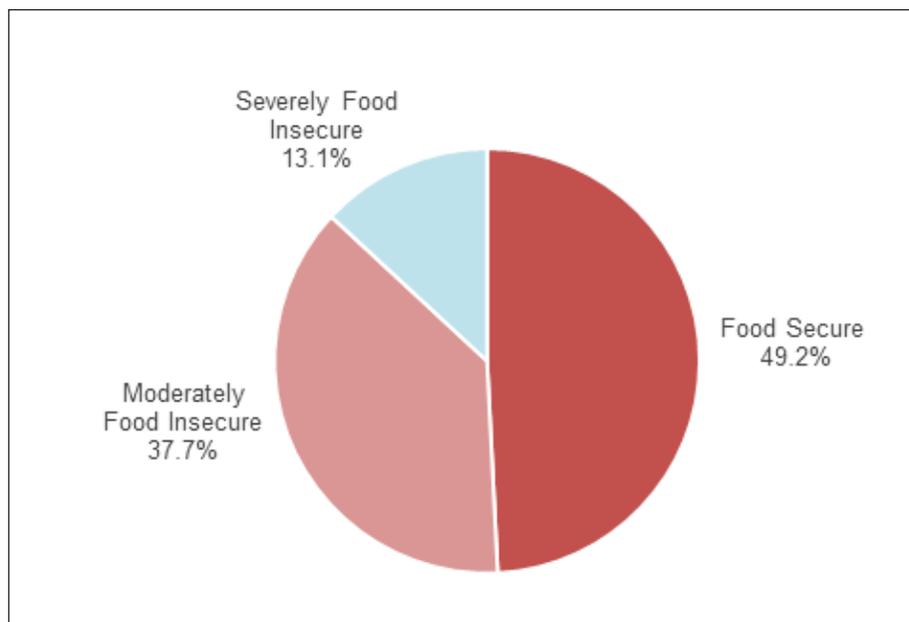
Nearly one fifth of adults (19.7%, 95% CI [18.4, 21.1]) reported cutting the size of their meals or skipping meals because there was not enough money for food. Among this group, 37.6% (95% CI [33.7, 41.7])

reported having done so almost every month in the 12 months prior to the survey.

Nearly half (49.2%, 95% CI [47.2, 51.2]) of all First Nations adults (47.3%, 95% CI [45.5, 49.1] for females and 52.7%, 95% CI [50.9, 54.5] for males) were classified as food secure, nearly two fifths were moderately food insecure (37.7%, 95% CI [36.1, 39.3]) and 13.1% (95% CI [12.0, 14.2]) were considered severely food insecure (see *Figure 4.12*).

Of those households with children, more than half (56.8%, 95% CI [54.1, 59.4]) were classified as food secure. In the RHS Phase 2, similar percentages of First Nations households (45.7%, 95% CI [43.9, 47.6]) and households with children (55.1%, 95% CI [52.8, 57.3]) were food secure.

Figure 4.12: Food security status among First Nations adults



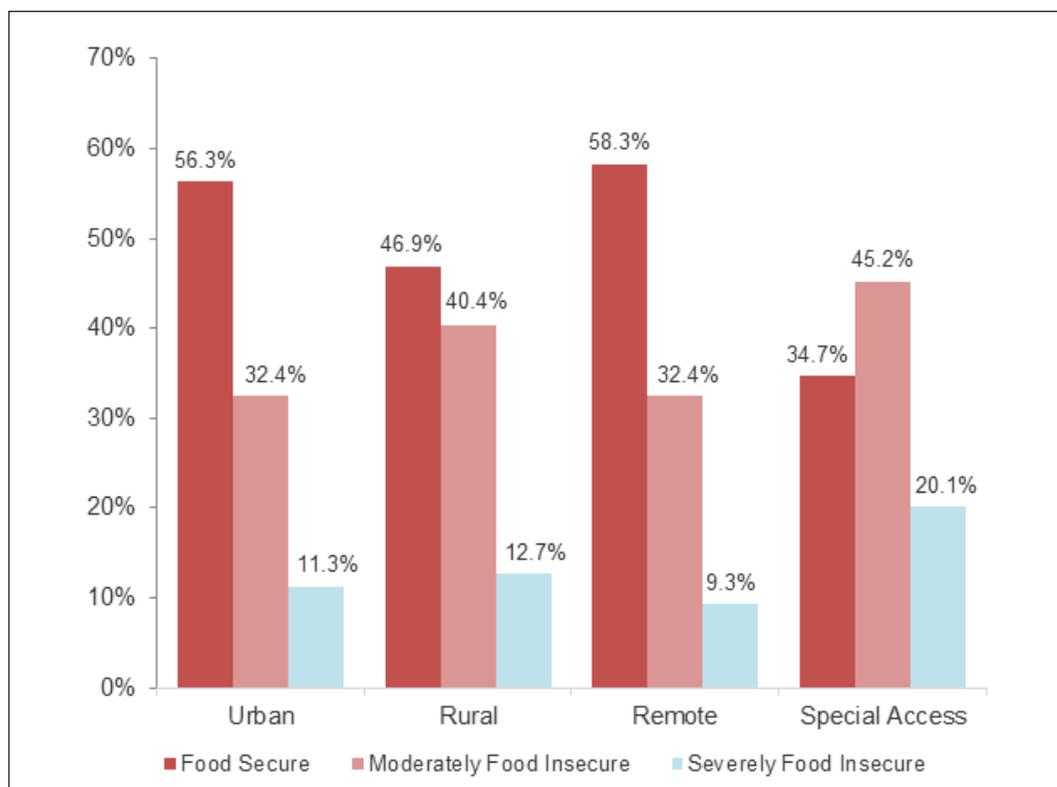


One third of households in special-access communities (34.7%, 95% CI [29.4, 40.3]) and nearly three fifths of those in remote communities were food secure (58.3%, 95% CI [48.0, 67.9]). The difference between these two groups is statistically significant.

Less than three fifths of adults in urban communities (56.3%, 95% CI [52.8, 59.7]) were food secure, which

is a significantly greater proportion than those living in rural (46.9%, 95% CI [43.9, 50.0]) locations. More than 1 in 10 (11.3%, 95% CI [9.5, 13.5]) adults living in urban communities and 12.7% (95% CI [11.5, 14.1]) in rural locations were severely food insecure, but the difference between the two groups is not statistically significant (see *Figure 4.13*). These results are similar to those observed in the RHS Phase 2.

Figure 4.13: Food security status of First Nations adults, by remoteness



Significantly more First Nations adults who were food secure did not live in crowded housing (53.5%, 95% CI [51.5, 55.4]) compared to those who lived in crowded housing (i.e., more than one person per room) (36.2%, 95% CI [33.0, 39.5]).

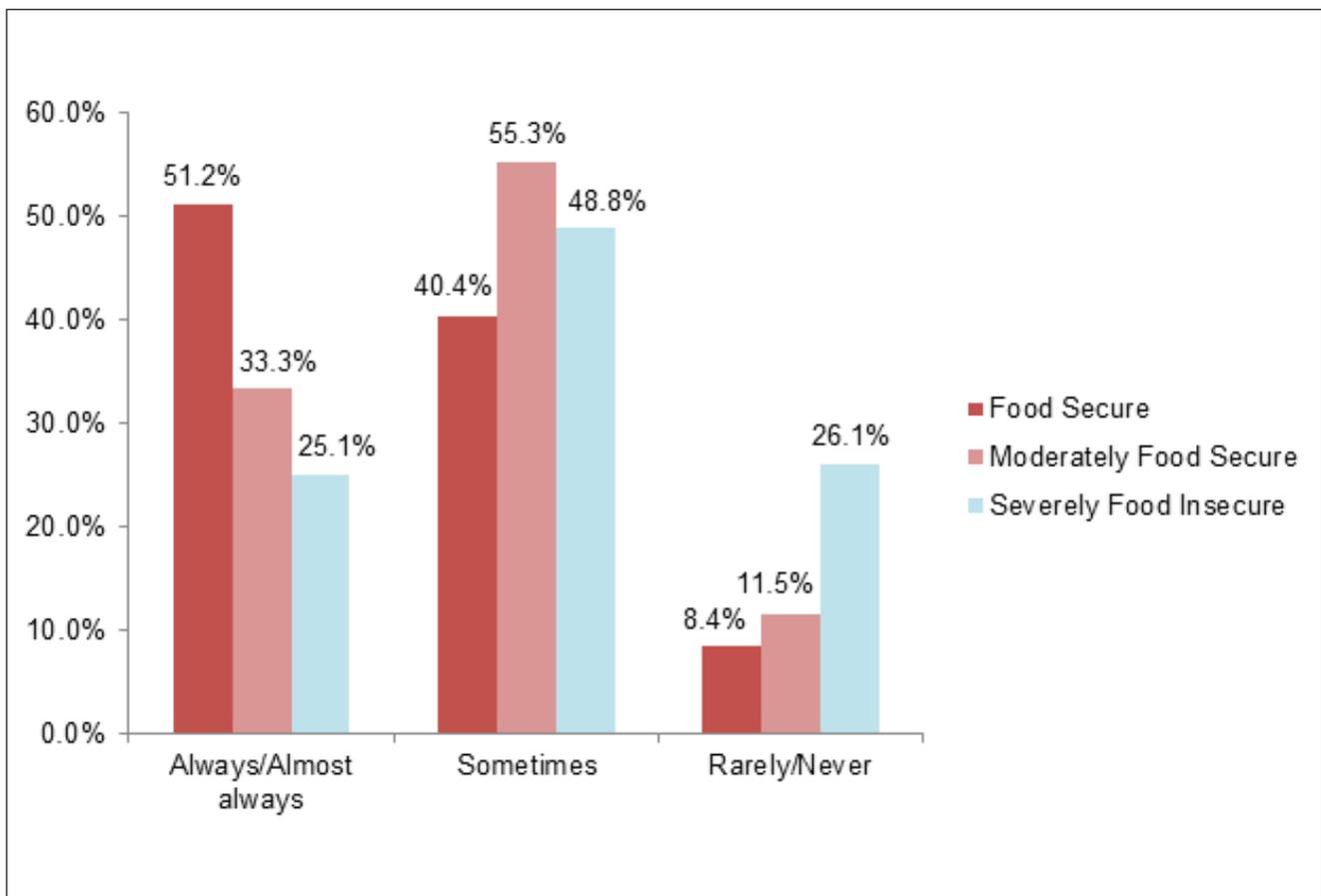
A significantly higher proportion of those who were food secure rated their general health as excellent

(59.4%, 95% CI [54.9, 63.8]) compared to those who rated their general health as poor (30.5%, 95% CI [25.1, 36.5]). A similar trend was found in self-rated mental health. Of those who were food secure, a significantly greater percentage (59.6%, 95% CI [56.2, 62.8]) rated their mental health as excellent compared to those who rated their mental health as poor (24.0%, 95% CI [17.4, 32.1]).

Food security increases with household income: 35.7% (95% CI [32.6, 38.9]) of First Nations adults who reported household incomes of less than \$20,000 (or no income) were food secure, which was significantly lower compared to those with a household income of \$30,000–\$39,999 (46.0%, 95% CI [40.4, 51.6]), \$40,000–\$49,999 (57.4%, 95% CI [51.1, 63.5]) and \$50,000 or more (68.3%, 95% CI [63.7, 72.5]).

Food security is a factor in the frequency of eating nutritious, balanced meals. For instance, 51.2% (95% CI [48.4, 54.0]) of First Nations adults who are food secure consumed nutritious, balanced meals always/almost always, which is significantly higher compared to those who are moderately food insecure (33.3%, 95% CI [30.5, 36.2]) or severely food insecure (25.1%, 95% CI [20.9, 29.9]) and always/almost always consumed nutritious, balanced meals (see *Figure 4.14*).

Figure 4.14: Percentage of First Nations adults reporting eating nutritious, balanced meals, by food security status

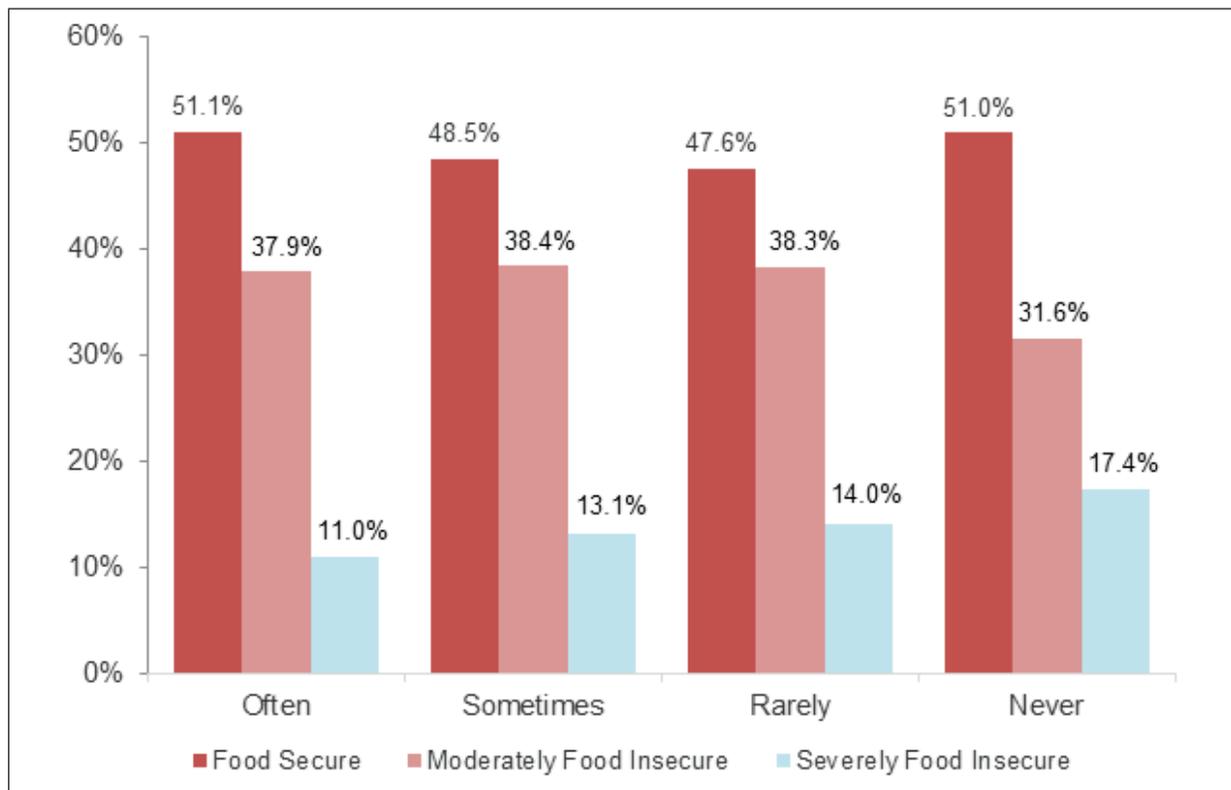




An association between having traditional food shared often or sometimes and food security in First Nations households was observed (see *Figure 4.15*). The percentage of First Nations adults who were food secure was higher among those who often had traditional food shared with their household in the

past 12 months (51.1%, 95% CI [48.0, 54.2]) compared to those that had it sometimes shared (48.5%, 95% CI [45.8, 51.2]), rarely shared (47.6%, 95% CI [44.7, 50.6]) or never shared (51.0%, 95% CI [44.6, 57.4]).

Figure 4.15: Percentage of First Nations adults reporting traditional food shared with their household in the past 12 months, by food security status





DISCUSSION

Respecting the place that food holds within a holistic world view, this discussion focuses on interpreting the results of nutrition and income-related food security and comparing these results to the RHS Phase 2 findings within the context of realities for First Nations.

Now that the RHS is in its third phase, some trends over time were possible to observe. The majority of First Nations adults reported they sometimes or always/almost always ate nutritious, balanced meals. A balanced diet consists of meals containing a variety of food groups; for example, a selection of protein, grains, vegetables and fruits, and dairy products (or milk alternatives).

A review of the literature on the diets of Indigenous schoolchildren by Gates et al. (2015) found that intakes of vegetables and fruits, milk and alternatives were low and sugar-sweetened beverages, snacks and fast foods were high; and while traditional food remained important, it was consumed infrequently. Of particular concern from the studies reviewed by Gates et al. (2015) was the high consumption of sugar-sweetened beverages (soda pops and fruit-flavoured drinks), fast foods, snacks and sweets which replaced more nutrient-dense food choices in youth diets. Similar trends are noted in the RHS Phase 3, where the consumption of less-nutritious foods occurred once or more times a day for more than one third of First Nations youth and children. There may be an increasing trend in the proportion of youth and children reporting consumption of some traditional foods between the RHS Phase 2 and the RHS Phase 3. For example, 26.4% of youth reported often consuming large land-based animals in the RHS Phase 3, 18.6% freshwater fish, and 10.4% game birds; whereas in the RHS Phase 2 the percentages were 23.0%, 15.4%, and 8.2%, respectively.

Nearly 1 in 10 adults reported that they never or hardly ever consumed milk or milk products. The First Nations Food Nutrition and Environment Study (FNFNES) also found a low intake of milk and other milk products among First Nations adults (FNFNES, 2014). Several studies have demonstrated that for First Nations people, servings of milk and alternatives fall below the recommendations in the *Canada's Food Guide*. This has been linked to quality and availability in communities as well as cost (FNFNES, 2014; Food Secure Canada, 2016; Kuhnlein et al., 2013; Lawn & Harvey, 2004; Williams et al., 2010). Traditional diets did not include milk and dairy products; therefore, nutrients like calcium and vitamin D acquired through consumption of dairy were instead obtained by eating certain types of fish, especially the head of the fish and the bones (First Nations Health Authority, n.d.). One study of First Nations children living off reserve showed lactose intolerance as the fourth most common chronic health condition (7%) after asthma (10%), speech/language difficulties (10%) and allergies (9%) (Findlay & Janz, 2012). Surveys from households in Fort Severn in 2002 found that the top reason for not buying more milk was cost (80% of respondents), followed by availability (64%) and being past the "best before" date (43%), and 5% of adults reported they were unable to digest milk (Lawn & Harvey, 2004).

Between the RHS Phase 1 and the RHS Phase 2 there was a reduction in reported hunting and trapping (31.9% vs. 22.1%), fishing (42.8% vs. 32.2%), berry picking and other food gathering (38.1% vs. 28.3%) in the 12 months prior to the survey. Data on traditional food acquisition activities in previous RHS surveys are not directly comparable to the RHS Phase 3 because the time period for the question was in the past three months prior to the survey in the RHS Phase 3 instead of 12 months in the RHS Phase 1 and RHS Phase 2. Therefore, seasonal differences and the timing of harvesting practices may have impacted how First Nations adults responded to this question



in the RHS Phase 3. Regardless, these estimates are all lower than the two previous RHS phases, which could potentially indicate a decreasing trend in the harvesting of traditional food over the past 13 years of the RHS, although differences in the time frame for these questions may be the reason for the declining trend seen in these results.

The majority (90.0%) of First Nations adults had traditional food shared with their household in the 12 months prior to the survey, which was slightly higher than the 85.5% in the RHS Phase 2 who reported having had someone share traditional foods with their household. It is common for First Nations people to share the food that has been hunted or harvested. Sharing food can increase traditional food access for those who are not able to harvest the food themselves and, as a result, may increase food security in households and communities (Skinner et al., 2013). While not asked directly in the RHS, sharing could also be in the form of community-based programs such as food centres, food banks or community meetings (Alamenciak, 2015; Food Banks Canada, 2016).

As income decreases, the prevalence of reporting food insecurity increases (McIntyre & Tarasuk, 2002, Health Canada, 2007a, Tarasuk et al., 2016). For many low-income families, the unfortunate reality is that the grocery budget is flexible; whereas other bills, such as electricity, are not. One in 10 First Nations adults reported struggling throughout the past year to meet the basic living requirements for food. The cost and accessibility of certain foods varies considerably with geographic regions. Despite government subsidization, the cost of purchasing market food in Northern communities remains high because of the long distance the food must be transported (Galloway, 2017; Wendimu et al., 2018). Moreover, cost and accessibility also create challenges for obtaining traditional foods. Studies have found that the affordability and accessibility to hunting and fishing

activities (equipment, transportation, etc.) were major barriers to food security (Food Secure Canada, 2016; Pal et al., 2013).

Half (50.8%) of all First Nations adults were food insecure, including 13.1% with severe food insecurity. The comparable statistics from the FNFNES reported 29.0% (95% CI [26, 32]) of on-reserve First Nations households surveyed in 2011/12 as food insecure in Ontario (FNFNES, 2014). Data from the RHS and the FNFNES clearly show that First Nations households have high levels of food insecurity. Remoteness, along with poor access to traditional foods, may be factors contributing to food insecurity.

There is an association between eating balanced meals and food security, as the percentage of First Nations adults who reported that they always/almost always ate nutritious, balanced meals was higher among food secure adults (51.2%) compared to those that are moderately food insecure (33.3%) or severely food insecure (25.1%). The progression from being food secure to food insecure follows a pattern that begins with food anxiety, followed by compromised diet quality, compromised food quantity, feelings of hunger and ultimately not eating at all (Tarasuk, 2001). Since more than half of First Nations adults who live in food-secure households reported eating balanced meals always/almost always, this indicates that the remaining half are compromising their diet quality. Income and financial security are the most significant determinants of food insecurity (Tarasuk et al., 2016).

While it is understood that knowledge about food insecurity helps to direct necessary programming and establishes a benchmark for improvement, measurement tools that focus on economics and food miss an important element: food security is more than a matter of financially being able to access foods. The lack of access to capital and a myriad of complex bureaucratic barriers undermine current capacities



to re-establish strong and vibrant food systems (Echo Hawk Consulting, 2015), including Indigenous ones.

The colonization and aggressive assimilation policies of the past have turned thriving Indigenous Nations into small communities of peoples, some of whom are barely surviving. Understanding the historical context and root causes of the current crisis of poverty in First Nations is absolutely essential to developing policy solutions that can turn this trend around (Palmer, 2011, p. 122).

It is important to acknowledge traditional food acquisition skills. The results from the First Nations Regional Early Childhood, Education and Employment Survey (FNREEES) show that 36.1% (95% CI [32.3, 40.0]) of First Nations youth reported that Elders helped them learn about Traditional Teachings such as beliefs, values, medicines, practices, ceremonies, stories, songs and other cultural activities (FNIGC, 2016). The well-being of future generations can be assured through knowledge sharing and cultural revitalization.

There may be a relationship between mental health and food security. More than half of First Nations adults who were food secure rated their mental health as excellent and nearly three fifths rated their general health as excellent. Furthermore, culture is central to mental wellness and critical for the health of First Nations people.

First Nations leadership, youth, community members, and Elders have made it clear that culture must be at the centre of mental wellness. Culture must not only guide our work, it must be understood as an important social determinant of health. Culturally specific interventions are holistic; they attend to the spirit, mind, body, and emotions simultaneously. Culture as a foundation implies that all health services and programs related to First Nations go above and beyond creating culturally

relevant programs and safe practices. As such, culture as a foundation means starting from the point of Indigenous knowledge and culture and then integrating current policies, strategies, and frameworks (Health Canada, 2015, p. 6).

Cultural activities, such as land-based practices for food harvesting, may be important elements in building and maintaining mental wellness, general health and food security.

Understanding levels of household food security help to position programs to more adequately address issues related to food access in the hopes of achieving better nutrition. One example is Nutrition North Canada (NNC), a government-funded program created to help reduce the cost of perishable, nutritious food in eligible, isolated Northern communities. The overall NNC program currently resides primarily with the new Crown-Indigenous Relations and Northern Affairs (CIRNA), though the First Nations and Inuit Health Branch (FNIHB) in Indigenous Services Canada continues to administer and provide funding for the nutrition education initiatives component of NNC. CIRNA has not managed to meet the objectives of the NNC of making healthy foods more accessible to residents of isolated Northern communities, as it has not identified eligible communities on the basis of need (Burnett et al., 2015; Galloway, 2017; Office of the Auditor General of Canada, 2014).

It is important to recognize that while the NNC program supports greater access to food in certain communities, the program is not specifically targeting food insecurity or the population that directly suffers from food insecurity at a national level. There are 121 out of 634 (19%) First Nations communities that are eligible to access the NNC program (Government of Canada, 2018). Currently, a national strategy does not exist to address the 1 in 2 (50.8%) First Nations households experiencing food insecurity.



CONCLUSIONS

Income-related food insecurity is high within the First Nations population compared to the general population (Tarasuk et al., 2016; Willows et al., 2011). Traditional foods, and the sharing of traditional foods, provide a foundation for better nutrition and well-being as well as impacting food security (Council of Canadian Academies, 2014; Schuster et al., 2011). Although remote geographical locations can increase the cost and availability of healthy traditional and store-bought foods, living in these communities allows First Nations people to remain connected to their land and traditional food systems. The apparent decline in hunting, fishing and gathering practices between each of the RHS phases is cause for some concern and could be examined more closely. Future development of the RHS food security module could consider adapting the Canadian Community Health Survey, Cycle 2.2, and the First Nations Food, Nutrition and Environment Study measures. The development of a new measure should also incorporate cultural indicators of food security, such as levels of traditional food knowledge, access to traditional food systems, and the safety of traditional food. Assessing food security in First Nations communities should continue to be included in future phases of the RHS, as this would allow for the analysis of food security trends over time.

Researchers and policy makers have focused on understanding levels of food insecurity among First Nations people and communities (Council of Canadian Academies, 2014). The RHS Phase 3 data have confirmed that the rates of food insecurity are high, with half of First Nations adults and more than half of households with children experiencing food insecurity. This is one effect of the ongoing nutrition transition (shift in dietary consumption) that exists today for First Nations people, coupled with high rates of diabetes and other nutrition-related diseases.

Food security in the First Nations population is often explored within a deficit-based construct (Cidro et al., 2015), focusing on the needs or problems rather than on solutions. Positioning health and Indigenous food systems within an Indigenous food sovereignty framework provides an opportunity to ground solutions within Indigenous ways of knowing (Martens, 2018). The Working Group on Indigenous Food Sovereignty call out four principles: (1) sacred sovereignty: food is a sacred gift from the Creator; (2) participatory: a call to action in the responsibility to uphold and nurture healthy and interdependent relationships with the eco-system that provides the land, water, plants and animals as food; (3) self-determination: placed within a context of Indigenous self-determination with the freedom and ability to respond to community needs around food; and (4) policy: provides a restorative framework for reconciling Indigenous food and cultural values with colonial laws and policies (Morrison, 2011). These principles recognize that food has a historical element for Indigenous Peoples (Cidro et al., 2015). While many First Nations may not be using the language of food sovereignty, it is crucial to explicitly engage communities on framing anything to do with food in this context, especially when it comes to interventions (Daigle, 2017). There is a rapidly expanding Indigenous food sovereignty movement to restore and enhance access to traditional Indigenous foods in the forests, fields and waterways linked to the historic claims to the hunting, fishing and gathering grounds in their respective Traditional Territories (Martens, 2018; NMFCCC, 2016; PFPP, 2011). What is especially important in this movement is the involvement of youth.

It is important to draw upon the opportunities for reconnecting with traditional food systems as self-determining and health- and wellness-promoting strategies. When Indigenous people have the skills to practice Indigenous food sovereignty a whole range of positive benefits to their social and economic well-being can unfold (Cidro et al., 2015; Martens, 2018).



Learning from and about the land is an essential aspect of First Nations learning and often entails experiential learning, a mode of learning that is frequently associated with traditional activities that occur outside the classroom (Canadian Council on Learning, 2009). Therefore, when people are asked what they eat and how they acquire it and when, it is important not to analyze these findings in isolation. Not only are traditional foods valued from cultural, spiritual and health perspectives, but the activities involved allow for the practice of cultural values such as sharing, reciprocity and cooperation (Earle, 2011, Martens, 2018; Morrison, 2011; Martin, 2012).

The findings from this chapter should be used as a benchmark. Measuring food insecurity helps to understand trends over time as well as address the issue. As Canada currently embarks on a national food policy, the question “Where can action have a lasting impact?” must be asked. Furthermore, as Canada has adopted the United Nations’ 2030 Sustainable Development Goals for hunger and nutrition, food insecurity in First Nations communities must be addressed. The role of self-determination in health and food sovereignty is an important consideration that should be included in future survey questions to better understand nutrition and food for First Nations people. It is time for action to address food insecurity in First Nations communities.



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CHAPTER FIVE: PHYSICAL ACTIVITY

EXECUTIVE SUMMARY

Physical activity and sedentary behaviours are key considerations for public health, as they are modifiable risk factors for various chronic diseases. This chapter describes physical activity levels and sedentary behaviours among the First Nations population living on reserve and in Northern communities. Walking is a popular activity for all ages, as is gardening and yardwork for adults, competitive or team sports for youth and swimming for children. Participation in some activities tends to decline with increasing age. Participation in some traditional activities—such as fishing, hunting and traditional dancing—continue to be popular among adults throughout mid-life.

More than two fifths (43.4%) of First Nations adults, 62.8% of youth and 66.0% of children are active to some extent. In addition, roughly half of children and youth report sufficient activity levels to meet physical activity guidelines. One purpose of this chapter was to understand physical activity and sedentary behaviours using a comprehensive approach of individual-, social- and community-level factors. Several factors were associated with higher physical activity levels for adults and youth (e.g., very good/excellent general and mental health, having normal weight, having fewer health conditions and frequently consuming a nutritious, balanced diet). Being active was also associated with factors related to one's culture and traditions among all ages (e.g., often sharing traditional foods and participating in cultural events). Among youth and children, participation in team sports/lessons outside of school hours was also associated with being active.

The majority of the population spent at least 2 hours in sedentary time (screen and non-screen) per day. Several key findings related to sedentary time were also found and echo certain findings

related to physical activity. Factors related to culture and traditions were important considerations. For example, the lowest amount of time spent being sedentary was associated with often sharing traditional food among adults, youth and children. Specifically, for children, attributing importance to, and participating in, traditional cultural events in one's life were associated with the lowest amount of sedentary time. Among youth and children, participation in team sports/lessons outside of school hours was also associated with lower amounts of sedentary time. This chapter provides valuable information for informing strategies for modifying physical activity and sedentary behaviours.

KEY FINDINGS

Adults

- Walking is a popular activity among First Nations adults (57.3%), followed by outdoor gardening (28.4%), fishing (22.5%), weights or exercise equipment (22.1%) and swimming (18.2%).
- More than two fifths (43.4%) of First Nations adults were considered active to some extent in leisure time whereas 56.6% were considered inactive. Inactivity rates are higher among females, older adults and those living in the lowest income households.
- Among First Nations adults, many factors were associated with being active in leisure time, including having very good/excellent health, being of normal weight, having fewer health conditions, frequently consuming a nutritious, balanced diet and feeling in balance.
- A significantly higher proportion of First Nations adults who often had traditional food shared with their household were considered active compared to those who experienced this less often.



- A significantly greater percentage of First Nations adults who felt a very strong sense of belonging within their community were active compared to those who felt that they had a somewhat strong or a somewhat weak sense of belonging.
- More than 1 in 10 (13.0%) adults spent less than 2 hours in sedentary time (e.g., watching television, reading or playing video games) per day, while one third (33.3%) spent between 2 and 4 hours and more than half (53.7%) spent 4 hours or more in sedentary time per day.

Youth

- The top 5 physical activities cited by First Nations youth included competitive or team sports (46.0%), walking (41.1%), running or jogging (36.4%), swimming (30.3%) and bicycling or mountain biking (25.5%).
- Nearly half (48.4%) of First Nations youth indicated adequate levels of activity to meet physical activity guidelines of 60 minutes of moderate-to-vigorous daily activity.
- More than three fifths (62.8%) of First Nations youth were active to some extent in leisure time while 37.2% of youth were considered inactive. Inactivity rates are higher among females and older youth.
- Similar to adults, several factors were associated with being active in leisure time among youth, including being in very good/excellent health, being of normal weight, having fewer health conditions, frequently consuming a nutritious, balanced diet and feeling in balance.
- Factors associated with community and culture were also associated with being active among youth, such as having a very strong sense of community belonging, often having traditional foods shared among their household, perceiving traditional activities as important and participating in cultural events. Frequent participation in sports teams or lessons was also related to being active among youth.

- Less than one fifth (17.0%) of First Nations youth spent less than 2 hours being sedentary, 32.4% spent between 2 and 4 hours and 50.6% spent 4 hours or more in sedentary time.

Children

- The top 5 cited physical activities among First Nations children in the three months prior to the survey were swimming (39.2%), walking (38.7%), bicycling or mountain biking (34.1%), running or jogging (30.0%) and participating in competitive or team sports (21.5%).
- Half (50.1%) of First Nations children reported sufficient levels of activity to meet physical activity guidelines of 60 minutes of moderate-to-vigorous daily activity.
- Nearly two thirds (66.0%) of First Nations children were active to some extent in leisure time, while the remaining 34.0% were inactive. Inactivity rates are higher among children living in lower income households.
- Among First Nations children, 20.7% spent less than 2 hours, 40.4% spent between 2 and 4 hours, and 38.9% spent 4 hours or more in sedentary time per day.
- Factors involving traditional or cultural elements that were related to being active during leisure time and low levels of sedentary time included often having traditional food shared with their household, perceiving that traditional activities are important and participating in cultural events more often. Frequent participation in sports teams and lessons was also associated with being active and reporting low levels of sedentary time.



INTRODUCTION

Increasing physical activity and reducing sedentary time are important factors in public health. Physical activity is a modifiable risk factor for various chronic diseases, including obesity, cardiovascular disease, type 2 diabetes, osteoporosis, hypertension or certain cancers such as colon and breast (Warburton et al., 2006). Regular physical activity has also been shown to have a positive impact on mental health, such as reducing anxiety, depression and stress (Warburton et al., 2006). In addition, physical activity has been shown to promote certain health benefits among school-aged children and youth (Janssen & LeBlanc, 2010; Donnelly et al., 2016). Conversely, extended periods of sitting are associated with certain negative health outcomes and chronic disease (Chastin et al., 2015; Vallance et al., 2011). Some research has demonstrated a dose–response association between daily sitting time and mortality rates from all causes of death and cardiovascular disease. These associations were found to be independent from overall physical activity levels; meaning that even if one is active, long periods of sitting can still have negative consequences (Katzmarzyk et al., 2009).

Sedentary behaviours are those that involve low energy expenditures during sitting or in a reclined posture (Network SBR, 2012). One chronic condition affected by both physical activity and sedentary behaviour—obesity—has increased among adults and children in Canada over time (Tjepkema, 2006; Shields, 2004). Childhood obesity may increase the risk of developing certain diseases—such as diabetes, asthma, obstructive sleep apnea, menstrual abnormalities and neurological conditions—which may result in adult morbidity and mortality (Kelsey et al., 2014). Among the general Canadian population, Statistics Canada’s Canadian Community Health Survey (CCHS) indicates that 61.3% of persons 18 and older are considered overweight or obese (34.6% overweight and 26.7% obese) (Statistics Canada,

n.d.a). The prevalence rates of overweight and obesity among the Indigenous population are consistently higher compared to the overall Canadian population (Gionet & Roshanafshar, 2013; Ning & Wilson, 2012; Katzmarzyk, 2008; Tjepkema, 2006; Katzmarzyk & Malina, 1998), as is the prevalence of some chronic diseases (Katzmarzyk, 2008). The RHS Phase 2 indicated that 24.2% of First Nations adults were normal weight, 34.2% were overweight, 34.8% were obese, and 5.4% were morbidly obese (FNIGC, 2012). Increasing time spent being active and reducing time spent in sedentary behaviours may play an integral role in combatting these higher prevalence rates among the First Nations population.

Among the general adult population in Canada, data has shown an increase in self-reported leisure-time physical activity between the 1980s and early-2000s, followed by a somewhat level trend line since that time (Craig et al., 2004; CFLRI, 2014a). Based on the 2013 CCHS, more than half (53%) of Canadians 20 years and older were at least moderately active (approximating at least 30 minutes of moderate-to-vigorous daily activity) (CFLRI, 2014a). Among the general adult population, there continues to be a disparity in activity levels among certain sub-population groups, including women and older adults (CFLRI, 2014a). Using the CCHS data from 2007 to 2010, Statistics Canada states that fewer First Nations people living off reserve were inactive in leisure time (44%) compared to the non-Aboriginal population (46%) (Gionet & Roshanafshar, 2013).

Among youth in the general Canadian population, the majority (70.4%) are active to some extent while 29.6% of youth aged 12 to 19 are inactive in their leisure time (Statistics Canada, 2016). Similar to adults, lower rates of activity in children and youth appear among girls, older teens and lower-income groups (CFLRI, 2017; Colley et al., 2017). Findings from the RHS Phase 2 found that the majority of youth (71.9%) were active to some extent (49.3%



were active and 22.6% were moderately active) although findings are not directly comparable due to differences in methodology and survey questions (FNIGC, 2012).

The Canadian Society for Exercise Physiology (CSEP) has developed 24-hour movement guidelines for children and youth, which stipulate not only the amount of physical activity that children and youth should achieve, but also recommend amounts of light activity, sedentary time and sleep (CSEP, 2017). According to these guidelines, children aged 5–17 years should accumulate at least 60 minutes of moderate-to-vigorous-intensity physical daily activity (CSEP, 2017). Furthermore, the guidelines specify that children and youth should incorporate several hours of structured and unstructured light activity, spend no more than 2 hours of recreational screen time per day and follow sleep guidelines according to age (CSEP, 2017).

Tracking of physical activity using objective measures for children and youth through pedometers and accelerometers was introduced nearly a decade ago in studies of the general Canadian population. This data has shown a relatively stable level of activity among children and youth in the general population over the past decade (CFLRI, 2017; Colley et al., 2017). Based on Statistics Canada's Canadian Health Measures Survey (CHMS), which objectively measured physical activity, nearly one third of children and youth achieved, on average, a threshold which approximates a sufficient amount of moderate-to-vigorous-intensity activity (Colley et al., 2017). In addition, based on objectively measured data, 24% of children met the sedentary behaviour recommendations in the 24-hour movement guidelines of less than two hours of screen time on a daily basis (ParticipACTION, 2016).

This chapter examines physical activity and sedentary behaviours among the First Nations population living on reserve and in Northern communities and

suggests recommendations to help guide policy developers, practitioners and decision-makers towards shaping strategies for healthy and active living among this population.

To begin, the concepts of physical activity and sedentary behaviours will be examined individually. Next, the relationship of key socio-demographic variables such as gender, age and socio-economic status will be examined in relation to both behaviours. Further, factors included within a broader comprehensive approach (FNIGC, 2005) will be examined in relation to being active and sedentary. More specifically, physical activity and sedentary behaviours will be examined against factors representing an individual's spiritual, emotional, mental and physical well-being and social and community environments. Each of the factors can operate independently or connectedly while shaping an individual's behaviour. This type of approach is similar to other approaches used in health behaviour literature. For example, an ecological approach accounts for multiple factors influencing a behaviour, such as individual factors (intrapersonal factors within an individual), social factors (interpersonal or those within one's social environment), environmental factors (those within the physical environment or location), societal factors (those influenced by culture and community) and policy-related factors (those that exist among policies at a band or government level). This type of approach has been used in other research related to health issues among Indigenous populations (Willows et al., 2012; Lévesque et al., 2015).

METHODS

The results in this chapter are based on the physical activity and sedentary questions in the RHS Phase 3. Certain measures that are used in the analyses for this chapter have been calculated or derived, and these are summarized below.



The level of leisure-time physical activity was based on the total energy expenditure calculated from the reported frequency and duration of physical activities identified in the three months prior to the survey and the metabolic equivalent (MET) value of each activity, which had been independently established (Ainsworth et al., 2000). The level of physical activity was based on the total energy expenditure (EE) that was calculated using the following formula:

$$EE = \sum(N_i * D_i * MET_i / \text{number of days in 3 months prior to survey date})$$

N_i = number of occasions of activity i in 3 months

D_i = average duration in hours of activity i

MET_i = a constant value for the metabolic energy cost of activity i

For this analysis, adults with energy expenditures of less than 1.5 MET hour per week were considered inactive or sedentary, those between 1.5 and 2.9 MET were considered moderately active and 3 MET hour per week or greater were considered *active*. National surveys in Canada have traditionally used these categories for describing leisure-time physical activity among adults (Stephens and Craig, 1990; Gilmour, 2007; Statistics Canada, 2015) and have used a similar criterion for examining physical activity among youth (Gilmour, 2007; *Statistics Canada, 2015*). The criterion level of active for health at 3 MET hours per week was established in 1988 (Haskell et al., 1985) and has been used for comparison over time (Craig et al., 2004). For the purpose of consistency, the threshold of ≥ 3.0 MET hours per week has been used for the analyses of leisure-time activity when exploring its relation to other correlates in this chapter. For consistency between adults, youth and children at least 6 years of age, the ≥ 3.0 MET value was used as the criterion for defining active when examining leisure-time physical activity for all age groups.

The Canadian 24-hour movement guidelines recommend appropriate levels of physical activity for children and youth as 60 minutes or more of moderate-to-vigorous physical activity on a daily basis, as well as limiting sedentary time for young people to less than 2 hours of screen time per day (CSEP, 2017). For children and youth, a dichotomous variable was created where less than 60 minutes of daily activity is defined as not achieving the guideline and 60 or more minutes of daily activity is defined as meeting the guideline.

Since the question in the RHS Phase 3 also includes reading as an example of sedentary time in addition to screen time, slightly different criteria have been used for these analyses to account for the extra time spent in sedentary behaviours beyond screen time. For children and youth, the calculated time spent in sedentary behaviours was categorized into three groups: less than 120 minutes, 120 to 239 minutes, and 240 minutes or higher. National guidelines for sedentary time for adults have not been established in Canada. For the purpose of consistency, the same time categories have been used for the adult population in this chapter.

Physical activity levels and time spent in sedentary behaviours were examined in relation to other factors through a series of cross-tabulations. These factors included:

- gender,
- age,
- education (self or parental),
- household income,
- employment status,
- community size/remoteness,
- self-rated general health,
- self-rated mental health status (adult and youth only),



- body mass index,
- number of diagnosed chronic conditions,
- perceived balance among four aspects (adult and youth only),
- perceived factors that help one to be healthy (adult and youth only),
- frequency of sharing traditional food among the household,
- frequency of consuming a nutritious, balanced diet,
- perceptions of belongingness in the community (adult and youth only),
- perceptions of the importance of traditional cultural events (youth and child only),
- participation in traditional cultural events,
- participation in activities outside of school (youth and child only), and
- community strengths, challenges and progress (adult and youth only)

Demographic Factors

For adults, age was grouped into four categories: 18 to 24, 25 to 44, 45 to 64, and 65 years and older. For youth, two age categories were created: 12 to 14 and 15 to 17 years. For children, two age categories were established: 0 to 5 and 6 to 11 years.

Adults were asked about their highest level of formal education, which was recoded into four categories: less than high school, high school, post-secondary diploma or training, and university and above. Youth and children were asked about their parent's highest level of education, which was recoded into three categories: less than high school, high school and post-secondary education.

Adults and parents or guardians (for children) were asked about their total household income. This was

recoded into categories of no income or less than \$15,000, \$15,000 to \$24,999, \$25,000 to \$49,999 and \$50,000 or higher per year. Adults were asked if they were currently working at a job or business for pay, with responses of Yes or No.

Categories of geographic remoteness included the following: urban (Zone 1) = located within 50 km of the nearest service centre with year-round road access; rural (Zone 2) = located between 50 km and 350 km from the nearest service centre with year-round road access; remote (Zone 3) = located greater than 350 km from the nearest service centre with year-round road access; and special access (Zone 4) = no year-round road access (INAC, 2000). Community size was defined by population: large (population with 1,500 and over), medium (population between 300 and 1,499) and small (population between 75 and 299).

Factors Related to Health

Body mass index (BMI) was calculated using self-reported height and weight based on the formula of weight in kilograms divided by height in metres squared. BMI categories are based on Health Canada guidelines, which suggest that individuals weighing less than 18.5 kg/m² are underweight, those 18.5–24.9 kg/m² are normal weight, those 25–29.9 kg/m² are overweight and those ≥30 kg/m² are obese (Health Canada, 2015).

The total number of health conditions was derived from a sum of the positive responses about diagnosed health conditions and recoded into four categories: none, one, two, and three or more conditions. Perceived health status was asked as two questions: respondents were asked to rate their general health and their mental health (adult and youth only). These were recoded into three categories: excellent/very good, good, and fair/poor.



Perceived feelings of balance (physically, emotionally, mentally and spirituality) were asked of adults and youth as a series of four questions, with response options of: none of the time, almost none of the time, some of the time, most of the time, and all of the time. Adults and youth were asked what makes them healthy and were provided with a list of 11 factors, such as good diet, good social supports, regular exercise/active in sports and cultural and traditional activities.

Factors Related to Individual or Social Aspects

The frequency of how often someone shared traditional food with the household in the past 12 months prior to the survey had four response options: often, sometimes, rarely, and never. The frequency of how often a nutritious, balanced meal was eaten in the past 12 months prior to the survey included responses of: always/almost always, sometimes, rarely, and never.

Adults and youth were asked about their perceived sense of belonging in their local community, with categories of very strong, somewhat strong, somewhat weak, and very weak. Youth and proxies for children were asked if it is important to them that traditional cultural events are part of their or their child’s life, with responses of strongly agree, agree, neither agree/disagree, disagree, and strongly disagree. Adults and youth were also asked how often they took part in cultural events in the community, with responses of always/almost always, sometimes, rarely, and never.

Youth and children were asked how often they participated in sports teams or lessons or take part in traditional activities such as singing or drumming outside of school hours. For each factor, categories included never, less than once a week, once to three times a week, four or more times per week.

RESULTS

Physical Activities

Adult

The most frequently cited physical activity among First Nations adults was walking (57.3%). This is followed by outdoor gardening or yardwork (28.4), fishing (22.5%) and use of weights/exercise equipment (22.1%) (see *Table 5.1*). Generally speaking, the top 10 reported activities cited in the RHS Phase 3 were the same as those cited in the RHS Phase 2, although the percentages are not directly comparable due to variations in question wording over the time period. It should be noted that the RHS Phase 2 asked a 12-month recall of activities whereas the RHS Phase 3 asked a three month recall. Relatively recent data from Statistics Canada’s CHMS indicated that 65.8% of 18- to 39-year-olds, 67.2% of 40- to 59-year-olds and 69.3% of 60- to 79-year-olds participated in walking at least once in the three months prior to the survey (Garriguet & Colley, 2014) and that 70.9% of those 12 years and older reported walking in the 3 months prior to the survey (Statistics Canada, 2015). This echoes the findings from other national surveys as well (CFLRI, 2016).

A significantly greater proportion of males than females said that they fished, used weights or exercise equipment, hunted, ran or jogged, hiked, participated in competitive or team sports, bicycled or mountain biked, golfed, skated, snowmobiled, trapped, snowshoed, and skied or snowboarded. In contrast, significantly more females than males indicated that they walked, swam, went berry picking or other food gathering, attended aerobics or fitness classes and participated in aerobic or modern and traditional dancing in the previous three months (see *Table 5.1*).



Table 5.1: Participation in physical activities among First Nations adults at least once in the past three months prior to the survey, by gender

Physical activity	Total		Male		Female	
	%	[95% CI]	%	[95% CI]	%	[95% CI]
Walking	57.3	[55.5, 59.0]	51.5	[48.7, 54.4]	63.0	[60.8, 65.2]
Outdoor gardening/Yardwork	28.4	[26.8, 30.1]	30.2	[28.0, 32.6]	26.6	[24.9, 28.4]
Fishing	22.5	[21.0, 24.1]	28.8	[26.6, 31.2]	16.2	[14.5, 18.1]
Weights/Exercise equipment	22.1	[20.8, 23.5]	28.0	[26.0, 30.1]	16.1	[14.8, 17.6]
Swimming	18.2	[17.1, 19.4]	15.7	[14.1, 17.4]	20.8	[19.2, 22.4]
Hunting	17.5	[16.0, 19.1]	27.2	[24.8, 29.7]	7.7	[6.5, 9.1]
Berry picking/Food gathering	16.8	[15.4, 18.3]	14.4	[12.9, 16.1]	19.2	[17.3, 21.3]
Running/Jogging	15.8	[14.5, 17.2]	17.6	[15.8, 19.6]	14.0	[12.4, 15.7]
Hiking	15.4	[14.2, 16.7]	18.7	[16.8, 20.7]	12.1	[10.9, 13.5]
Competitive/Team sports	14.6	[13.5, 15.8]	20.3	[18.7, 22.1]	8.9	[7.7, 10.3]
Bicycling/Mountain biking	13.4	[12.0, 15.0]	16.8	[14.7, 19.2]	9.9	[8.7, 11.3]
Dancing (aerobic, modern)	11.9	[10.9, 12.9]	6.8	[5.6, 8.2]	17.0	[15.7, 18.3]
Aerobics/Fitness classes	7.9	[7.2, 8.7]	6.0	[5.1, 7.1]	9.9	[8.9, 11.0]
Golf	7.9	[7.0, 8.9]	10.6	[9.3, 12.0]	5.1	[4.2, 6.2]
Bowling	7.8	[6.9, 8.7]	7.0	[5.9, 8.4]	8.5	[7.5, 9.6]
Traditional dancing	7.0	[6.3, 7.8]	5.5	[4.7, 6.4]	8.5	[7.5, 9.7]
Skating	6.2	[5.3, 7.2]	9.2	[7.7, 11.0]	3.2	[2.6, 3.9]
Canoeing/Kayaking	5.7	[4.9, 6.5]	6.4	[5.3, 7.7]	4.9	[4.0, 6.0]
Snowmobiling	5.6	[5.0, 6.4]	7.6	[6.5, 8.8]	3.7	[3.1, 4.4]
Trapping	4.3	[3.7, 4.9]	6.9	[5.9, 8.1]	1.6	[1.3, 2.1]
Other	3.2	[2.8, 3.8]	3.2	[2.7, 3.9]	3.2	[2.9, 4.0]
Boxing	2.1	[1.8, 2.5]	3.3	[2.7, 4.1]	0.9 ^E	[0.6, 1.2]
Snowshoeing	2.1	[1.7, 2.6]	3.0	[2.3, 3.8]	1.2	[0.9, 1.6]
Skiing/Snowboarding	1.8	[1.4, 2.2]	2.4	[1.9, 3.1]	1.1	[0.8, 1.5]
Martial arts	1.6	[1.3, 2.0]	2.7	[2.2, 3.4]	0.5 ^E	[0.3, 0.9]
Skateboarding	0.9 ^E	[0.6, 1.3]	1.5 ^E	[1.0, 2.2]	F	F

Note: ^E High sampling variability, interpret with caution.

^F Suppressed due to low cell count or very high sampling variability.

Walking was the most frequently reported physical activity among First Nations adults regardless of age (see Table 5.2). Participation in many physical activities decline with increasing age among adults. One notable exception is gardening and yardwork, which generally increased with age until 64 and then declined slightly

for adults aged 65 and older. Participation in some traditional activities, such as fishing and hunting, remained steady from 18 until 64 years of age and then significantly declined among adults aged 65 and older. A similar trend was observed for traditional dancing, though this decrease was not statistically significant.



Table 5.2: Participation in physical activities among First Nations adults at least once within the past three months prior to the survey, by age

Physical activity	18-24 Years		25-44 Years		45-64 Years		≥65 Years	
	%	[95% CI]						
Walking	50.5	[46.8, 54.1]	57.1	[54.0, 60.1]	62.4	[60.0, 64.7]	50.8	[47.1, 54.5]
Outdoor gardening/ Yardwork	19.2	[16.3, 22.5]	28.6	[26.2, 31.2]	33.5	[31.2, 35.9]	24.5	[21.6, 27.6]
Fishing	23.1	[20.2, 26.4]	26.0	[23.5, 28.6]	20.7	[18.5, 23.0]	12.2	[8.7, 16.8]
Weight/Exercise equipment	36.4	[32.4, 40.6]	27.0	[24.6, 29.7]	13.6	[12.2, 15.1]	6.5	[4.8, 8.7]
Swimming	24.6	[21.5, 27.9]	23.7	[21.7, 25.9]	11.9	[10.6, 13.3]	4.5 ^E	[3.1, 6.4]
Hunting	18.9	[15.3, 23.1]	19.3	[17.0, 21.8]	16.8	[15.0, 18.7]	9.2	[7.6, 11.1]
Berry picking/ Food gathering	12.9	[10.4, 15.8]	17.3	[15.3, 19.5]	18.3	[16.5, 20.3]	15.3	[11.7, 19.7]
Running/Jogging	27.5	[24.2, 31.1]	20.6	[18.2, 23.1]	8.4	[7.2, 9.7]	1.4 ^E	[0.9, 2.1]
Hiking	15.2	[12.7, 18.1]	17.9	[16.1, 19.8]	14.9	[13.1, 16.7]	6.2	[4.8, 7.9]
Competitive/ Team sports	25.0	[21.7, 28.8]	20.5	[18.5, 22.7]	5.9	[4.8, 7.1]	F	F
Bicycling/ Mountain biking	16.8	[13.4, 20.8]	16.9	[14.3, 19.8]	9.9	[8.6, 11.3]	4.1	[3.0, 5.4]
Dancing (aerobic, modern)	12.4	[10.4, 14.7]	14.2	[12.5, 16.0]	10.4	[9.0, 12.0]	5.4 ^E	[3.8, 7.6]
Aerobics/ Fitness classes	8.8	[6.8, 11.4]	9.9	[8.6, 11.3]	6.2	[5.3, 7.3]	3.7 ^E	[2.6, 5.1]
Golf	7.7	[6.0, 9.8]	9.8	[8.2, 11.7]	6.9	[5.8, 8.2]	2.6 ^E	[1.8, 3.7]
Bowling	8.0	[6.4, 10.0]	11.3	[9.8, 13.2]	4.9	[4.0, 6.0]	0.8 ^E	[0.5, 1.3]
Traditional dancing	6.8	[5.2, 8.8]	6.5	[5.4, 7.6]	8.4	[7.1, 9.9]	5.0	[3.9, 6.3]
Skating	10.1	[8.1, 12.6]	8.2	[6.6, 10.1]	3.5	[2.7, 4.5]	F	F
Canoeing/ Kayaking	7.6	[5.5, 10.2]	7.5	[6.2, 9.1]	3.4	[2.7, 4.3]	2.1 ^E	[1.4, 3.1]
Snowmobiling	6.9	[5.4, 8.7]	6.9	[5.7, 8.3]	4.7	[3.9, 5.6]	1.2 ^E	[0.8, 1.8]
Trapping	3.7	[2.7, 5.1]	4.5	[3.5, 5.6]	4.6	[3.8, 5.5]	3.4	[2.6, 4.4]
Boxing	5.3 ^E	[3.7, 7.4]	2.4	[1.9, 2.9]	0.9 ^E	[0.5, 1.4]	F	F
Snowshoeing	2.0 ^E	[1.2, 3.1]	2.4 ^E	[1.7, 3.4]	1.9	[1.4, 2.4]	1.7	[1.3, 2.3]
Skiing/ Snowboarding	3.0 ^E	[2.0, 4.6]	2.4	[1.8, 3.1]	0.8 ^E	[0.5, 1.2]	F	F
Martial arts	2.4 ^E	[1.6, 3.5]	1.9	[1.4, 2.5]	1.3 ^E	[0.9, 1.9]	F	F
Skateboarding	2.4 ^E	[1.4, 4.1]	1.1 ^E	[0.7, 1.8]	F	F	F	F

Note: ^E High sampling variability, interpret with caution.

^F Suppressed due to low cell count or very high sampling variability.



Youth

Among First Nations youth, the most frequently cited physical activities were competitive or team sports (46.0%) and walking (41.1%). These were followed by running or jogging (36.4%), swimming (30.3%), bicycling or mountain biking (25.5%) and using weights/exercise equipment (23.8%). Generally speaking, the top 10 reported activities among youth remain consistent between the RHS Phase 3 and the RHS Phase 2 although the percentages are not directly comparable due to changes in questionnaire wording. Statistics Canada's CHMS indicated that 60.3% of 12- to 17-year-olds participated in walking at least once in the three months prior to the survey, although these statistics cannot be directly compared to the RHS data due to differences in methodology and questions (Garriguet & Colley, 2014).

A significantly greater proportion of First Nations male youth reported that they participated in competitive or team sports, fished, used weights/exercise equipment, hunted, bicycled or mountain biked, golfed, skated, skateboarded, or boxed compared to female youth. Significantly more females said that they walked, bowled, did traditional dancing or danced (aerobic or modern) compared to male youth (see *Table 5.3*). These gender differences also existed in the RHS Phase 2 (FNIGC, 2012).



Table 5.3: Participation in physical activities among First Nations youth at least once in the past three months prior to the survey, by gender

Physical activity	Total		Male		Female	
	%	[95% CI]	%	[95% CI]	%	[95% CI]
Competitive/Team sports	46.0	[43.9, 48.2]	51.5	[47.8, 55.2]	40.4	[37.6, 43.2]
Walking	41.1	[38.2, 44.0]	33.5	[29.8, 37.4]	49.0	[45.7, 52.3]
Running/Jogging	36.4	[33.9, 39.0]	36.7	[32.7, 40.8]	36.0	[33.2, 39.0]
Swimming	30.3	[27.3, 33.6]	27.9	[24.0, 32.1]	32.9	[29.7, 36.3]
Bicycling/Mountain biking	25.5	[22.6, 28.5]	31.8	[27.9, 36.1]	18.8	[15.8, 22.2]
Weights/Exercise equipment	23.8	[22.1, 25.5]	30.2	[27.5, 33.1]	17.0	[15.0, 19.3]
Fishing	19.3	[16.7, 22.1]	25.0	[21.1, 29.4]	13.2	[10.9, 16.0]
Skating	17.4	[15.5, 19.5]	21.6	[18.2, 25.5]	13.0	[11.1, 15.1]
Hiking	16.1	[13.7, 18.8]	17.2	[13.7, 21.3]	14.9	[12.8, 17.4]
Hunting	15.7	[14.2, 17.3]	21.7	[19.1, 24.5]	9.4	[7.9, 11.2]
Outdoor gardening/Yardwork	14.9	[12.8, 17.4]	16.2	[13.7, 19.1]	13.6	[11.0, 16.8]
Berry picking/Food gathering	13.2	[10.4, 16.7]	10.9 ^E	[7.7, 15.1]	15.6	[12.6, 19.2]
Dancing (aerobic, modern)	11.1	[9.5, 13.0]	4.8	[3.4, 6.5]	17.8	[15.0, 21.0]
Bowling	10.8	[9.2, 12.7]	7.2	[5.8, 9.0]	14.6	[11.9, 17.7]
Aerobics/Fitness classes	10.1	[8.7, 11.8]	8.9	[6.9, 11.3]	11.4	[9.5, 13.7]
Canoeing/Kayaking	9.0	[7.6, 10.7]	8.1	[6.4, 10.3]	9.9	[8.2, 12.0]
Skateboarding	8.3	[7.2, 9.7]	10.2	[8.6, 12.1]	6.4	[5.1, 8.0]
Traditional dancing	6.9	[5.9, 8.0]	4.8	[3.8, 6.0]	9.0	[7.6, 10.7]
Snowmobiling	6.6	[5.8, 7.6]	7.7	[6.5, 9.2]	5.5	[4.4, 6.8]
Golf	5.9	[5.1, 6.9]	8.0	[6.5, 9.8]	3.8	[3.0, 4.7]
Skiing/Snowboarding	5.3	[4.5, 6.2]	6.3	[5.0, 7.9]	4.2	[3.4, 5.2]
Boxing	5.0	[4.2, 6.0]	6.6	[5.3, 8.2]	3.2	[2.4, 4.3]
Trapping	3.5	[2.8, 4.2]	4.9	[3.9, 6.2]	2.0 ^E	[1.4, 2.8]
Martial arts	2.9 ^E	[2.1, 4.1]	3.7 ^E	[2.6, 5.4]	2.0 ^E	[1.4, 2.9]
Other	2.9	[2.3, 3.6]	2.3 ^E	[1.6, 3.4]	3.5	[2.7, 4.5]
Snowshoeing	2.0	[1.6, 2.6]	2.2	[1.6, 3.1]	1.8	[1.3, 2.5]

Note: ^E High sampling variability, interpret with caution.



Among youth, participation in competitive or team sports, bicycling or mountain biking, swimming and skating were significantly lower among 15- to 17-year-olds compared to 12 to 14-year-olds, whereas the

proportion using weights and exercise equipment was significantly higher among 15- to 17-year-olds compared to 12- to 14-year-olds (see *Table 5.4*).

Table 5.4: Participation in physical activities among First Nations youth at least once in the past three months, by age

Physical activity	12-14 Years		15-17 Years	
	%	[95% CI]	%	[95% CI]
Competitive/Team sports	49.7	[46.2, 53.3]	42.9	[40.5, 45.3]
Walking	41.1	[35.8, 46.6]	41.0	[38.7, 43.5]
Running/Jogging	38.8	[35.0, 42.6]	34.3	[31.6, 37.2]
Swimming	34.9	[29.4, 40.9]	26.4	[23.9, 29.2]
Bicycling/Mountain biking	30.4	[26.3, 34.8]	21.3	[18.4, 24.5]
Weights/Exercise equipment	17.0	[14.5, 19.8]	29.6	[27.3, 32.0]
Fishing	21.8	[17.3, 27.2]	17.1	[15.0, 19.3]
Skating	21.0	[17.4, 25.0]	14.4	[12.6, 16.4]
Hiking	15.6	[12.1, 20.0]	16.5	[14.0, 19.3]
Hunting	16.1	[13.3, 19.3]	15.4	[13.5, 17.5]
Outdoor gardening/Yardwork	12.5	[10.1, 15.4]	17.0	[14.4, 20.0]
Berry picking/Food gathering	16.2 ^E	[11.2, 22.8]	10.6	[8.8, 12.8]
Dancing (aerobic, modern)	12.0	[9.4, 15.2]	10.4	[8.7, 12.5]
Bowling	11.9	[9.2, 15.2]	9.9	[7.9, 12.4]
Aerobics/Fitness classes	10.0	[8.1, 12.3]	10.3	[8.5, 12.4]
Canoeing/Kayaking	8.8	[6.6, 11.6]	9.2	[7.6, 11.2]
Skateboarding	8.4	[6.8, 10.5]	8.2	[6.7, 10.0]
Traditional dancing	7.5	[6.1, 9.2]	6.3	[5.2, 7.7]
Snowmobiling	6.8	[5.4, 8.5]	6.5	[5.5, 7.5]
Golf	5.2	[4.1, 6.7]	6.5	[5.3, 8.0]
Skiing/Snowboarding	5.4	[4.1, 7.0]	5.2	[4.3, 6.3]
Boxing	4.3	[3.3, 5.5]	5.6	[4.5, 7.0]
Trapping	3.1 ^E	[2.2, 4.3]	3.8	[2.9, 4.9]
Martial arts	2.8 ^E	[1.9, 4.3]	3.0 ^E	[2.1, 4.2]
Other	2.9 ^E	[2.0, 4.2]	2.9	[2.1, 3.8]
Snowshoeing	2.1 ^E	[1.5, 3.0]	2.0	[1.4, 2.7]

Note: ^E High sampling variability, interpret with caution.



Children

Among First Nations children, the most frequently cited activity was swimming (39.2%) followed by walking (38.7%), bicycling or mountain biking (34.1%), running or jogging (30.0%) and participating in competitive or team sports (21.5%) (see *Table 5.5*). Generally speaking, the top 10 activities participated in by First Nations children in the RHS Phase 3 are similar to those identified in the RHS Phase 2, albeit

the percentages cannot be compared due to changes in questionnaire wording.

Among First Nations children, a higher percentage of males reported that they participated in competitive or team sports, fished, golfed and hunted compared to females of the same age. In contrast, a higher percentage of females did aerobic or modern dance or traditional dance compared to males (see *Table 5.5*).

Table 5.5: Participation in physical activities among First Nations children in the past three months prior to the survey, by gender

Physical activity	Total		Male		Female	
	%	[95% CI]	%	[95% CI]	%	[95% CI]
Swimming	39.2	[36.7, 41.8]	37.5	[34.6, 40.5]	40.9	[38.0, 43.9]
Walking	38.7	[36.3, 41.2]	37.2	[34.4, 40.2]	40.2	[37.2, 43.3]
Bicycling/Mountain biking	34.1	[31.6, 36.6]	34.3	[31.2, 37.5]	33.8	[31.2, 36.5]
Running/Jogging	30.0	[27.9, 32.2]	30.6	[28.0, 33.3]	29.4	[26.7, 32.3]
Competitive/Team sports	21.5	[20.0, 23.2]	25.7	[23.4, 28.1]	17.3	[15.4, 19.4]
Dancing (aerobic, modern)	17.1	[15.5, 18.9]	11.5	[9.6, 13.8]	22.9	[20.7, 25.3]
Outdoor gardening/Yardwork	16.3	[14.9, 17.7]	15.8	[14.0, 17.8]	16.8	[14.9, 18.7]
Berry picking/Food gathering	15.6	[14.0, 17.4]	14.3	[12.4, 16.5]	16.9	[15.0, 19.0]
Skating	14.4	[12.9, 16.0]	15.8	[13.9, 17.8]	13.0	[11.1, 15.1]
Fishing	13.5	[12.0, 15.1]	16.4	[14.1, 19.1]	10.4	[9.2, 11.8]
Traditional dancing	11.1	[10.0, 12.4]	8.2	[6.8, 9.7]	14.2	[12.5, 16.1]
Hiking	9.7	[8.6, 10.8]	10.2	[8.8, 11.9]	9.1	[7.8, 10.6]
Bowling	8.6	[7.6, 9.8]	9.6	[8.2, 11.2]	7.6	[6.6, 8.9]
Other	6.9	[6.0, 8.0]	5.7	[4.7, 6.9]	8.1	[6.6, 10.0]
Hunting	6.9	[5.9, 8.0]	8.7	[7.2, 10.4]	5.1	[4.1, 6.3]
Aerobics/Fitness classes	6.4	[5.3, 7.7]	5.0	[3.9, 6.6]	7.8	[6.4, 9.4]
Skateboarding	3.6	[2.8, 4.6]	5.1	[4.1, 6.4]	2.0 ^E	[1.2, 3.4]
Canoeing/Kayaking	3.3	[2.6, 4.1]	3.2	[2.3, 4.3]	3.3	[2.6, 4.3]
Weights/Exercise equipment	3.2	[2.5, 4.0]	3.9	[3.0, 5.2]	2.4 ^E	[1.6, 3.5]
Golf	3.0	[2.4, 3.6]	4.0	[3.2, 5.1]	1.8	[1.3, 2.5]
Skiing/Snowboarding	2.2	[1.8, 2.7]	2.2	[1.7, 3.0]	2.2	[1.7, 2.8]
Martial arts	2.1	[1.6, 2.8]	2.8 ^E	[1.9, 4.1]	1.5	[1.1, 2.0]
Boxing	1.6 ^E	[1.2, 2.2]	1.8 ^E	[1.3, 2.6]	1.4 ^E	[0.9, 2.2]
Trapping	1.2 ^E	[0.8, 1.8]	1.8 ^E	[1.1, 2.9]	0.7 ^E	[0.4, 1.2]
Snowshoeing	0.9 ^E	[0.7, 1.2]	0.9 ^E	[0.7, 1.3]	0.9 ^E	[0.6, 1.3]

Note: ^E High sampling variability, interpret with caution.



As one would expect among children, a greater proportion of older children (6–11 years) participated in almost every activity compared to younger ones (5 years and younger) with four notable exceptions:

there are no significant differences by age for walking, berry-picking or other food gathering, traditional dance, and aerobic or modern dance (see *Table 5.6*).

Table 5.6: Participation in physical activities among First Nations children in the past 3 months prior to the survey, by age

Physical activity	<6 Years		6-11 Years	
	%	[95% CI]	%	[95% CI]
Swimming	29.8	[26.5, 33.3]	46.1	[43.3, 48.9]
Walking	36.0	[33.0, 39.0]	40.7	[37.9, 43.7]
Bicycling/Mountain biking	17.6	[15.1, 20.4]	46.2	[43.5, 49.0]
Running/Jogging	24.2	[21.6, 26.9]	34.3	[31.7, 37.0]
Competitive/Team sports	6.7	[5.5, 8.2]	32.4	[30.2, 34.8]
Dancing (aerobic, modern)	17.6	[15.3, 20.1]	16.8	[14.7, 19.2]
Outdoor gardening/Yardwork	13.4	[11.6, 15.5]	18.4	[16.4, 20.5]
Berry picking/Food gathering	13.2	[11.3, 15.3]	17.3	[15.1, 19.8]
Skating	6.9	[5.6, 8.6]	19.9	[18.0, 22.0]
Fishing	8.2	[6.9, 9.9]	17.3	[15.1, 19.8]
Traditional dancing	10.1	[8.4, 12.2]	11.9	[10.4, 13.5]
Hiking	7.2	[6.0, 8.6]	11.5	[10.0, 13.2]
Bowling	5.4	[4.0, 7.2]	11.0	[9.7, 12.5]
Other	7.9	[6.6, 9.5]	6.2	[5.0, 7.5]
Hunting	4.6	[3.4, 6.1]	8.6	[7.3, 10.0]
Aerobics/Fitness classes	3.3	[2.4, 4.5]	8.7	[7.1, 10.6]
Skateboarding	1.5 ^E	[0.8, 2.7]	5.2	[3.9, 6.7]
Canoeing/Kayaking	0.8 ^E	[0.5, 1.2]	5.1	[4.0, 6.4]
Weights/Exercise equipment	1.1 ^E	[0.7, 1.7]	4.7	[3.6, 6.0]
Golf	1.6 ^E	[1.0, 2.4]	3.9	[3.1, 5.0]
Skiing/Snowboarding	0.6 ^E	[0.3, 1.0]	3.4	[2.7, 4.3]
Martial arts	0.8 ^E	[0.5, 1.2]	3.1 ^E	[2.2, 4.3]
Boxing	F	F	1.9 ^E	[1.4, 2.7]
Trapping	F	F	1.3	[0.9, 1.7]
Snowshoeing	F	F	1.4	[1.0, 1.9]

Note: ^E High sampling variability, interpret with caution.

^F Suppressed due to low cell count or very high sampling variability.



Physical Activity Guidelines

Youth

Based on the RHS Phase 3, nearly half (48.4%, 95% CI [45.7, 51.1]) of First Nations youth aged 12 to 17 reported that they met the minimum guideline of 60 minutes of moderate-to-vigorous-intensity physical activity on a daily basis. Among youth, significantly more males (53.3%, 95% CI [49.5, 57.0]) in this age group reported achieving sufficient moderate-to-vigorous-intensity physical activity guidelines than females (43.2%, 95% CI [39.3, 47.1]). A significantly higher percentage of youth whose parent(s) have less than a high school education (54.0%, 95% CI [49.7, 58.3]) achieved these guidelines compared to those whose parents have a post-secondary education (43.8%, 95% CI [39.7, 47.9]).

Children

Half (50.1%, 95% CI [47.4, 52.9]) of First Nations children reported achieving at least 60 minutes of moderate-to-vigorous-intensity physical activity every day. There were no significant gender differences among children, as the rate was 47.7% (95% CI [44.0, 51.5]) among males and 52.6% (95% CI [49.1, 56.0]) among females. In terms of parental education, no significant difference was found, as the rate was 54.3% (95% CI [49.1, 59.3]) among children whose parents have less than a high school education and 49.2% (95% CI [45.8, 52.6]) among children whose parents have a post-secondary education.

Leisure-time Physical Activity

Adults

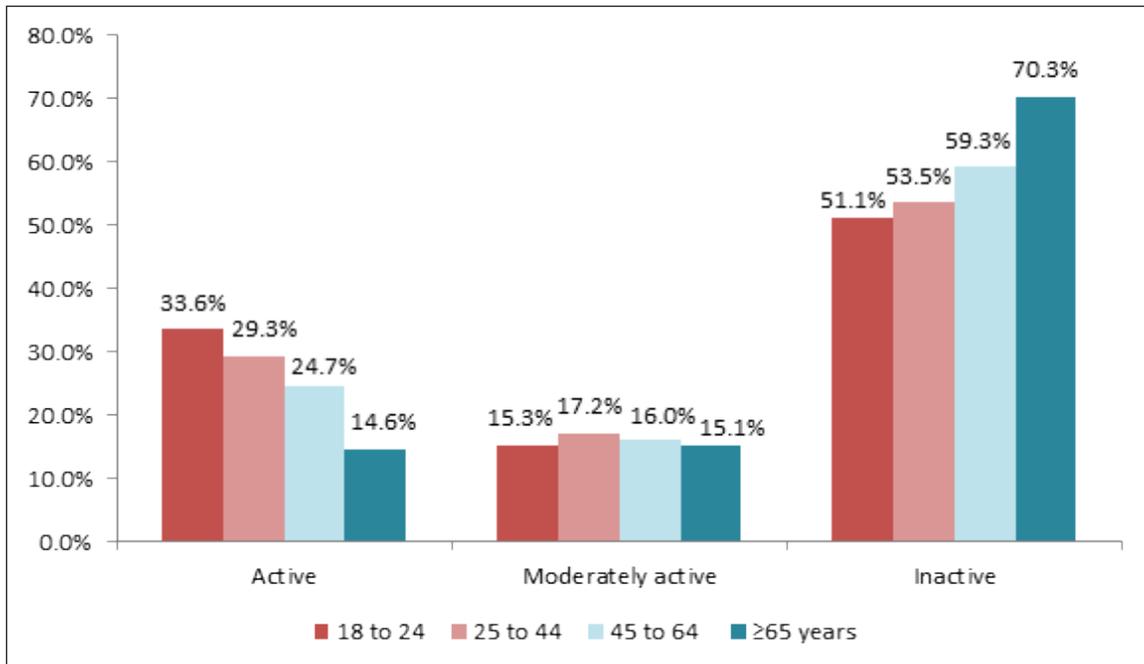
Based on the definition of leisure-time activity described in the Methods section, more than half (56.6%, 95% CI [54.9, 58.3]) of adults were considered inactive (equivalent to <1.5 MET), 16.3% (95% CI [15.2, 17.5]) were considered moderately active (equivalent to 1.5 to 2.9 MET) and 27.1% (95% CI [25.6, 28.6]) were considered active (equivalent to 3 or more MET hours per week). Although not directly comparable due to differences in methodology and in question wording, inactivity rates from the RHS Phase 3 were slightly higher compared to self-reported leisure-time physical activity among the national population, which finds that 47% of adults 20 years and older are inactive (CFLRI, 2014a). Similarly, the RHS Phase 3 findings show significantly higher inactivity rates (56.6%, 95% CI [54.9, 58.3]) compared to the RHS Phase 2 (46.5%, 95% CI [44.6, 48.4]) despite differences in the recall period (three months in the RHS Phase 3 compared to 12 months in the RHS Phase 2).

When comparing both extreme values (i.e., inactive and active) among the First Nations adult population, significantly more females (63.8%, 95% CI [61.8, 65.8]) than males (49.4%, 95% CI [47.0, 51.7]) were inactive whereas a significantly greater proportion of males were considered active (33.1%, 95% CI [30.7, 35.7]) compared to females (21.0% (95% CI [19.4, 22.6])).

The proportion considered active was significantly higher among younger adults aged 18–24 (33.6%, 95% CI [29.9, 37.6]) than older adults aged 65 and older (14.6%, 95% CI [12.5, 16.9]) (see *Figure 5.1*).



Figure 5.1: Leisure-time physical activity categories among First Nations adults, by age



Leisure-time physical activity was associated with socio-economic factors. For instance, a significantly greater proportion of First Nations adults with less than a high school education (60.4%, 95% CI [57.3, 63.5]) reported being inactive compared to those with a post-secondary diploma or training (53.3%, 95% CI [51.2, 55.4]). Similarly, a significantly higher proportion of adults with household incomes less than \$15,000 per year (60.2%, 95% CI [56.9, 63.5]) were inactive compared to adults with household incomes of \$50,000 and higher per year (49.4%, 95% CI [45.3, 53.7]). A significantly higher percentage of adults who said that they were not currently working for pay were considered inactive (59.5%, 95% CI [57.1, 61.8]) compared to those who were employed (53.0%, 95% CI [50.6, 55.5]).

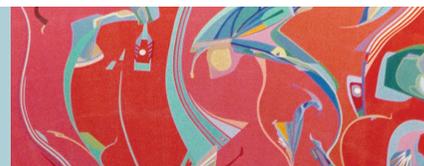
Youth

Among First Nations youth, nearly two fifths (37.2%,

95% CI [34.5, 40.0]) were considered inactive, 17.7% (95% CI [15.7, 19.8]) were considered moderately active and 45.1% (95% CI [42.3, 47.9]) were considered active. The RHS Phase 2 results show that 28.1% (95% CI [25.9, 30.4]) of youth were inactive, while 22.6% (95% CI [21.1, 24.3]) were moderately active and 49.3% (95% CI [47.2, 51.3]) were considered active, although these percentages cannot be directly compared due to changes in the recall period.

Based on self-reported leisure-time physical activity among the general Canadian population, 29.6% of youth aged 12 to 19 were considered inactive in their leisure time (Statistics Canada, 2016). Based on this statistic, inactivity rates from the RHS Phase 3 seem slightly higher, although the RHS Phase 3 and the national statistics are not directly comparable.

A significantly greater proportion of female First Nations youth were considered inactive (42.1%, 95%



CI [39.0, 45.4]) compared to males (32.5%, 95% CI [29.2, 36.0]), whereas a significantly higher proportion of males were considered active (50.6%, 95% CI [46.8, 54.4]) compared to females (39.3%, 95% CI [36.2, 42.6]).

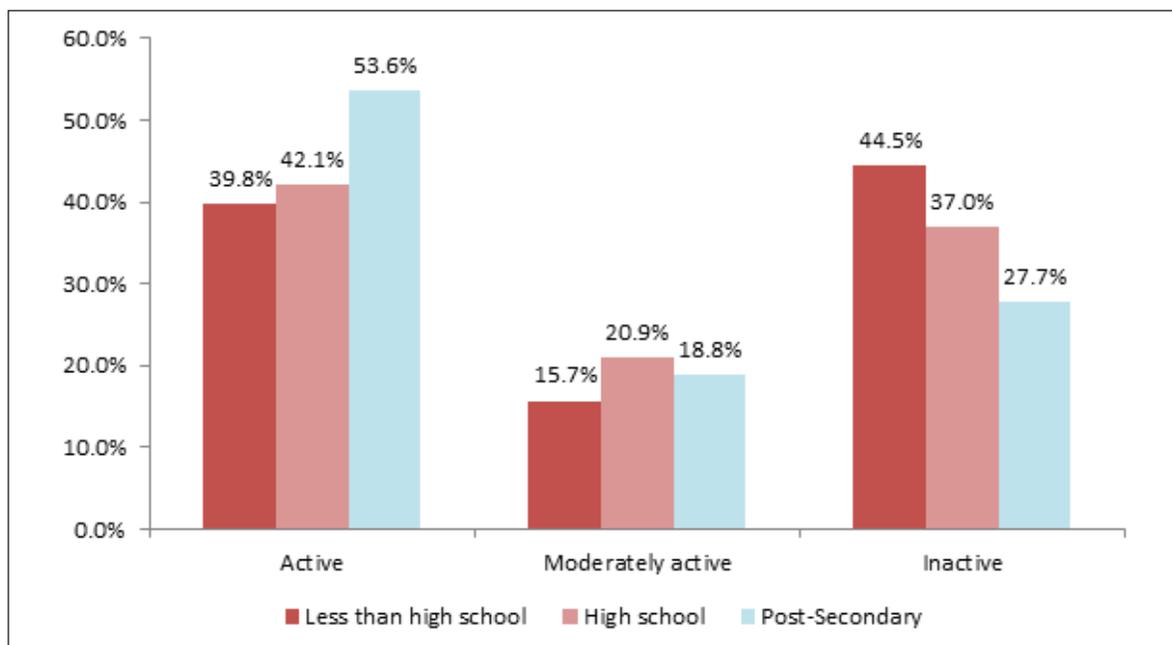
Significantly more 15- to 17-year-olds (40.7%, 95% CI [37.9, 43.6]) were considered inactive compared to 12- to 14-year-olds (33.2%, 95% CI [29.2, 37.4]).

A significantly greater proportion of youth whose parents had post-secondary education (53.6%, 95% CI [49.5, 57.6]) were considered active compared to

those with less than high school (39.8%, 95% CI [33.6, 46.3]) or high school (42.1%, 95% CI [37.8, 46.6]). The opposite is true for inactive youth. Youth whose parents had less than high school education (44.5%, 95% CI [39.0, 50.3]) had higher rates of inactivity compared to 27.7% (95% CI [24.5, 31.1]) of youth whose parents had post-secondary education.

A significantly higher percentage of youth living in urban environments (49.5%, 95% CI [46.5, 52.5]) were considered active compared to those living in rural environments (39.5%, 95% CI [36.2, 42.9]) (see *Figure 5.2*).

Figure 5.2: Leisure-time physical activity categories among First Nations youth, by parent’s highest level of education





Children

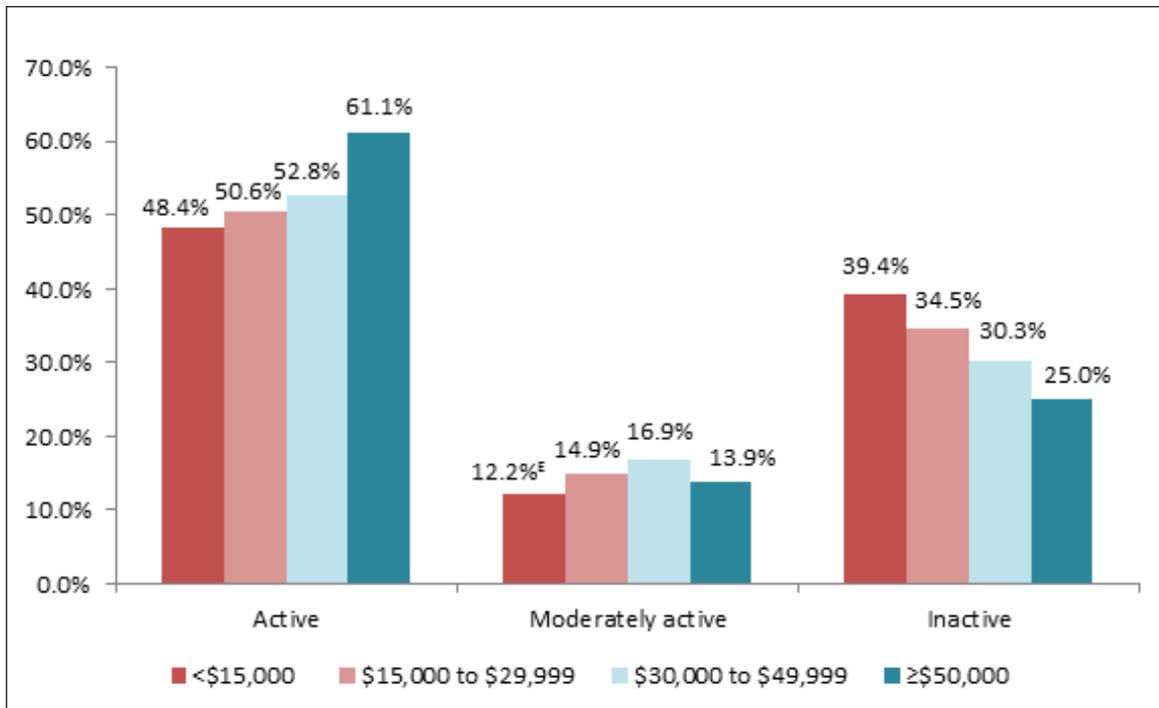
Among children aged 6 to 11, 34.0% (95% CI [31.4, 36.6]) were inactive, 14.5% (95% CI [12.9, 16.3]) were moderately active and 51.5% (95% CI [48.7, 54.2]) were considered active. The RHS Phase 2 results show that 61.9% of children were considered active, 20.2% were moderately active and 17.9% were inactive, although the two surveys cannot be directly compared as the RHS Phase 2 asked about these activities with a 12-month recall period and the RHS Phase 3 asked for a three month recall period. Significantly more females (17.2%, 95% CI [14.7, 20.1]) were moderately active compared to males (11.9%, 95% CI [10.0, 14.0]).

A significantly higher percentage of children whose parent(s) had a post-secondary education (56.0%, 95% CI [52.2, 59.7]) were considered active compared

to those whose parents had less than a high school education (45.4%, 95% CI [40.7, 50.3]). The opposite is true for children who were inactive whose parents had less than high school education (41.0%, 95% CI [36.3, 45.9]) compared to those whose parents had a post-secondary education (28.2%, 95% CI [25.0, 31.5]).

A significantly higher proportion of children living in households earning \$50,000 or more per year (61.1%, 95% CI [55.6, 66.4]) were considered active compared to those living in households earning less than \$15,000 per year (48.4%, 95% CI [41.5, 55.3]). The opposite relationship is true among children considered inactive living in households with incomes of less than \$15,000 per year (39.4%, 95% CI [33.2, 46.0]) compared to 25.0% (95% CI [20.2, 30.4]) of those living in households with annual incomes of \$50,000 and higher (see *Figure 5.3*).

Figure 5.3: Leisure-time physical activity categories among First Nations children aged 6-11, by household income



Note: ^E High sampling variability, interpret with caution



A significantly greater proportion of children living in large communities (1,500 or more residents) were considered inactive (36.8%, 95% CI [33.2, 40.7]) compared to those from small communities (75 to 299 residents) (22.2%, 95% CI [17.0, 28.4]). The reverse is true for those who were considered active: 47.4% (95% CI [43.3, 51.4]) who were active live in large communities compared to 62.0% (95% CI [57.1, 66.6]) in small communities. Significantly more children living in rural communities (38.4%, 95% CI [34.7, 42.3]) were inactive compared to those living in urban environments (29.8%, 95% CI [25.7, 34.4]).

Factors Associated with Being Active in Leisure Time

Adults

A greater percentage of First Nations adults who reported very good/excellent general health or very good/excellent mental health were considered active in their leisure time compared to those who cited fair or poor general or mental health (see *Table 5.7*). A greater proportion of adults who are considered normal weight or overweight were active compared to those who were considered obese. A higher percentage

of adults who always/almost always consume a nutritious, balanced diet were considered active compared to those who do so less often. Over one quarter of adults who cited either no health conditions (27.5% (95% CI [25.4, 29.7]) or one health condition (32.9%, 95% CI [29.3, 36.8]) reported being active compared to 23.0% (95% CI [21.0, 25.2]) of those who had three or more conditions.

A significantly greater percentage of adults who believed that participating in regular exercise or sport, feeling in balance (physically, emotionally, mentally and spiritually), having good social support from family, friends and coworkers and participating in cultural or traditional activities are important factors in helping them be healthy were active compared to those who did not report these factors. Moreover, a higher proportion of adults who felt that they were in balance physically, emotionally, mentally and spiritually all of the time were considered active in leisure time compared to those who felt they were not in balance (see *Table 5.7*).



Table 5.7: Individual-level factors related to health, by percentage of First Nations adults considered active according to levels of leisure-time physical activity

Individual-level factors related to health		% Active	[95% CI]	
Perceived general health	Excellent, very good	34.3	[31.9, 36.7]	
	Fair, poor	19.4	[16.8, 22.3]	
Perceived mental health	Excellent, very good	30.5	[28.5, 32.7]	
	Fair, poor	22.5	[19.2, 26.2]	
Consumed a nutritious, balanced diet	Always/Almost always	33.3	[31.2, 35.4]	
	Sometimes	24.0	[21.8, 26.4]	
	Rarely	17.9	[14.6, 21.7]	
	Never	14.8 ^E	[9.2, 23.1]	
Body mass index	Normal	32.4	[29.3, 35.6]	
	Overweight	29.8	[27.3, 32.5]	
	Obese	23.1	[21.1, 25.2]	
Number of chronic health conditions	None	27.5	[25.4, 29.7]	
	One	32.9	[29.3, 36.8]	
	Two	26.2	[22.3, 30.6]	
	Three or more	23.0	[21.0, 25.2]	
Perceived balance	Physical	All of the time	34.3	[31.7, 37.0]
		None of the time	21.9	[16.8, 28.0]
	Emotional	All of the time	32.8	[30.1, 35.5]
		None of the time	23.7	[18.7, 29.5]
	Mental	All of the time	33.2	[30.8, 35.6]
		None of the time	22.8	[18.0, 28.5]
Spiritual	All of the time	33.2	[30.5, 35.9]	
	None of the time	22.7	[17.8, 28.5]	
Perceptions of factors that make one healthy	Cited good social support		30.2	[28.1, 32.3]
	Did not cite good social support		23.9	[21.5, 26.4]
	Cited regular exercise, sports		38.3	[36.1, 40.7]
	Did not cite regular exercise, sports		16.9	[15.1, 18.9]
	Cited being in balance		32.3	[30.0, 34.8]
	Did not cite being in balance		23.9	[21.9, 26.0]
	Cited traditional cultural activities		33.2	[30.9, 35.6]
	Did not cite traditional cultural activities		24.1	[22.2, 26.1]



Factors including sharing traditional foods among the household, having a sense of belonging and participation in community events were analyzed in relation to being active (according to leisure-time activity level). Statistically significant relationships are illustrated in *Table 5.8*. A significantly higher proportion of adults who often had traditional food shared with them and their household were considered active compared to those who experienced this less often.

A significantly greater percentage of adults who felt a very strong sense of belonging within their community were active compared to those who felt that they had a somewhat strong or a somewhat weak sense of belonging. Adults who have at least sometimes participated in their community’s cultural events were considered active compared to those who rarely or never have (see *Table 5.8*).

Table 5.8: Individual- or social-level factors, by percentage of First Nations adults considered active according to levels of leisure-time physical activity

Individual- or social-level factors		% Active	[95% CI]
Share traditional food among the household	Often	35.3	[32.5, 38.3]
	Sometimes	25.8	[23.4, 28.2]
	Rarely	23.4	[20.5, 26.6]
	Never	18.5	[15.6, 21.9]
Sense of belonging in local community	Very strong	33.7	[30.8, 36.8]
	Somewhat strong	25.2	[23.1, 27.4]
	Somewhat weak	22.7	[19.8, 26.0]
	Very weak	23.3	[16.7, 31.4]
Take part in local community cultural events	Always/Almost always	33.6	[30.9, 36.4]
	Sometimes	29.3	[27.2, 31.6]
	Rarely	22.5	[19.9, 25.2]
	Never	16.4	[13.2, 20.1]

Note: ^E High sampling variability, interpret with caution.

Factors associated with community strengths are also explored in relation to leisure-time physical activity. A higher proportion of adults who stated that the availability of traditional gatherings/ceremonial activities such as powwows (32.8%, 95% CI [30.5, 35.1]) and the natural environment or resources

(35.6%, 95% CI [32.5, 38.8]) were important strengths in their community were considered active in their leisure time compared to those who indicated that they were not (25.1%, 95% CI [23.1, 27.3] and 26.7%, 95% CI [24.9, 28.6], respectively).



Youth

A significantly greater proportion of First Nations youth who indicated that they were in very good or excellent general or mental health were considered active in their leisure time compared to those who indicated fair or poor general or mental health. Body mass index and perceptions of satisfaction with one’s weight were also associated with activity levels, whereby significantly more youth of normal weight were considered active compared to those who were obese. In addition, a greater proportion of youth who were very satisfied with their weight were considered active in leisure time compared to those who were neither satisfied nor dissatisfied or who were dissatisfied with their weight. A greater proportion of youth who have always or almost always consumed a nutritious, balanced diet were active in leisure time compared to those who did so less often or less frequently (see *Table 5.9*).

A significantly higher percentage of youth who had one health condition were considered active compared to those with two or more health conditions. A significantly higher percentage of youth who felt that they are in balance all of the time with three of the four aspects (the exception being emotionally in balance) were considered active in their leisure time compared to youth who said none of the time (see *Table 5.9*).

Perceptions of factors that help make an individual healthy were also examined in relation to being active. A significantly greater proportion of First Nations youth who cited good diet, regular exercise or sport, being in balance, and participation in traditional cultural activities as important factors for being healthy were active compared to those who did not report these factors as being important for health (see *Table 5.9*).

Table 5.9: Individual-level factors related to health, by percentage of First Nations youth considered active according to levels of leisure-time physical activity

Individual-level factors related to health		% Active	[95% CI]
Perceived general health	Excellent, very good	52.2	[48.2, 56.1]
	Fair, poor	34.6	[28.4, 41.4]
Perceived mental health	Excellent, very good	50.7	[46.5, 54.8]
	Fair, poor	35.2	[29.4, 41.4]
Body mass index	Normal	50.1	[46.9, 53.4]
	Overweight	45.0	[39.5, 50.6]
	Obese	38.2	[31.9, 44.8]
Satisfaction with weight	Very satisfied	53.2	[49.0, 57.3]
	Somewhat satisfied	44.9	[40.5, 49.4]
	Neither satisfied nor dissatisfied	42.3	[37.2, 47.7]
	Somewhat dissatisfied	36.9	[31.0, 43.2]
	Very dissatisfied	28.7 ^E	[19.6, 40.0]
Consumed a nutritious, balanced diet	Always/Almost always	57.7	[53.3, 61.9]
	Sometimes	40.5	[37.6, 43.4]
	Rarely	28.1	[21.9, 35.2]
	Never	19.6 ^E	[10.6, 33.2]



Number of chronic conditions		None	42.6	[39.5, 45.7]
		One	56.6	[50.5, 62.4]
		Two	39.9	[33.4, 46.8]
		Three or more	44.1	[37.9, 50.4]
Perceived balance	Physical	All of the time	57.2	[53.2, 61.0]
		None of the time	38.2	[31.7, 45.1]
	Emotional	All of the time	55.0	[50.6, 59.4]
		None of the time	44.7	[37.5, 52.1]
	Mental	All of the time	54.3	[50.1, 58.4]
		None of the time	43.0	[36.8, 49.5]
	Spiritual	All of the time	55.8	[51.6, 59.9]
		None of the time	39.8	[32.8, 47.3]
Perceptions of factors that make one healthy		Cited good diet	53.1	[49.1, 57.1]
		Did not cite good diet	39.1	[36.4, 42.0]
		Cited regular exercise, sports	58.8	[55.0, 62.5]
		Did not cite regular exercise, sports	30.5	[27.7, 33.4]
		Cited being in balance	56.3	[50.7, 61.6]
		Did not cite being in balance	42.8	[40.1, 45.4]
		Cited traditional cultural activities	56.9	[52.0, 61.7]
		Did not cite traditional cultural activities	42.8	[40.2, 45.4]

Note: ^E High sampling variability, interpret with caution.

Youth who often had traditional food shared with their household had higher rates of being active in leisure time, compared to those who had traditional food shared with their household less often (see *Table 5.10*). Ratings of belongingness were also examined, and significantly more youth who felt a very strong sense of belonging within their community were active compared to those who felt a lesser sense of belonging.

When examining the relationship between perceptions of the importance of cultural events, more than half of youth (55.4%) who strongly agreed

that cultural events were important were active compared to those who agreed (43.7%), neither agreed nor disagreed (34.4%) or disagreed (27.5%). These differences are statistically significant with the exception of the difference between those who neither agreed nor disagreed compared to those who disagreed (see *Table 5.10*). Furthermore, a significantly higher proportion of youth who always/almost always (53.9%) took part in community cultural events were active compared to those who rarely (36.8%) or never (22.0%^E) participated in these types of activities (see *Table 5.10*).



A significantly higher proportion of youth who took part in traditional activities outside of school 4 or more times per week (73.9%) were active compared to those who never took part (38.1%). A similar relationship was found among those who participated

in sports teams or lessons outside of school hours 4 times or more per week: a significantly higher percentage of youth were active (73.0%) compared to those who did so less often (see *Table 5.10*).

Table 5.10: Individual- or social-level factors, by percentage of First Nations youth considered active according to levels of leisure-time physical activity

Individual- or social-level factors		% Active	[95% CI]
Share traditional food with the household	Often	59.0	[53.4, 64.4]
	Sometimes	42.3	[39.1, 45.6]
	Rarely	40.1	[35.7, 44.7]
	Never	42.0	[35.8, 48.5]
Sense of belonging in local community	Very strong	59.3	[53.0, 65.4]
	Somewhat strong	47.2	[44.4, 50.0]
	Somewhat weak	37.8	[33.3, 42.4]
	Very weak	28.8 ^E	[18.7, 41.5]
Perception that traditional cultural events are important	Strongly agree	55.4	[51.0, 59.6]
	Agree	43.7	[40.9, 46.5]
	Neither agree nor disagree	34.4	[29.4, 39.8]
	Disagree	27.5	[19.1, 37.8]
	Strongly disagree	64.9	[43.2, 81.8]
Take part in local community cultural events	Always/Almost always	53.9	[49.1, 58.6]
	Sometimes	48.1	[44.3, 51.9]
	Rarely	36.8	[31.8, 42.1]
	Never	22.0 ^E	[14.5, 32.0]
Take part in traditional activities outside of school	Never	38.1	[34.9, 41.5]
	<1 time per week	53.7	[49.4, 58.0]
	1-3 times per week	56.9	[51.1, 62.5]
	≥4 times per week	73.9	[57.2, 85.7]
Take part in sports teams or lessons outside of school	Never	28.7	[24.2, 33.6]
	<1 time per week	44.0	[39.4, 48.8]
	1-3 times per week	54.9	[50.6, 59.2]
	≥4 times per week	73.0	[65.7, 79.2]

Note: ^E High sampling variability, interpret with caution.



Children

A significantly higher proportion of First Nations children aged 6 to 11 years who always/almost always consumed a nutritious, balanced diet were active (57.5%) compared to those who did so less often. Similarly, a significantly higher percentage of those who often had traditional food shared with their household were active (63.2%) compared to those who report traditional food sharing less often (see *Table 5.11*).

Three fifths (60.5%) of caregivers who strongly agreed that it is important to them that traditional cultural events are a part of their child's life reported the child being active compared to 42.1% of those who agreed and 38.7% who neither agreed nor disagreed, (note: these differences are statistically significant). In terms of participation, a significantly greater percentage of children (aged 6–11) who always/almost always take part in community cultural events are considered active in leisure time, compared to those who have participated less often (see *Table 5.11*).

A significantly higher proportion of children (aged 6–11 years) who participate in traditional activities outside of school hours (such as singing, drumming or dancing 4 or more times per week) 75.5% were considered active in their leisure time compared to 44.9% who never participate in these activities. As one might expect, significantly more children who participated in sports teams or lessons outside of school hours 4 or more times per week were considered active (76.5%) compared to those who did so less often (see *Table 5.11*).



Table 5.11: Individual- or social-level factors, by percentage of First Nations children aged 6-11 considered active according to levels of leisure-time physical activity

Individual- or social-level factors		% Active	[95% CI]
Consumed a nutritious, balanced diet in the year prior to the survey	Always/Almost always	57.5	[54.1, 60.9]
	Sometimes	44.6	[40.1, 49.1]
	Rarely	28.3 ^E	[17.8, 41.9] ^E
	Never	^F	^F
Share traditional food with the household	Often	63.2	[59.1, 67.1]
	Sometimes	48.2	[44.4, 52.1]
	Rarely	46.9	[41.6, 52.3]
	Never	40.2	[32.8, 48.2]
Perception that traditional cultural events are important	Strongly agree	60.5	[57.2, 63.7]
	Agree	42.1	[37.7, 46.6]
	Neither agree nor disagree	38.7	[31.6, 46.3]
	Disagree	49.6 ^E	[32.9, 66.3] ^E
	Strongly disagree	^F	^F
Take part in local community cultural events	Always/Almost always	63.5	[59.1, 67.6]
	Sometimes	50.4	[46.6, 54.1]
	Rarely	38.7	[33.7, 43.9]
	Never	29.6	[21.5, 39.3]
Take part in traditional activities outside of school	Never	44.9	[41.3, 48.5]
	<1 time per week	59.4	[54.9, 63.8]
	1-3 times per week	63.7	[57.2, 69.8]
	≥4 times per week	75.5	[61.4, 85.6]
Take part in sports teams or lessons outside of school	Never	39.9	[35.7, 44.2]
	<1 time per week	46.8	[40.8, 52.9]
	1-3 times per week	66.4	[62.6, 69.9]
	≥4 times per week	76.5	[69.1, 82.7]

Note: ^E High sampling variability, interpret with caution.

^F Suppressed due to low cell count or very high sampling variability.



Sedentary Behaviours

Adults

The RHS Phase 3 results show that 13.0% (95% CI [11.9, 14.1]) of First Nations adults spent less than 2 hours of sedentary time per day, while 33.3% (95% CI [32.0, 34.7]) spent between 2 and 4 hours of sedentary

time per day and 53.7% (95% CI [52.2, 55.2]) spent 4 hours or more per day. Slightly more females (14.5%, 95% CI [13.0, 16.1]) than males (11.4%, 95% CI [10.1, 13.0]) spent less than 2 hours of sedentary time, although the difference is not statistically significant.

Nearly 6 in 10 (58.9%, 95% CI [55.0, 62.8]) 18- to 24-year-olds spent 4 or more hours of sedentary time compared to roughly 5 in 10 (51.1%, 95% CI [49.0, 53.2]) 45- to 64-year-olds; the difference is statistically significant. A significantly higher proportion of adults aged 45 to 64 years spent between 2 and 4 hours in sedentary time per day (35.7%, 95% CI [33.8, 37.7]) compared to adults aged 18 to 24 years (29.3%, 95% CI [26.0, 32.9]) (see *Figure 5.4*).

A significantly lower percentage of First Nations adults who have a post-secondary diploma or training (10.8%, 95% CI [9.5, 12.2]) spent less than 2 hours in sedentary time per day compared to those who have

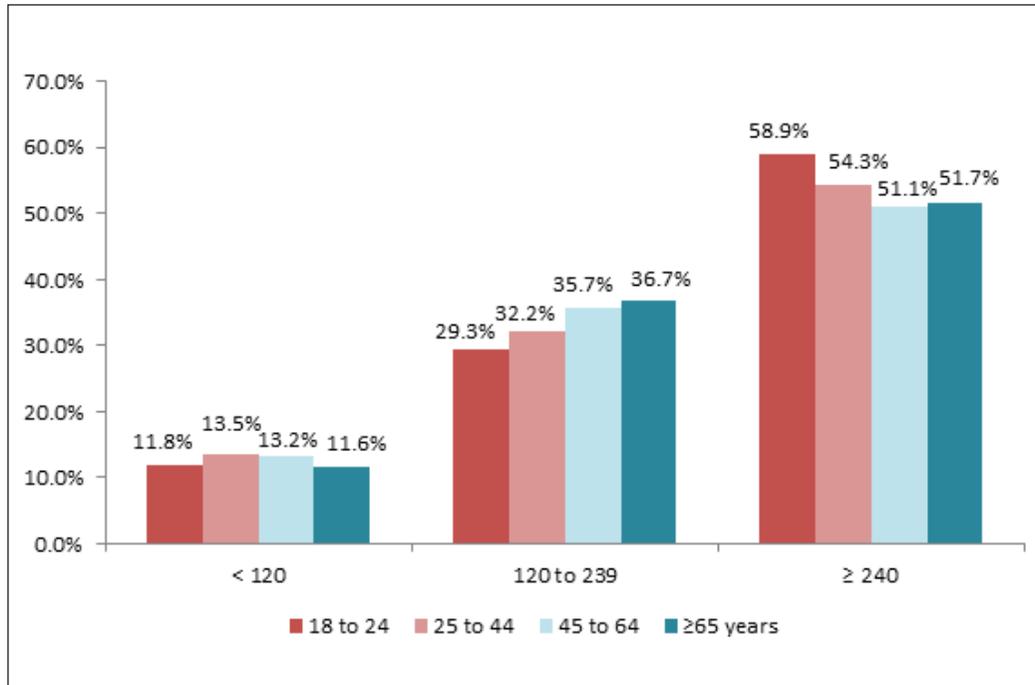
less than a high school education (15.0%, 95% CI [13.3, 16.8]). In addition, significantly more adults who have less than a high school education (55.7%, 95% CI [53.2, 58.3]) cited sedentary time of 4 hours or more compared to those with a university education (45.5%, 95% CI [39.8, 51.3]).

Similarly, a significantly lower percentage of adults who live in households with annual incomes of \$25,000 to \$49,999 (10.3%, 95% CI [8.8, 12.1]) spent less than 2 hours of sedentary time per day compared to those who live in households with less than \$15,000 annual income (14.4%, 95% CI [12.2, 16.8]).

A significantly smaller proportion of adults who have household incomes of \$50,000 or more per year reported sedentary time of 4 hours or more (44.7%, 95% CI [40.5, 49.0]) compared to adults who live in households with incomes of less than \$15,000 per year (54.3%, 95% CI [51.3, 57.3]). Significantly more adults who were not currently working for pay reported 4 hours or more of sedentary time (57.9%, 95% CI [56.0, 59.8]) compared to those who were working (49.1%, 95% CI [47.0, 51.3]). A significantly higher percentage of adults who live in an urban setting (56.5%, 95% CI [54.0, 58.9]) spent 4 or more hours in sedentary time compared to those who live in rural communities (51.0%, 95% CI [49.1, 52.9]).



Figure 5.4: Number of minutes of sedentary time per day among First Nations adults, by age



Youth

Among First Nations youth, 17.0% (95% CI [15.3, 18.8]) spent less than 2 hours of sedentary time per day, while 32.4% (95% CI [30.3, 34.6]) spent between 2 and 4 hours and 50.6% (95% CI [48.4, 52.8]) spent 4 or more hours of sedentary time per day. Despite no significant gender differences, sedentary time does vary by age. A significantly higher proportion of 15- to 17-year-olds (55.3%, 95% CI [52.8, 57.8]) spent 4 or more hours in sedentary time compared to youth aged 12 to 14 years (45.0%, 95% CI [41.0, 49.0]).

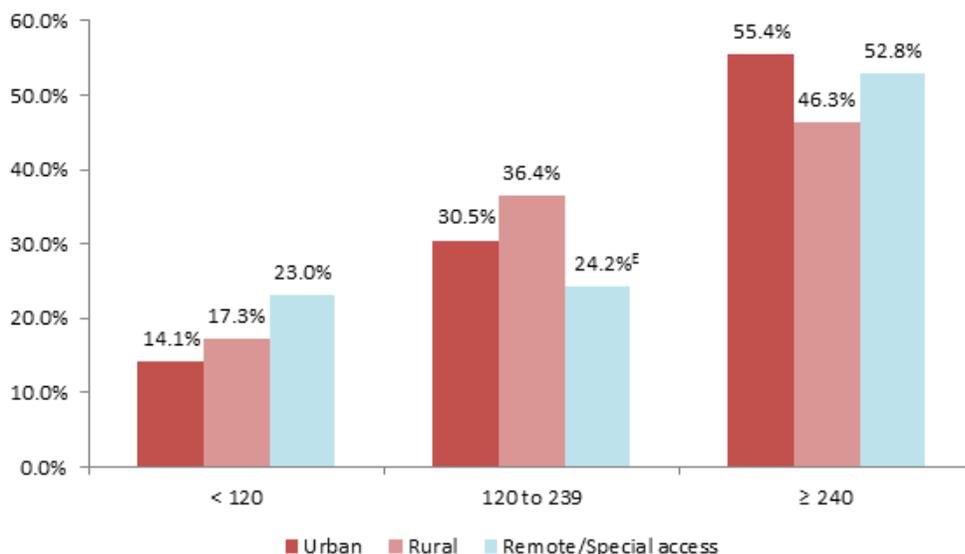
A significantly greater proportion of First Nations youth whose parents that have less than a high school education spent less than 2 hours in sedentary time

(19.0%, 95% CI [15.7, 22.8]) compared to those whose parents that have a post-secondary education (9.8%, 95% CI [7.8, 12.2]).

Significantly more First Nations youth who live in remote or special-access communities spent less than 2 hours of sedentary time per day (23.0%, 95% CI [17.1, 30.2]) compared to those who live in urban environments (14.1%, 95% CI [11.9, 16.7]). A significantly higher proportion of youth who live in urban environments (55.4%, 95% CI [51.6, 59.1]) had spent 4 hours or more per day in sedentary time compared to those who live in rural communities (46.3%, 95% CI [43.5, 49.1]) (see *Figure 5.5*).



Figure 5.5: Number of minutes of sedentary time per day among First Nations youth, by remoteness



Note: ^E High sampling variability, interpret with caution.

Children

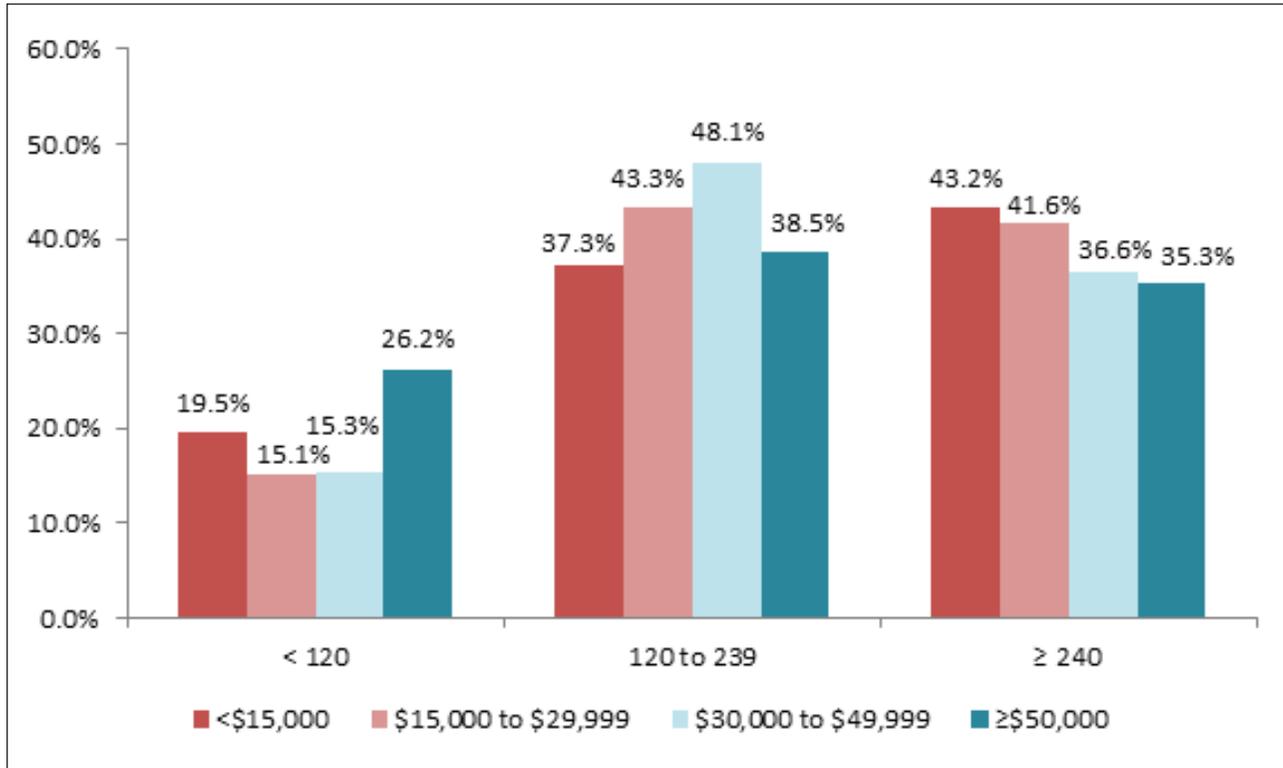
Among First Nations children, 20.7% (95% CI [19.3, 22.1]) spent less than 2 hours a day in sedentary time whereas 40.4% (95% CI [38.1, 42.7]) spent between 2 and 4 hours per day and 38.9% (95% CI [36.6, 41.3]) spent 4 hours or more. The lowest and the highest amount of sedentary behaviour show no significant differences by gender.

Significantly more children aged 5 years or younger (25.8%, 95% CI [23.3, 28.5]) spent less than 2 hours being sedentary compared to children aged 6–11

(16.9%, 95% CI [15.4, 18.6]). There are no significant age-related differences in sedentary time of 4 hours or more among children.

A significantly greater proportion of children who live in households with incomes of \$50,000 or more per year (26.2%, 95% CI [22.3, 30.5]) spent less than 2 hours of sedentary time compared to children who live in households with incomes of \$15,000 to \$29,999 (15.1%, 95% CI [12.7, 17.8]) and of \$30,000 to \$49,999 (15.3%, 95% CI [12.4, 18.6]) (see Figure 5.6).

Figure 5.6: Number of minutes of sedentary time among First Nations children, by household income



Factors Associated with Low Levels of Sedentary Time

Adults

Table 5.12 describes the relationships between health- and diet-related factors with lower times of sedentary behaviours (i.e., less than 2 hours). The proportion of adults who often had traditional food shared with their household reported a significantly higher percentage of low sedentary time (15.8%) compared to those who rarely had traditional food shared with their home (9.5%). Furthermore, 14.8% of adults who said that participating in cultural or traditional activities was an important factor for being healthy

reported significantly higher rates of low sedentary time compared to those who did not indicate that this was as important (11.6%). A higher percentage of adults who indicated that they felt in balance physically, emotionally, mentally and spiritually none of the time reported low levels of sedentary time compared to those who felt in balance all of the time (see Table 5.12).



Table 5.12: Individual- and social-level factors, by percentage of First Nations adults with low sedentary time (<2 hours/day)

Individual- or social-level factors		% <2 hours/ day of sedentary time	[95% CI]	
Share traditional food among the household	Often	15.8	[13.9, 18.0]	
	Sometimes	12.2	[10.7, 13.9]	
	Rarely	9.5	[7.9, 11.4]	
	Never	14.2	[10.7, 18.7]	
Perceptions of traditional cultural activities that make one healthy	Yes	14.8	[13.0, 16.8]	
	No	11.6	[10.5, 12.8]	
Perceptions of balance	Physical	All of the time	14.0	[12.0, 16.3]
		None of the time	25.5	[20.9, 30.8]
	Emotional	All of the time	13.9	[11.8, 16.2]
		None of the time	30.0	[25.2, 35.3]
	Mental	All of the time	13.1	[11.3, 15.2]
		None of the time	31.2	[24.4, 39.0]
Spiritual	All of the time	13.5	[11.8, 15.5]	
	None of the time	24.0	[19.9, 28.8]	

Youth

Similar to adults, relationships between sedentary behaviours and factors either supporting or hindering sedentary behaviours were studied for youth aged 12 to 17. A higher percentage of youth who did not indicate that good sleep or proper rest or good social supports were important factors for being healthy cited participation of less than 2 hours per day of sedentary time compared to youth who indicated that these factors are important. More than one fifth of youth (21.1%) who stated that they often had traditional food shared with their household also reported the lowest amount of time spent in sedentary behaviours compared to those who rarely (11.5%) o

or never had traditional food shared with their home (10.8%) (see *Table 5.13*).

A significantly greater percentage of youth who reported that they feel that they are in balance with the four aspects none of the time spent lower amounts of sedentary time compared to those who indicated feeling in balance all of the time in each of the four aspects. More than 1 in 5 (21.7%) youth who took part in sports teams or lessons (outside of school) 1 to 3 times per week spent less than 2 hours of sedentary time per day compared to 12.5% of youth who never took part in these types of teams or lessons (see *Table 5.13*).



Table 5.13: Individual- and social-level factors, by percentage of First Nations youth with low sedentary time (<2 hours/day)

Individual- and social-level factors		% <2 hours/day of sedentary time	[95% CI]	
Share traditional food among the household	Often	21.1	[17.5, 25.2]	
	Sometimes	18.0	[15.7, 20.6]	
	Rarely	11.5	[8.7, 15.0]	
	Never	10.8	[7.8, 14.8]	
Perception of balance	Physical	All of the time	18.0	[14.6, 22.0]
		None of the time	36.7	[30.2, 43.8]
	Emotional	All of the time	15.7	[12.3, 19.8]
		None of the time	34.7	[28.4, 41.5]
	Mental	All of the time	13.4	[10.5, 16.8]
		None of the time	36.1	[30.1, 42.6]
	Spiritual	All of the time	14.3	[10.9, 18.5]
		None of the time	33.6	[27.9, 39.7]
Perceptions of factors that make one healthy	Cited good sleep, proper rest	14.3	[12.3, 16.7]	
	Did not cite good sleep, proper rest	21.3	[18.5, 24.5]	
	Cited good social support	13.1	[11.0, 15.6]	
	Did not cite good social support	19.9	[17.7, 22.3]	
Take part in sports teams or lessons outside of school	Never	12.5	[10.1, 15.5]	
	<1 time per week	15.5	[12.5, 19.0]	
	1-3 times per week	21.7	[18.4, 25.5]	
	≥4 times a week	19.8	[14.9, 25.9]	

Children

A significantly greater percentage of children who have always/almost always (22.4%, 95% CI [20.4, 24.6]) consumed a nutritious, balanced meal spent less than 2 hours of sedentary time on a daily basis compared to those who sometimes consumed a nutritious, balanced meal (16.7%, 95% CI [14.8, 18.9]). In a similar manner, nearly one quarter (24.8%, 95% CI [21.8, 28.1]) of children who often had traditional food shared with their household also cited low sedentary

time, which was significantly higher compared to those who sometimes (17.4%, 95% CI [15.6, 19.4]) or rarely had traditional food shared with their home (17.5%, 95% CI [14.4, 21.1]).

Participation in certain types of activities outside of school was also associated with low sedentary time (see *Table 5.14*). Roughly one third of children (32.3%, 95% CI [24.2, 41.6]) who took part in sports



teams or lessons outside of school at least 4 times per week reported less than 2 hours of sedentary time, a significantly higher percentage compared to children who took part in sports or team lessons less than once a week (14.2%, 95% CI [11.5, 17.3]) and those who never did (20.6%, 95% CI [18.7, 22.6]). Moreover, a significantly higher proportion of caregivers who strongly agreed that it was important that traditional or cultural events be part of the child’s life reported

that the child spent less than 2 hours in sedentary time compared to those who agreed, neither agreed nor disagreed, or disagreed. Further to this, significantly more children who always or almost always (24.9%, 95% CI [22.1, 27.9]) took part in local community cultural events spent less than 2 hours being sedentary compared to those who sometimes (18.1%, 95% CI [16.0, 20.5]) or rarely (15.7%, 95% CI [12.6, 19.2]) participated in cultural events.

Table 5.14: Individual- and social-level factors, by percentage of First Nations children with low sedentary time (<2 hours/day)

Individual- and social-level factors		% <2 hours/day of sedentary time	[95% CI]
Consume a nutritious, balanced diet	Always, almost always	22.4	[20.4, 24.6]
	Sometimes	16.7	[14.8, 18.9]
	Rarely	F	F
	Never	74.4	[54.7, 87.5]
Share traditional food among the household	Often	24.8	[21.8, 28.1]
	Sometimes	17.4	[15.6, 19.4]
	Rarely	17.5	[14.4, 21.1]
	Never	27.0	[22.2, 32.4]
Perceptions that traditional cultural events are important	Strongly agree	23.6	[21.6, 25.8]
	Agree	18.1	[15.9, 20.6]
	Neither agree nor disagree	16.6	[13.1, 20.7]
	Disagree	10.4 ^E	[5.8, 18.0]
	Strongly disagree	38.5 ^E	[18.1, 64.0]
Take part in local community cultural events	Always/Almost always	24.9	[22.1, 27.9]
	Sometimes	18.1	[16.0, 20.5]
	Rarely	15.7	[12.6, 19.2]
	Never	29.7	[24.3, 35.9]
Take part in traditional activities outside of school	Never	20.1	[18.0, 22.3]
	Less than once per week	18.0	[15.3, 21.1]
	1-3 times per week	24.7	[19.5, 30.8]
	4 times or more a week	22.0	[15.9, 29.7]
Take part in sports teams or lessons outside of school	Never	20.6	[18.7, 22.6]
	Less than once per week	14.2	[11.5, 17.3]
	1-3 times per week	22.3	[19.4, 25.5]
	4 times or more a week	32.3	[24.2, 41.6]

Note: ^E High sampling variability, interpret with caution.

^F Suppressed due to low cell count or very high sampling variability.



DISCUSSION

Improving and increasing physical activity levels and reducing sedentary behaviours are important public health concerns given their positive contribution towards the reduction of chronic disease and improvements to overall health and quality of life. In Canada, several national initiatives have stressed the importance of physical activity, sport and recreation. As described earlier, guidelines governing movement behaviours in a 24-hour period have been developed for children and youth in Canada, and physical activity guidelines have been developed for adults (CSEP, 2011a; 2011b; 2017). In addition, strategies and frameworks for guiding policy development, programs or action and implementation have been developed, such as the Canadian Sport Policy 2012 and the Framework for Recreation in Canada (Federal, Provincial, and Territorial Ministers Responsible for Sport, Physical Activity and Recreation, 2012; CPRA/ISRC, 2015). At the time of writing this chapter (June 2018), a national policy is being developed that will focus on physical activity in conjunction with sport and recreation.

The RHS Phase 3 results show that more than two fifths of the adult First Nations population are considered active to some extent during their leisure time (43.4%). The proportion of First Nations children and youth who are active to some extent seems much higher when compared to their adult counterparts (62.8% of youth aged 12 to 17 and 66.0% of children aged 6 to 11). When looking at the proportion of children and youth who achieve sufficient physical activity to meet guidelines (60 minutes of moderate-to-vigorous physical activity on a daily basis) in the RHS Phase 3, nearly half report that they achieve this amount. The finding that too few young people are achieving enough physical activity to meet guidelines also appears among the general population. According to objective measurement studies of the general Canadian population, nearly one third of

children and youth nationally accumulate enough activity on average to approximate guidelines. Among adults in the general population, 15% achieve sufficient activity to meet physical activity guidelines when assessed objectively (Colley et al., 2011a).

Results from the RHS Phase 3 indicate that inactivity is apparent among particular gender, age and economic groups. Among adults, inactivity is higher among women, older adults and those living in the lowest income households. Similarly, among youth, inactivity is higher among girls and older youth. Among children, inactivity is higher among those living in lower income households. These findings mirror those for the general population. For example, the Canadian Fitness and Lifestyle Research Institute's CANPLAY study shows that among children and youth, girls take fewer steps than boys, daily steps taken declines as children age into youth and average steps vary by household income (CFLRI, 2017). Similarly, Statistics Canada's Canadian Community Health Survey shows that there is a lower proportion of active women compared to men and that activity levels decline with age among adults (CFLRI, 2014a; Statistics Canada, 2015). These patterns also appear among First Nations people living off reserve (Findlay, 2011).

In order to reduce these disparities, understanding the reasons for the gaps or key barriers among these populations are important for developing and implementing effective and appropriate programs and strategies. The development and promotion of these strategies, beyond knowledge about the barriers, could benefit from an understanding of what enables or motivates particular groups (Coble and Rhodes, 2006; Sushames et al., 2017), such as connections to nature and the environment, health outcomes or social interactions with family or peers (Sushames et al., 2017). The social, cultural and physical contexts and norms are important considerations and can vary among First Nations



populations and communities. Understanding the types of activities that are more popular among particular groups can help with the design of activity programming.

To this end, participation rates in various types of physical activities were also explored in the RHS Phase 3, and the most frequently cited activity among 57.3% of First Nations adults was walking. Walking is a popular activity among all First Nations people, regardless of age or gender, and is therefore an important activity to promote to those who are less active. Emphasizing the benefits of walking—including the ease, convenience and social aspects of this activity—may be beneficial in promoting this activity among particular populations (Cortis et al, 2007).

Traditional activities and sports have historically been important to Indigenous populations. Data from the RHS Phase 3 indicate that traditional physical activities are particularly popular among First Nations adults and that the attrition rate by age is a slower decline than some of the other physical activities, such as participation on competitive teams. The 2012 *Aboriginal Peoples Survey* (Statistics Canada, n.d.b) also shows fairly steady or increasing percentages of traditional activities with age among the off-reserve First Nations population (e.g., hunting, fishing, trapping was cited by 36% of 15- to 24-year-olds, 35.3% among 25- to 54-year-olds, then declined to 25.5% among those 55 years and older; gathering of plants was reported by 22.2% of 15- to 24-year-olds, then increased to 29.0% of 25- to 54-year-olds and 30% of those 55 years and older). Ensuring that these types of activities are promoted in physical activity policy, frameworks, strategies and guidelines may be of considerable value for combating the decline of participation in activities with age.

The majority of the First Nations population (79.3% of children, 83.0% of youth and 87.0% of adults spent at

least 2 hours in sedentary time per day. This amount seems relatively high compared to other limited data among First Nations populations. One study found that one quarter of youth watched more than 2 hours of television daily and one third spent more than 2 hours playing video games (Gates et al., 2013). Results from the RHS Phase 3 indicate that more time spent engaged in sports teams or lessons per week is associated with lower sedentary time among children, and these findings are somewhat similar to those found in studies among off-reserve First Nations, Métis and Inuit children (Smith et al., 2010). Smith et al. (2010) found that children who spent less than 4 hours watching television, using a computer or playing video games were more likely to participate in sports at least once a week compared to those who spent more time in these types of sedentary pursuits. The promotion of active time in organized sports, as well as in unstructured or outdoor play, may play an important role for decreasing rates of sedentary time.

Findings in this chapter suggest a relationship between being active and factors such as being in very good/excellent health, being of normal weight, having fewer health conditions and frequently consuming a nutritious, balanced diet among First Nations adults and youth. The economic impact of physical inactivity in Canada pertaining to chronic disease, obesity and health care costs (total) is estimated at \$6.8 billion per year, with the most expensive chronic conditions attributable to physical inactivity being coronary artery disease, Type 2 diabetes and stroke (Janssen, 2012). The relationships between activity and positive health benefits found in this chapter are important considerations given the role that regular physical activity can have as a preventative strategy for reducing certain health conditions (Rhodes et al., 2017), some of which are more prevalent in some Indigenous populations, such as Type 2 diabetes, metabolic syndrome and cardiovascular risk factors (Katzmarzyk, 2008). In addition, the promotion of physical activity needs to progress beyond a focus



on physical and mental benefits, by shifting to the holistic balance and interconnectedness of physical, mental, emotional and spiritual aspects of health and well-being in order to encourage sustained and better health (Lavallée, 2007; Hanna, 2009; Marsh et al., 2015). Perhaps, to a certain extent, this may be addressed by facilitating mechanisms to promote cultural teachings in all aspects of healthy behaviours.

A key finding in this chapter demonstrated the association between being active and the importance attributed to, and participation in, traditional or cultural events within the community. This was found among all populations: adults, youth and children. Smith et al. (2010) found that among off-reserve First Nations, Métis and Inuit children, those who spent less time in sedentary pursuits (e.g., watching television, using a computer or playing video games) were more likely to participate in sports at least once a week and that those who had participated in extracurricular activities—including cultural activities, art, music or volunteering—were more likely to participate in sports. In order to help generate interest in physical activity programming, as well as to increase retention, decision-makers, program developers and delivery providers can ensure that programs are culturally relevant to First Nations children, youth and adults. This is a critical element to reinforce and support not only cultural identity (Lavallée, 2007) but connectedness to culture and to the environment.

When developing policy and programming, strategies should consider the following: incorporating a wide variety of activity options, including both traditional and non-traditional activities; incorporating physical literacy and a variety of skill-developing opportunities so that individuals of all ages achieve the competence, confidence and knowledge to participate in physical activity and sports; offering various levels of competition and culturally appropriate athlete-development models; ensuring participants are engaged in the development of the programming; and

involving role models (Indigenous Wellness Group, 2012; Canadian Sport for Life, 2014; Dalton et al., 2015).

A review of physical activity behaviours among Indigenous populations in North America showed that social support is an important factor to consider in association with physical activity (Coble & Rhodes, 2006). Other research indicates that social factors were associated with physical activity in Native American women, stressing the importance of support from family and relations, friends and the community for increasing activity levels (Thompson et al., 2003). Smith et al. (2010) found that among off-reserve First Nations, Métis and Inuit children, spending time with Elders was associated with participation in cultural activities and sports. As such, it is essential to incorporate aspects of the social network or environment into the development, implementation and support of strategies, policies and initiatives to promote active behaviours; for example, involve Elders and community members for support and encouragement to share and exchange knowledge and to help bridge generations of participants; encourage parents, families, relations and peers to be involved in supporting participation given their significant role among Indigenous populations; inspire, educate and ensure that Indigenous program leaders, service providers, coaches and officials are well equipped to reflect Indigenous values of family and community (Mason & Koehli, 2012; Blodgett, 2010; Hanna, 2009; Rose & Giles, 2007).

The Truth and Reconciliation Commission of Canada Call to Action #89 states:

We call upon the federal government to amend the Physical Activity and Sport Act to support reconciliation by ensuring that policies to promote physical activity as a fundamental element of health and well-being, reduce barriers to sports participation, increase the pursuit



of excellence in sport, and build capacity in the Canadian sport system, are inclusive of Aboriginal peoples (TRC, 2015, p.14).

Further, the TRC's Call to Action #90 states:

We call upon the federal government to ensure that national sports policies, programs, and initiatives are inclusive of Aboriginal peoples, including, but not limited to, establishing: i. In collaboration with provincial and territorial governments, stable funding for, and access to, community sports programs that reflect the diverse cultures and traditional sporting activities of Aboriginal peoples (p.14).

Ensuring that appropriate and accessible facilities (outdoor and indoor spaces) and quality programming are available in all communities must not be overlooked, especially in remote and rural settings given their specific environmental constraints. Research shows that children spending time outdoors is associated with greater moderate-to-vigorous-intensity physical activity and less sedentary time (Larouche et al., 2016), and children who play in natural environments have demonstrated resilience and developed skills for stress reduction (ParticipACTION, 2015). The use of natural environments and resources may be of particular importance for changing active and sedentary behaviours, or potentially influencing other healthy behaviours, but this requires further research (University of Alberta, 2015). Additional studies are warranted to assess the perception of availability, satisfaction or perceptions of importance and usage of the natural and built environments for supporting physical activity or reducing sedentary behaviours, along with perceived environmental barriers or enablers (such as transportation, maintenance, safety, available facilities and equipment) which can influence behaviours, among First Nations people living in urban, rural or remote settings.

This chapter provides information on current physical activity and sedentary behaviours of First Nations individuals living on reserve and in Northern communities as well as valuable information for informing strategies on key public health issues. Further research could benefit from including an objective measurement of the environment, activity and time spent in sedentary activity in order to increase precision of the measures and to provide comparability to national statistics. Measuring physical activity levels among youth has traditionally relied on self-reported data (e.g., through recall of activities in the past week, three months or year); however, objective measures of physical activity among the youth population have been collected using pedometers and accelerometers at a national level from 2005 to 2007. The reason for the shift in measurement tools from self-report to objective measures is, in part, due to potential bias in self-reported and recalled responses (Colley et al., 2011b). Some research has shown that nearly 60% of studies among adults indicate that self-reported physical activity estimates were higher than measured data (Garriguet & Colley, 2014). The availability of this additional data would be beneficial for developing strategies, establishing targets and evaluating progress.

CONCLUSIONS

In terms of monitoring and surveillance, several Canadian studies have examined physical activity and sport participation rates among the population; however, similar data for Indigenous populations (especially First Nations living on reserve and in Northern communities) is relatively limited. The RHS Phase 3, along with its earlier iterations, provides essential data to address this gap. The findings in this chapter provide critical information and evidence for informing strategies on these key public health issues among First Nations populations living on reserve and



in Northern communities.

This chapter took a multi-faceted approach by looking at a host of factors at the individual, social and community levels which can influence physical activity and sedentary behaviours. These behaviours were associated with very good health, body mass index, diet, presence of chronic conditions, a sense of belonging, perceptions of being in balance with the four aspects of life (physically, emotionally, mentally, and spiritually) and participation in cultural events.

Although physical activity and sedentary behaviours can be considered independently, an intervention approach that considers both of these behaviours while also targeting certain common population segments may be useful.

For example, the newly developed 24-hour movement guidelines take into account the spectrum of intensities of physical activity but reflect on the contribution of reduced sedentary time and appropriate levels of sleep to overall health. The development of guidelines, interventions, programs, initiatives and strategies for increasing physical activity and reducing sedentary behaviours must be culturally valid for First Nations populations. For example, strategies related to physical activity must consider various types and forms of physical activity, including the contribution and importance of traditional activities, cultural considerations, social connectedness, and the role that nature and the environment provide.



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CHAPTER SIX: PERSONAL AND COMMUNITY WELLNESS

EXECUTIVE SUMMARY

The concept of individual wellness, from a First Nations perspective or worldview, stems from the traditional teachings of the medicine wheel that imparts knowledge and understanding of a person's life cycle and their connectedness to all things. The medicine wheel depicts four states of personal wellness including the physical, emotional, mental, and spiritual aspects. As represented in the RHS Cultural Framework (see page 7), First Nations health and wellness is based on a holistic approach that focusses on achieving balance among all states or aspects throughout one's lifespan. Balance is essential to maintaining one's overall health as changes in one aspect can have rippling effects or consequences on other aspects.

Personal wellness is determined by a multitude of influences such as social, economic, environmental, and personal factors, and their related interactions. Key factors such as resilience, family, community health and strengths, sense of belonging, and safety contribute to a person's overall wellness and are examined in the RHS Phase 3. At the core of individual wellness is the community and the importance of relationships "within, between and outside" of the community.

Results from the RHS Phase 3 show that First Nations adults and youth living on-reserve and in Northern communities demonstrate a high prevalence of personal wellness with more than 3 in 5 reporting a sense of physical, emotional, mental, and spiritual balance most or all of the time. Scores from the Pearlin and Schooler's Self-Mastery Scale indicated that the majority of adults and youth have moderate to high levels of mastery, or a sense of control

over their own actions and life (e.g., self-efficacy, confidence, abilities). The data also show that more than half of First Nations adults and youth reported very good or excellent mental health and the majority express that daily life is a bit, not very, or not at all stressful.

Various aspects of community wellness were found to impact personal wellness. The most frequently identified community strengths were Elders, awareness of First Nations culture, and community health programs. Whereas, the most frequently reported challenges were alcohol/drug abuse, housing, and employment/number of jobs. Personal wellness varies with age among First Nations adults. Notably, with age, First Nations adults were found to have a higher prevalence of personal wellness (i.e. higher mastery, more in balance), become more self-reliant, and are more connected with their culture.

While there are a number of methodological and analytic limitations, the current findings provide a foundation for future strengths-based research that can better inform policy and program development aimed at enhancing community and personal wellness.

KEY FINDINGS

Youth

- Nearly 3 in 5 (59.9%) of First Nations youth rated their general health as very good or excellent.
- More than half (55.5%) of First Nations youth rated their mental health as very good or excellent.
- First Nations youth reported feeling in balance



physically (73.3%), emotionally (65.1%), mentally (64.9%) and spiritually (62.0%) most or all of the time.

- The lifetime prevalence of suicide ideation and attempts among First Nations youth was 16.0% and 10.3% respectively. Since the RHS Phase 2, suicide ideation among youth has remained unchanged; however, the rate of suicide attempts has significantly increased from 5.9% in the RHS Phase 2.
- Female youth reported significantly higher percentages of lifetime suicidal thoughts (23.1%) compared with male youth (9.3%). Also, significantly more females reported suicide attempts in their lifetime (15.6%) compared with males (5.2%).
- No significant differences were found between female and male youth who reported suicidal thoughts and attempts in the past 12 past months prior to the survey.
- More than three-quarters (76.6%) of First Nations youth reported having a very or somewhat strong sense of belonging to their local community and the majority of youth (83.2%) reported feeling very or reasonably safe in their community.
- Among First Nations youth, Elders (52.2%), awareness of First Nations culture (49.2%), and community health programs (43.3%) were the most commonly reported community strengths. In the RHS Phase 3 a significantly higher percentage of youth reported that awareness of First Nations culture was a community strength when compared with RHS Phase 2 (23.1%).
- Alcohol and drug abuse (77.3%), housing (45.3%) and employment/number of jobs (42.5%) were the most commonly reported community challenges by First Nations youth.
- More than a quarter (27.9%) of First Nations youth experienced bullying in the 12 months prior to the survey and 17.9% experienced cyberbullying.
- First Nations youth who never considered suicide reported significantly higher levels of mastery, mental health, general health, the four aspects of balance, community safety, and community belonging. They also reported less stress, fewer bullying experiences, and less need for emotional and mental health support compared with those who had considered suicide.

Adults

- More than one-third (37.8%) of First Nations adults perceived their general health as very good or excellent.
- Half (50.5%) of First Nations adults rated their mental health as very good or excellent.
- First Nations adults reported feeling in balance physically (68.9%), emotionally (68.1%), mentally (69.8%) and spiritually (68.1%) most or all of the time.
- The lifetime prevalence of suicide ideation and attempts among First Nations adults was 16.1% and 11.2% respectively. Suicide ideation has significantly decreased in the RHS Phase 3 compared with 22.0% reported in the RHS Phase 2 and 30.9% in the RHS Phase 1.
- Female adults reported significantly higher percentages of lifetime suicidal thoughts (18.7%) compared with male adults (13.7%). Also, nearly twice as many female adults (14.3%) as male adults (8.2%) reported suicide attempts in their lifetime.
- There were no significant differences between First Nations female and male adults who reported suicidal thoughts and attempts in the past 12 past months.
- The majority (80.6%) of First Nations adults reported having a very or somewhat strong sense of belonging to their local community and even more (81.5%) reported feeling very or reasonably safe in their community.



- Among First Nations adults, Elders (56.0%), awareness of First Nations culture (53.6%), and community health programs (51.7%) were the most commonly reported community strengths. Since the RHS Phase 2, a much higher percentage of adults reported that awareness of First Nations culture was a community strength (53.6% in the RHS Phase 3 compared with 24.9% in the RHS Phase 2).
- Alcohol and drug abuse (80.3%), housing (63.1%) and employment/number of jobs (61.6%) were the most commonly reported community challenges by First Nations adults.
- In the year prior to the survey, more than 1 in 10 (11.0%) First Nations adults either sometimes or often experienced physical aggression and 21.0% either sometimes or often experienced verbal aggression. In addition, 6.9% of adults experienced cyberbullying and 24.2% experienced racism.
- First Nations adults who had never considered suicide reported significantly higher levels of mastery, mental health, general health, the four aspects of balance, community safety and community belonging. They also experienced less stress, fewer experiences of aggression, less racism, and less need for emotional and mental health support compared with those who had considered suicide.

INTRODUCTION

Traditional Indigenous perspectives of health and healing are grounded in ideas of holism that integrate a person's spiritual, physical, mental, and emotional states (or dimensions) in balance with their environments (AFN & Health Canada, 2015; Hunter et al., 2006; Lavalley & Poole, 2010; RCAP, 1996a). Accordingly, First Nations people understand mental health issues as a reflection of - and disruption in - their degree of balance (Wilk, Maltby, & Cooke, 2017).

Contrary to contemporary biomedical approaches to health care—which often independently focus on the physical or psychological aspects of well-being—Indigenous approaches to healing aim to maintain a holistic balance between the four dimensions of a person (AFN & Health Canada, 2015; McCormick, 1995). All forms of life are viewed as interrelated, and a spiritual bond exists between human and all forces of nature (Getty, 2010). Thus, this holistic balance is also dependent on one's connection with their community, family, ancestors, and the natural world; for instance, land, animals, and water. (Dumont, 2015).

There has been limited research that has explored First Nations concepts and measures of personal and community wellness using a strengths-based approach. Despite the many historical and contemporary injustices and traumas afflicted on them that result in profound stressors, First Nations people and communities continue to demonstrate resilience, growth, and strength. While Western concepts of wellness tend to take a deficits-based approach that focus on weaknesses, problems, and deficiencies of individuals and communities, a strengths-based approach seeks to understand wellness through examining the positive influences, protective and resiliency factors, political and historical context, and what is working well. Applying this approach to wellness in developing health services and programs has generally shown to be more effective and meaningful in creating lasting change in First Nations communities.

Past and present discriminatory and harmful Canadian government policies have permitted generations of First Nations children to be physically removed from their families and raised in environments devoid of their culture (Canadian Human Rights Tribunal, 2016; Hackett, Feeny, & Tompa, 2016). While the separation of children from their families is traumatic in and of itself, it was and is common for these children to experience



various types of abuse and care limitations. Such experiences create significant barriers to forming key elements in the promotion of mental wellness to future generations, such as adaptive coping mechanisms, nurturing relationships, and parenting skills (Tait, Henry, & Walker, 2013; Wilk et al., 2017). As a result, many First Nations people experience victimization including racism, violence and feelings of disconnection, a lack of belonging, and distrust (e.g., of government institutions and health care providers) (National Collaborating Centre for Aboriginal Health [NCCAH], 2012; NCCAH, 2014). The adverse psychological reactions and heightened levels of stress and that often result from these negative experiences may contribute to mental illness (Hackett et al., 2016; Kirmayer, Brass, & Tait, 2000).

Further, the creation of government-controlled reserves weakened the connection of First Nations people to the land, their lifestyles, and sources of economic sustenance (e.g., migration for hunting). This, coupled with the remote or rural location of many communities, hinders socioeconomic development, and access to health-care services, particularly culturally appropriate mental wellness services (NCCAH, 2012). These circumstances thus provide additional barriers for restoring holistic balance (The College of Family Physicians of Canada, 2016).

There is limited research on the role of community and social supports in contributing to personal wellness of First Nations children, youth and adults. Social support is comprised of “having caring relationships that offer positive feedback, a sense of being cared for, and positive expectations of the individual’s accomplishments” (Anderson, 2010), and enhances feelings about the controllability of a stressor (Carlson & Dalenberg, 2000). Social support can come in many forms, including affectionate (i.e., love or esteem), emotional/informational (i.e., advice or feedback), and tangible (i.e., material goods)

(House, 1981; Sherbourne & Stewart, 1991).

Along with providing baseline data on factors associated with community and personal wellness that build on some of the indicators assessed in the RHS Phase 2, the analysis of the RHS Phase 3 was guided by three broad research questions:

1. How does community wellness relate to First Nations adult and youth reports of personal wellness?
2. How do risk and protective factors impact First Nations adult and youth reports of personal wellness in relation to mastery, balance, mental health, and suicidal tendencies?
3. Are there differences for First Nations adults and youth by different gender and age groups on indicators of personal and community wellness?

METHODS

The RHS Phase 3 is comprised of both items from validated scales (e.g., Pearlin and Schooler’s (1978) Self-Mastery Scale) and items that were developed to assess traditional and Western concepts of health and well-being for First Nations people living on-reserve and in Northern communities.

For this chapter, a series of descriptive and cross-tabulated analyses were conducted from the youth (aged 12 to 17 years old) and adult (aged 18 years or older) surveys. Indicators of personal wellness, community wellness and general social experiences (e.g., aggression, social support) were explored (see *Table 1*).

The Self-Mastery Scale items were reverse coded, such that high scores would mean high mastery. The summed scores ranged from 0-28 and were grouped into three categories: low (0-14), moderate (15-20), and high (21-28) mastery for the purposes of analyses



in this chapter. The rationale for grouping the scores in this way is that generally people who have low mastery (scores from 0-14) would have disagreed or strongly disagreed to questions about having control their life (values of 2 or under for each of seven questions on average) which would indicate low mastery. For high mastery (scores from 21-28), people generally would have at a minimum selected neither agreed nor disagree, disagree, or strongly disagree (values of 3 or higher for each of the seven questions on average) which would indicate strong self-control over their life. The people who have values between 15 and 20 would have moderate levels of mastery.

Comparisons to the previous phase of the RHS were reported where possible. Cross-tabulated analyses were conducted to assess the relationship between suicide (ideation and attempts) and key personal and community wellness variables, including mastery, mental health, general health, balance, stress, aggression, bullying, racism, need for support, community safety, and community belonging. Note that personal and community wellness results from the child version of the survey (ages 0 to 11) were not included in the present chapter because the survey had few overlapping items with the youth and adult versions.

Descriptive analyses examined differences between males and females and between youth age groups (i.e., 12 to 14 and 15 to 17) and adult age groups (i.e., 18 to 29, 30 to 49, and 50+) across key variables.

Table 6.1: Variables related to personal wellness, community wellness and general social experiences from the adult and youth surveys

Variable	Description	Categories
Personal wellness indicators		
Mastery	Seven questions (on a scale ranging from 1 (strongly agree) to 5 (strongly disagree) that assess the extent to which individuals feel in control over their lives (e.g., I have control over things that happen to me; I can do anything I really set my mind to)	Summed scores: Low (0-14), Moderate (15-20), High (21- 28)
Mental health	In general, would you say your mental health is.?.	Excellent/Very good, Good, Fair/Poor
General health	In general, would you say that your health is.?.	Excellent/Very good, Good, Fair/Poor
Daily stress	Thinking about the amount of stress in your life, are most days...?	Not at all stressful, Not very stressful/A bit stressful, Quite a bit stressful/Extremely stressful
Balance	How often do you feel in balance physically, emotionally, mentally, and spiritually? Each type of balance assessed separately.	None of the time/Almost none of the time, Some of the time, All of the time/Most of the time
What makes you healthy	What things help make you healthy (that is, physically, emotionally, mentally, and spiritually healthy)?	Mark all that apply (list of 10 options)
Lifetime suicide ideation	Have you ever seriously considered suicide?	Yes, No



Suicide ideation in the past 12 months	When did these suicidal thoughts occur? (if answered Yes to having seriously considered suicide) (Mark all that apply)	In the past 12 months, As an adult, As an adolescent (aged 12-17), As a child (less than 12 years old)
Lifetime suicide attempts	Have you ever attempted suicide?	Yes, No
Suicide attempts in the past 12 months	When did the suicide attempt(s) occur? (if answered Yes to having attempted suicide) (Mark all that apply)	In the past 12 months, As an adult, As an adolescent (aged 12-17), As a child (less than 12 years old)
Community wellness indicators		
Sense of belonging	How would you describe your sense of belonging to your local community? Would you say it is?	Very strong/Somewhat strong, Somewhat weak/Very weak
Sense of safety	In general, how safe do you feel in your community?	Very safe/Reasonably safe, Somewhat safe/Very unsafe
Community strengths	What are the main strengths of your community?	Mark all that apply (list of 21 options): Grouped into less than 7 strengths chosen, 7 or more strengths chosen
Community challenges ¹	What are the main challenges your community is currently facing?	Mark all that apply (list of 18 options): Grouped into less than 7 challenges chosen, or, 7 or more challenges chosen
Social experiences indicators		
Physical aggression ²	Have you experienced any physical aggression towards you in the past 12 months?	Yes, often/ Yes, sometimes, Yes, rarely/No, never
Verbal aggression ²	Have you experienced any verbal aggression towards you in the past 12 months?	Yes, often/ Yes, sometimes, Yes, rarely/No, never
Racism ²	In the past 12 months, have you personally experienced any instances of racism?	Yes, No
Bullying experiences ³	Have you been bullied in the past 12 months?	Yes, No
Cyberbullying	Have you experienced any cyberbullying towards you in the past 12 months?	Yes, No
Need for support	In the past 12 months, did you feel like you needed to see or talk on the telephone to anyone about your emotional or mental health?	Yes, No
Source of social support	In the past 12 months, who have you seen or talked on the telephone to about your emotional or mental health?	Mark all that apply (list of 10 options)

Note:

¹ Excludes youth under 15 years old.

² Adult survey only.

³ Youth survey only.



RESULTS

Personal Wellness

Adults

The majority of First Nations adults were found to have moderate (49.2%, 95% CI [47.2, 51.2]) to high (45.0%, 95% CI [42.9, 47.1]) levels of mastery (i.e., feelings of control over their own life). Half (50.5%, 95% CI [48.9, 52.2]) perceived their mental health as very good or excellent. More than two-thirds (71.0%, 95% [69.5, 72.4]) of adults reported that their daily life was either a bit or not very stressful (see *Table 6.2*).

Over three quarters (37.8%, 95% [36.2, 39.4]) of First Nations adults perceived their general health as good or very good or excellent, and most adults reported feeling in balance physically (68.9%, 95% CI [67.4, 70.4]), emotionally (68.1%, 95% CI [66.4, 69.8]), mentally (69.8%, 95% CI [68.2, 71.4]), and spiritually (68.1%, 95% CI [66.4, 69.7]) most or all of the time (see *Table 6.2*). These results were slightly lower than in the RHS Phase 2 where 44.1% (95% CI [42.3, 45.9]) of First Nations adults reported very good or excellent general health. Perceived balance among First Nations adults also decreased since the RHS Phase 2, where 73.0% (95% CI [71.5, 74.5]) reported feeling in balance physically, 73.1% (95% CI [71.7, 74.5]) reported feeling in balance emotionally, 75.0% (95% CI [73.5, 76.5]) reported feeling in balance mentally, and 71.1% (95% CI [69.7, 72.5]) reported feeling in balance spiritually most or all of the time.

More than 1 in 6 (16.1%, 95% CI [14.9, 17.5]) of adults had seriously considered suicide in their lifetime. Of those who had seriously considered suicide, 1 in 5 (20.2%, 95% CI [17.8, 22.9]) reported that the suicidal thoughts occurred in the 12 months prior to the survey. Lifetime suicide ideation among adults has significantly decreased compared with the rate of 22.0% (95% CI [20.6, 23.4]) reported in the RHS Phase 2.

More than 1 in 10 (11.2%, 95% CI [10.2, 12.2]) First Nations adults attempted suicide at some point in their lives. Of those who had attempted suicide, nearly 1 in 10 (9.1%, 95% CI [7.3, 11.3]) reported that the suicide attempt occurred in the 12 months prior to the survey. In the RHS Phase 2, 13.1% (95% CI [12.1, 14.2]) had attempted suicide at some point in their lives which was not significantly different.

When examining gender differences, a significantly higher percentage of female adults reported lifetime suicidal thoughts (18.7%, 95% CI [17.0, 20.5]) compared with male adults (13.7%, 95% CI [12.3, 15.2]). Female adults also reported significantly higher percentages (14.3%, 95% CI [12.7, 15.9]) of suicide attempts in their lifetime compared with male adults (8.2%, 95% CI [7.2, 9.2]). No gender differences in lifetime suicidal thoughts and attempts were observed in the RHS Phase 2.

Among those who reported that they had ever seriously considered suicide or attempted suicide at some point in their life, no significant differences were found between female and male adults who reported suicide ideations in the past 12 months (females (21.1%, 95% CI [18.0, 24.6]); males (19.1%, 95% CI [15.4, 23.4])). Similarly, no gender differences were found in suicide attempts within the past 12 months between female adults (8.4%, 95% CI [6.4, 11.0]) and male adults (10.3%, 95% CI [7.1, 14.7]).

Significantly more young First Nations adults reported very good or excellent general health compared to adults aged 50 years and older (see *Table 6.3*). Significantly more adults aged 50 or older had no daily stress compared to younger adults, and felt more in balance emotionally, mentally and spiritually most or all of the time. Adults aged 50 years and older also had significantly lower reports of lifetime suicidal ideation and attempts compared to younger adults. Adults aged 50 years and older reported the highest rates of high mastery compared with other age groups.



Youth

The majority of First Nations youth were found to have moderate (31.2%, 95% CI [28.7, 33.7]) to high (57.9%, 95% CI [55.3, 60.4]) levels of mastery. Over half (55.5%, 95% CI [52.8, 58.1]) of youth rated their mental health as very good or excellent, and 63.9% (95% CI [61.6, 66.2]) felt that their daily life was a bit or not very stressful (see *Table 6.2*).

Nearly 2 in 5 (59.9%, 95% CI [57.0, 62.8]) of First Nations youth perceived their general health as very good or excellent; however, this was significantly lower than what was reported in the RHS Phase 2 (65.4%, 95% CI [63.0, 67.7]).

Most youth reported feeling in balance physically (73.3%, 95% CI [71.0, 75.5]), emotionally (65.1%, 95% CI [62.5, 67.7]), mentally (64.9%, 95% CI [62.0, 67.6]), and spiritually (62.0%, 95% CI [59.2, 64.6]) most or all of the time. These results remained unchanged compared with the RHS Phase 2 where youth reported feeling in balance most or all of the time physically (75.0%, 95% CI [72.2, 77.8]), emotionally (65.3%, 95% CI [63.1, 67.5]), mentally (65.6%, 95% CI [63.2, 68.0]), and spiritually (60.8%, 95% CI [58.5, 63.1]).

Nearly 1 in 6 (16.0%, 95% CI [14.2, 18.0]) First Nations youth seriously considered suicide in their lifetime; a rate that has remained relatively unchanged compared with RHS Phase 2 (16.5%, 95% CI [15.1, 18.0]). Of those who had seriously considered suicide according to the RHS Phase 3, more than two-fifths (41.5%, 95% CI [34.9, 48.4]) reported that the suicidal thoughts occurred in the 12 months prior to the survey.

Approximately 1 in 10 (10.3%, 95% CI [8.7, 12.1]) First Nations youth attempted suicide at some point in their lives. Of those who had ever attempted suicide, two-fifths (40.7%, 95% CI [33.0, 48.8]) of youth

reported that the suicide attempt occurred in the 12 months prior to the survey. Although the rate of suicide ideations among First Nations youth has not changed since the RHS Phase 2, the rate of lifetime suicide attempts among youth has risen significantly from 5.9% (95% CI [5.0, 6.9]) in the RHS Phase 2.

In considering gender differences in lifetime suicidal thoughts, female youth reported significantly higher percentages (23.1%, 95% CI [20.2, 26.3]) when compared with male youth (9.3%, 95% CI [7.7, 11.1]). Also, significantly more females reported suicide attempts in their lifetime (15.6%, 95% CI [13.1, 18.5]) compared with males (5.2%, 95% CI [3.7, 7.1]).

Among those who reported that they had ever seriously considered suicide or attempted suicide, there were no significant differences found between female and male youth's ideation or attempts in the past 12 months. Past 12 months suicidal ideation: females (39.3%, 95% CI [32.5, 46.5]); males (47.0%, 95% CI [35.7, 58.6]) and suicide attempts: females (38.8%, 95% CI [31.2, 46.9]); males (46.2%, 95% CI [31.2, 61.9]).

Among First Nations youth aged 15 to 17 years, a significantly higher percentage reported that they considered suicide at some point in their life compared with those aged 12 to 14 (see *Table 6.3*). There were also higher reports of lifetime suicide attempts among youth aged 15-17 compared with those aged 12 to 14.

Significantly lower percentages of youth aged 15 to 17 reported having very good or excellent general health, very good or excellent mental health, and no daily stress compared with youth aged 12 to 14. Older youth also had significantly lower reports of feeling in balance all or most of the time across physical, emotional, mental and spiritual aspects (see *Table 6.3*).



Table 6.2: Personal wellness indicators among First Nations adults and youth

Indicators	Response categories	Adults		Youth	
		%	[95% CI]	%	[95% CI]
Mastery	Low	5.8	[5.0, 6.7]	10.9	[9.7, 12.3]
	Moderate	49.2	[47.2, 51.2]	57.9	[55.3, 60.4]
	High	45.0	[42.9, 47.1]	31.2	[28.7, 33.7]
General health	Fair/poor	23.5	[22.1, 24.9]	7.2	[6.1, 8.6]
	Good	38.7	[37.2, 40.3]	32.8	[30.6, 35.1]
	Excellent/very good	37.8	[36.2, 39.4]	59.9	[57.0, 62.8]
Mental health	Fair/poor	13.0	[12.0, 14.1]	11.6	[10.3, 13.1]
	Good	36.5	[34.8, 38.2]	32.9	[30.6, 35.3]
	Excellent/very good	50.5	[48.9, 52.2]	55.5	[52.8, 58.1]
Daily stress	Not at all stressful	16.2	[14.8, 17.6]	20.2	[18.3, 22.3]
	Not very/a bit stressful	71.0	[69.5, 72.4]	63.9	[61.6, 66.2]
	Quite a bit/extremely stressful	12.9	[11.7, 14.1]	15.9	[13.9, 18.0]
Physical balance	None/almost none of the time	7.0	[6.3, 7.7]	8.3	[7.2, 9.6]
	Some of the time	24.1	[22.7, 25.6]	18.3	[16.5, 20.3]
	All/most of the time	68.9	[67.4, 70.4]	73.3	[71.0, 75.5]
Emotional balance	None/almost none of the time	6.2	[5.6, 7.0]	12.2	[10.7, 13.9]
	Some of the time	25.7	[24.1, 27.3]	22.6	[20.8, 24.6]
	All/most of the time	68.1	[66.4, 69.8]	65.1	[62.5, 67.7]
Mental balance	None/almost none of the time	7.6	[6.8, 8.5]	14.1	[12.3, 16.2]
	Some of the time	22.6	[21.2, 24.1]	21.0	[19.0, 23.2]
	All/most of the time	69.8	[68.2, 71.4]	64.9	[62.0, 67.6]
Spiritual balance	None/almost none of the time	8.1	[7.3, 9.1]	15.1	[13.3, 17.1]
	Some of the time	23.8	[22.3, 25.4]	23.0	[21.0, 25.1]
	All/most of the time	68.1	[66.4, 69.7]	62.0	[59.2, 64.6]
Lifetime suicide ideation	Yes	16.1	[14.9, 17.5]	16.0	[14.2, 18.0]
	No	83.9	[82.5, 85.1]	84.0	[82.0, 85.8]
Lifetime suicide attempts	Yes	11.2	[10.2, 12.2]	10.3	[8.7, 12.1]
	No	88.8	[87.8, 89.8]	89.7	[87.9, 91.3]



Table 6.3: Personal wellness indicators among First Nations adults and youth, by age

	% 12-14 [95% CI]	% 15-17 [95% CI]	% 18-29 [95% CI]	% 30-49 [95% CI]	% ≥ 50 [95% CI]
Lifetime suicide ideation (Yes)	12.6 [10.2, 15.6]	18.9 [16.7, 21.3]	17.8 [15.7, 20.1]	17.9 [15.8, 20.1]	12.5 [11.2, 14.1]
Lifetime suicide attempt (Yes)	7.1 [5.4, 9.2]	13.0 [10.8, 15.6]	12.7 [11.0, 14.6]	12.4 [10.8, 14.1]	8.3 [7.2, 9.6]
High mastery	28.6 [24.8, 32.9]	33.2 [30.4, 36.0]	40.6 [37.0, 44.2]	44.4 [41.5, 47.3]	49.7 [47.1, 52.3]
Physical balance all/most of the time	77.2 [74.1, 79.9]	70.3 [67.4, 73.0]	71.3 [68.6, 73.9]	67.7 [65.0, 70.2]	68.6 [66.6, 70.5]
Emotional balance all/most of the time	68.9 [65.2, 72.3]	62.1 [59.2, 65.0]	65.9 [62.7, 69.0]	66.4 [63.7, 69.1]	72.1 [70.2, 74.0]
Mental balance all/most of the time	68.8 [65.1, 72.3]	61.7 [58.5, 64.8]	67.7 [64.5, 70.7]	68.5 [65.9, 71.1]	73.3 [71.5, 75.0]
Spiritual balance all/most of the time	66.6 [62.8, 70.2]	58.2 [55.3, 61.1]	64.4 [60.9, 67.8]	65.9 [63.3, 68.4]	74.0 [72.2, 75.8]
Excellent/very good general health	65.5 [62.2, 68.6]	55.2 [51.4, 59.0]	46.2 [43.0, 49.4]	40.6 [38.1, 43.1]	26.7 [25.0, 28.6]
Excellent/very good mental health	62.1 [58.3, 65.7]	49.9 [46.9, 53.0]	50.9 [47.5, 54.3]	50.6 [48.0, 53.5]	50.1 [47.9, 52.3]
Daily life not stressful at all	25.0 [22.1, 28.3]	16.4 [14.4, 18.7]	15.2 [12.7, 18.2]	11.4 [10.0, 12.9]	23.2 [21.2, 25.4]

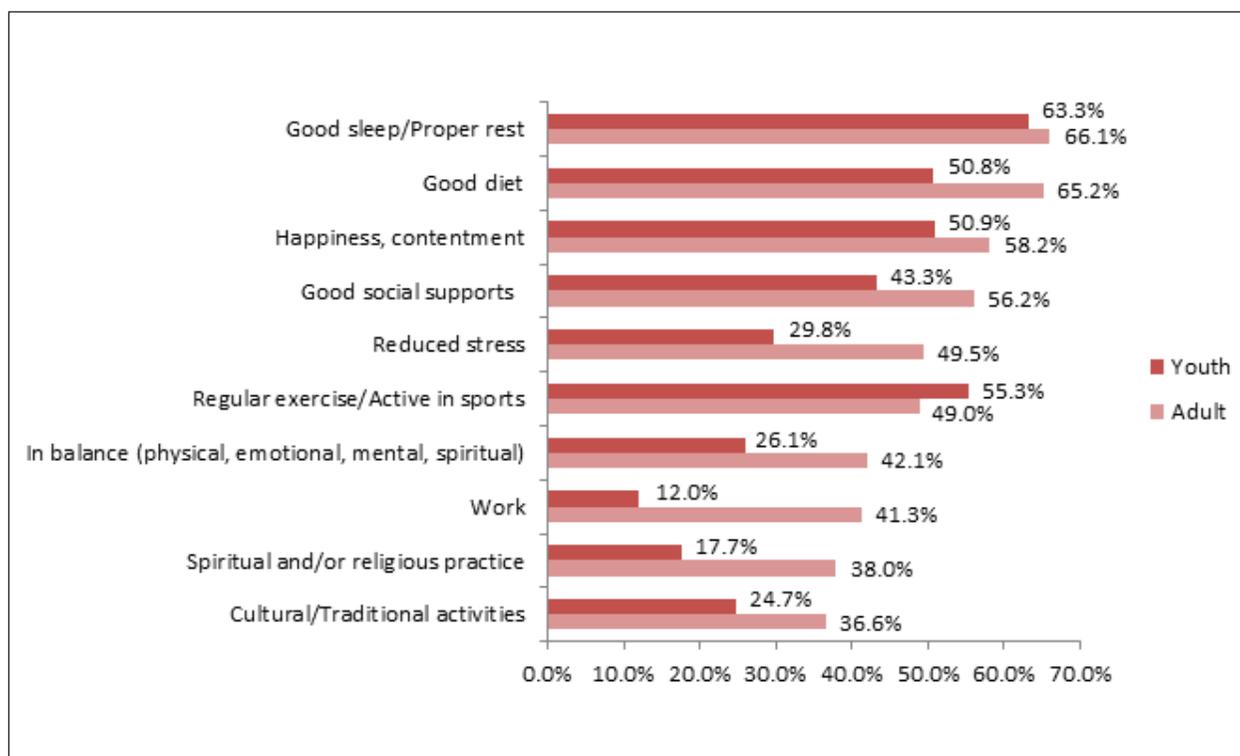
Factors Contributing to First Nations Health

More than half of First Nations adults reported that good sleep/proper rest (66.1%, 95% CI [63.8, 68.4]), a good diet (65.2%, 95% CI [63.3, 67.0]), happiness/contentment (58.2%, 95% CI [55.4, 61.0]), and good social supports (56.2%, 95% CI [53.7, 58.6]) helped make them physically, emotionally, mentally, and spiritually healthy. Spiritual/religious practice (38.0%, 95% CI [35.6, 40.5]) and cultural/traditional activities (36.6%, 95% CI [34.3, 39.0]) were the least frequently reported aspects that helped make them healthy (see *Figure 6.1*).

First Nations youth frequently reported that good sleep/proper rest (63.3%, 95% CI [60.1, 66.3]) helped to make them healthy. This was followed by regular exercise/active in sports (55.3%, 95% CI [52.2, 58.3]), happiness/contentment (50.9%, 95% CI [47.9, 53.9]), and a good diet (50.8%, 95% CI [47.5, 54.1]). Work (12.0%, 95% [10.6, 13.6]), spiritual/religious practice (17.7%, 95% CI [15.6, 20.1]) and cultural/traditional activities (24.7%, 95% CI [22.4, 27.1]) were the least frequently reported (see *Figure 6.1*).



Figure 6.1: Percentage of First Nations adults and youth reporting what helps make them physically, emotionally, mentally, and spiritually healthy



Note: Respondents could choose more than one response.

Community Wellness

Adults

The majority of First Nations adults rated their sense of community belonging as somewhat or very strong (80.6%, 95% CI [79.2, 81.9]). In addition, the majority of adults reported feeling very or reasonably safe (81.5%, 95% CI [79.9, 83.1]) in their community. Adults aged 50 years or older had higher reports of feeling very safe in their community compared with those aged 30 to 49 years and those aged 18 to 29 (see *Table 6.5*).

More than half of adults reported that Elders (56.0%, 95% CI [53.9, 58.1]), awareness of First Nations culture (53.6%, 95% CI [51.1, 56.0]), and community health

programs (51.7%, 95% CI [49.4, 53.9]) were strengths in their community (see *Figure 6.2*). A significantly higher percentage of adults reported that awareness of First Nations culture was a community strength in the RHS Phase 3 when compared with RHS Phase 2 (24.9%, 95% CI [23.1, 26.7]).

The majority (80.3%, 95% CI [78.2, 82.2]) of adults reported that alcohol and drug abuse was a main challenge in their community. Additional community challenges reported by adults include housing (63.1%, 95% CI [61.0, 65.3]) and employment/number of jobs



(61.6%, 95% CI [59.6, 63.6]) (see *Figure 6.3*). These challenges were also most commonly reported in RHS Phase 2 where the majority (82.6%, 95% CI [81.3, 83.9]) of adults reported alcohol and drugs, 70.7% (95% CI [68.8, 72.6]) reported housing, and 65.9% (95% CI [63.8, 68.0]) reported employment/number of jobs.

In comparison to the RHS Phase 2, the most frequently reported strengths were family values (61.6% versus 47.5% in the RHS Phase 3), Elders (41.7%), and traditional ceremonial activities (37.8%). The least reported challenges being natural environment/resources (32.5%), gang activities (33.2% versus 25.7% in RHS Phase 3), control over decisions (37.9% versus 30.1% in RHS Phase 3), and culture (42.3%).

Youth

More than three-quarters (76.6%, 95% CI [74.5, 78.6]) of First Nations youth reported a very or somewhat strong sense of belonging to their community. In addition, 83.2% (95% CI [81.3, 84.9]) of youth felt very or reasonably safe in their community. Significantly more youth aged 12 to 14 years old reported feeling

very or reasonably safe in their community compared to youth aged 15 to 17 years old (see *Table 6.4*).

Among youth aged 15 to 17 years old, 52.2% (95% CI [49.2, 55.2]) reported that Elders were a strength in their community, which was followed by awareness of First Nations culture (49.2%, 95% CI [45.6, 52.8]) and community health programs (43.3%, 95% CI [39.5, 47.2]) (see *Figure 6.2*). A higher percentage of youth reported that awareness of First Nations culture was a community strength in the RHS Phase 3 when compared with RHS Phase 2 (23.1%, 95% CI [21.0, 25.3]).

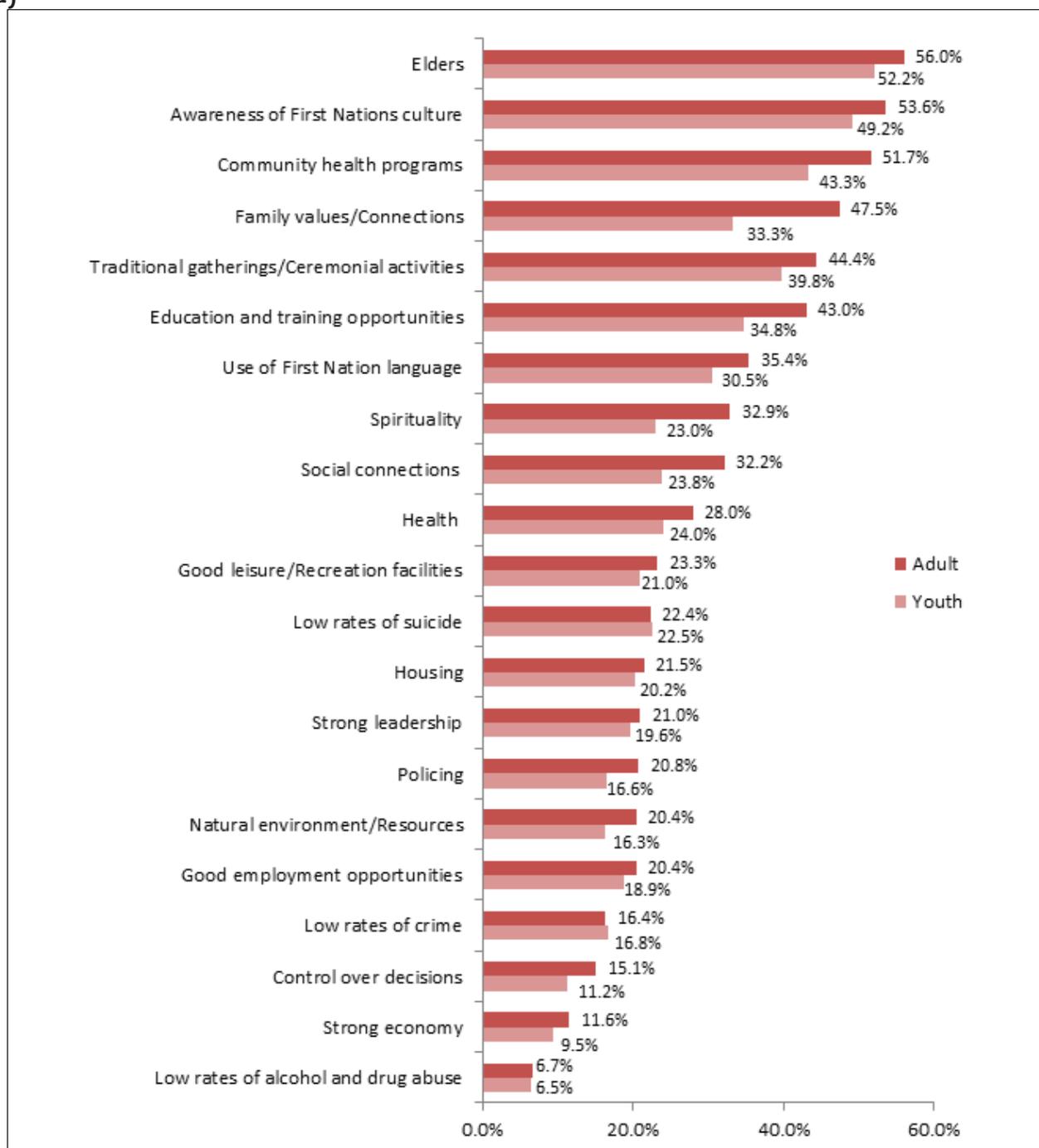
More than three-quarters (77.3%, 95% CI [74.2, 80.1]) of youth aged 15 to 17 years reported that alcohol and drug abuse was a main challenge in their community. This was followed by housing (45.3%, 95% CI [41.9, 48.7]) and employment/number of jobs (42.5%, 95% CI [39.0, 46.0]) (see *Figure 6.3*). In the RHS Phase 2, youth similarly reported that alcohol and drugs (74.7%, 95% CI [72.5, 76.8]), housing (46.2%, 95% CI [43.5, 48.8]) and employment/number of jobs (41.1%, 95% CI [38.4, 43.8]) were the main community challenges.

Table 6.4: Feelings of safety and community belonging among First Nations youth and adults, by age

	% 12-14 [95% CI]	% 15-17 [95% CI]	% 18-29 [95% CI]	% 30-49 [95% CI]	% ≥ 50 [95% CI]
Feeling very/reasonably safe	86.5 [84.1, 88.7]	80.3 [77.8, 82.6]	81.4 [78.5, 84.0]	80.8 [78.5, 82.9]	82.6 [80.8, 84.3]
Very/Somewhat strong sense of belonging	78.6 [75.8, 81.0]	75.1 [72.1, 77.8]	76.4 [73.9, 78.7]	79.9 [77.7, 82.0]	84.8 [83.1, 86.4]



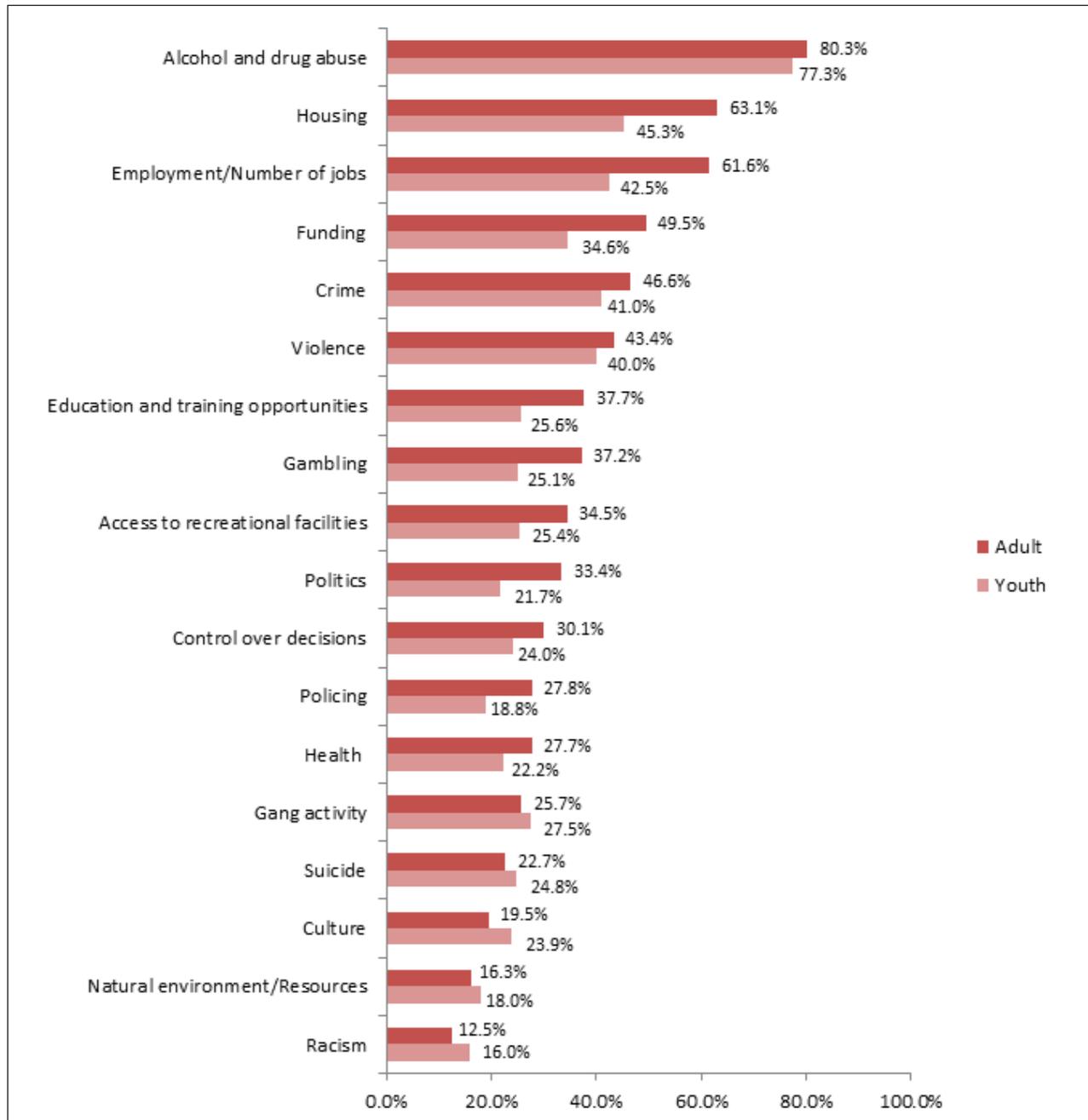
Figure 6.2: Community strengths reported by First Nations adults and youth (aged 15 to 17 years old)



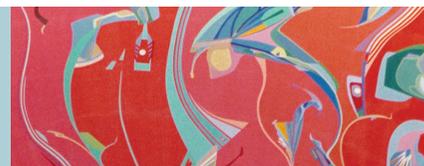
Note: Respondents could choose more than one response.



Figure 6.3: Community challenges reported by First Nations adults and youth (aged 15 to 17 years old)



Note: Respondents could choose more than one response.



Social Experiences

Adults

More than 1 in 10 (11.0%, 95% CI [9.7, 12.4]) First Nations adults reported experiencing physical aggression sometimes or often in the 12 months prior to the survey, and 21.0% (95% CI [19.3, 22.7]) reported experiencing verbal aggression sometimes or often in the 12 months prior to the survey. In addition, 6.9% (95% CI [6.1, 7.9]) of adults reported experiencing

cyberbullying and 24.2% (95% CI [22.0, 26.4]) reported personally experiencing racism in the 12 months prior to the survey. Adults aged 50 and over had significantly lower reports of physical aggression, verbal aggression and cyberbullying compared to younger adults. Reports of racism were similar across adult age groups (see *Table 6.5*).

Table 6.5: Experiences of aggression, cyberbullying and racism among First Nations adults, by age

	% 18-29 [95% CI]	% 30-49 [95% CI]	% ≥ 50 [95% CI]	% Adult Overall [95% CI]
Physical aggression often or sometimes	14.1 [11.9, 16.6]	12.4 [10.5, 14.5]	6.5 [5.2, 7.9]	11.0 [9.7, 12.4]
Verbal aggression often or sometimes	23.2 [20.3, 26.5]	23.7 [21.5, 26.2]	15.4 [13.5, 17.5]	21.0 [19.3, 22.7]
Cyberbullying	9.0 [7.5, 10.7]	8.2 [6.8, 9.8]	3.6 [2.9, 4.4]	6.9 [6.1, 7.9]
Racism	23.4 [20.3, 26.9]	25.6 [23.2, 28.1]	22.9 [20.0, 26.0]	24.2 [22.0, 26.4]

Note: Cyberbullying and racism assessed via yes/no responses. Physical and verbal aggression assessed via rarely/never versus often/sometimes.

Nearly three quarters (73.9%, 95% CI [71.8, 75.9]) of First Nations adults reported that they did not feel a need to see or talk to someone about their emotional or mental health in the 12 months prior to the survey, compared with 26.1% (95% CI [24.1, 28.2]) who felt a need. Adults aged 18 to 29 years reported significantly higher levels of need for mental or emotional support in the 12 months prior to the survey (28.4%, 95% CI [25.5, 31.5]) when compared with those aged 50 years and older (22.3%, 95% CI [20.2, 24.6]). Regardless of the need for social support, more than one-third (36.6%, 95% CI [34.9, 38.3]) of adults described speaking to either an immediate family member (including a significant other), a friend (36.0%, 95% CI [34.6, 37.4]), or no one (36.5%, 95% CI [34.9, 38.2])

about their emotional or mental health (see *Figure 4*). Among adults who did not speak to someone about their emotional or mental health, a large majority (94.6%, 95% CI [93.5, 95.5]) reported that they did not feel a need for support in the 12 months prior to the survey, while 5.4% (95% CI [4.5, 6.5]) reported a need for support.

Youth

More than a quarter (27.9%, 95% CI [25.5, 30.3]) of First Nations youth experienced bullying and 17.9% (95% CI [16.2, 19.7]) of youth experienced cyberbullying in the 12 months prior to the survey. A significantly higher percentage of First Nations



youth aged 12 to 14 years reported experiences of bullying compared with those aged 15 to 17 years (see *Table 6.6*). Reports of bullying are significantly higher in the present results compared to the RHS Phase 2 where 11.7% (95% CI [10.1, 13.3]) of youth experienced bullying.

Approximately 4 in 5 (79.3%, 95% CI [77.2, 81.3]) First Nations youth reported that they did not feel a need to talk to someone about their emotional or mental health in the 12 months prior to the survey compared with 20.7% (95% CI [18.7, 22.8]) who felt a need. Youth aged 15 to 17 reported a significantly greater need for support (23.6%, 95% CI [21.2, 26.2]) compared with those aged 12 to 14 years (17.1%, 95% CI [14.6, 19.9]).

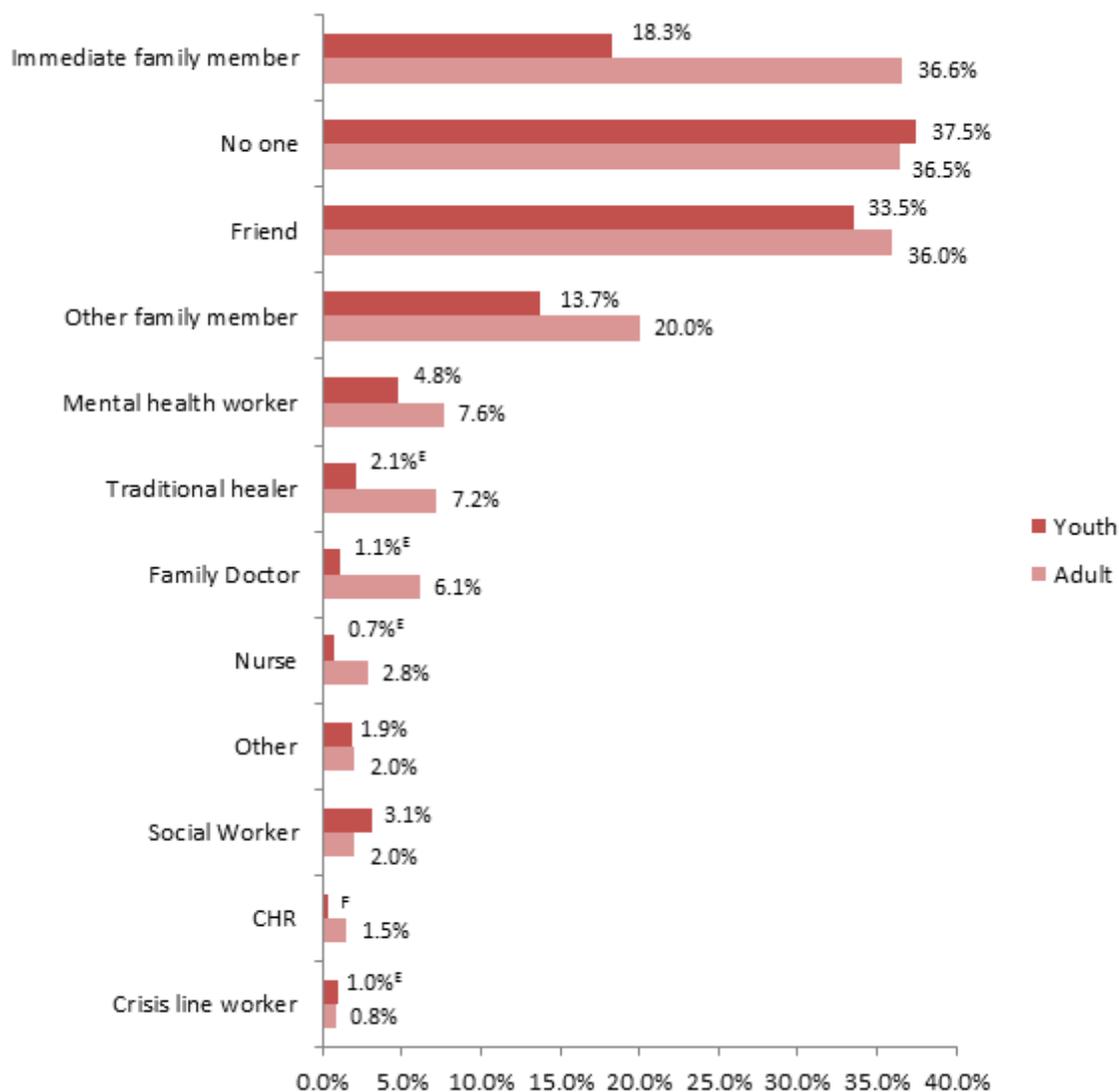
Regardless of the need for support, more than one-third (37.5%, 95% CI [34.9, 40.2]) of youth reported that they spoke to no one about their emotional or mental health. The following most frequently identified source of support was a friend (33.5%, 95% CI [31.0, 36.2]), which was followed by an immediate family member (18.3%, 95% CI [16.2, 20.5]) (see *Figure 6.4*). Among youth who did not speak to anyone about their emotional or mental health, a large majority (94.1%, 95% CI [92.0, 95.7]) did not feel a need for support, while 5.9% (95% CI [4.3, 8.0]) reported a need for support.

Table 6.6: Experiences of bullying and cyberbullying among First Nations youth, by age

	% 12-14 [95% CI]	% 15-17 [95% CI]	% Youth Overall [95% CI]
Cyberbullying	20.1 [16.6, 24.1]	16.0 [13.9, 18.3]	17.9 [16.2, 19.7]
Bullying	36.2 [32.0, 40.6]	21.0 [18.8, 23.4]	27.9 [25.5, 30.3]



Figure 6.4: Who First Nations youth and adults reported talking to about their emotional or mental health in the past 12 months *Note: ^F Suppressed due to small cell size or extreme sampling variability.*



Note: ^E High sampling variability, interpret with caution.

^F Suppressed due to small cell size or extreme sampling variability.

Respondents could choose more than one response.



Factors Associated with Suicide Ideation and Attempts.

Adults

The relationships between suicide (ideation and attempts) and key personal and community wellness variables were assessed for First Nations adults (see *Table 6.7*). Lifetime suicide ideation was significantly associated with all key personal wellness, community wellness and social experience variables including: mastery, mental health, general health, the four aspects of balance, daily stress, aggression, racism, cyberbullying, need for support, community safety, and community belonging. Overall, adults who never considered suicide reported significantly higher levels of personal and community wellness, fewer aggressive experiences, and less need for emotional and mental health support when compared with those who had considered suicide.

The same pattern of results was obtained for lifetime suicide attempts. Having attempted suicide at some point in one's life was significantly associated with all key personal wellness, community wellness, and social experience variables (see *Table 6.7*). Overall, those who never attempted suicide reported significantly higher levels of personal and community wellness, fewer aggression experiences and less need for emotional and mental health support compared with those who had attempted suicide at some point in their lives.



Table 6.7: Factors associated with lifetime suicide ideation and attempts among First Nations adults

	Lifetime suicide ideation		Lifetime suicide attempt	
	% Yes [95% CI]	% No [95% CI]	% Yes [95% CI]	% No [95% CI]
High mastery	40.6 [37.5, 43.8]	47.5 [45.1, 49.9]	36.7 [32.7, 40.9]	47.0 [44.8, 49.3]
Excellent/very good mental health	35.0 [31.7, 38.4]	54.4 [52.4, 56.4]	35.1 [31.0, 39.4]	53.2 [51.4, 55.0]
Excellent/very good general health	26.4 [23.7, 29.2]	40.8 [39.1, 42.4]	24.5 [21.4, 27.9]	40.4 [38.8, 42.0]
Physically balanced all/most of the time	52.8 [49.4, 56.3]	72.9 [71.3, 74.4]	54.2 [49.8, 58.6]	71.2 [69.7, 72.8]
Emotionally balanced all/most of the time	52.4 [48.9, 55.8]	71.8 [69.9, 73.7]	54.0 [50.1, 57.8]	70.5 [68.7, 72.2]
Mentally balanced all/most of the time	57.1 [53.8, 60.3]	73.0 [71.2, 74.7]	57.6 [53.1, 62.0]	71.9 [70.2, 73.5]
Spiritually balanced all/most of the time	57.7 [54.6, 60.8]	71.2 [69.4, 73.0]	59.2 [54.7, 63.4]	70.1 [68.4, 71.8]
Most days not at all stressful	7.1 [5.9, 8.6]	18.6 [16.9, 20.3]	7.1 [5.6, 9.0]	17.7 [16.1, 19.4]
Physical aggression experienced rarely/ never in the 12 months prior to survey	77.0 [73.5, 80.1]	91.6 [90.1, 92.8]	76.9 [73.7, 79.9]	90.8 [89.4, 92.0]
Verbal aggression experienced rarely/ never in the 12 months prior to survey	56.6 [52.9, 60.2]	84.2 [82.4, 85.9]	56.2 [51.9, 60.3]	82.4 [80.7, 84.0]
No experience of racism in the 12 months prior to survey	56.2 [52.7, 59.6]	79.6 [76.9, 82.1]	56.4 [51.9, 60.7]	78.3 [75.8, 80.7]
No experience of cyberbullying in the 12 months prior to survey	85.5 [82.9, 87.7]	94.7 [93.8, 95.4]	82.6 [79.5, 85.3]	94.4 [93.5, 95.1]
No need for emotional/mental health support in the 12 months prior to survey	45.4 [41.6, 49.2]	80.2 [78.1, 82.2]	47.0 [42.7, 51.2]	77.9 [75.9, 79.9]
Feeling very/reasonably safe in the community	72.5 [69.0, 75.7]	83.9 [82.2, 85.4]	70.2 [66.1, 74.0]	83.3 [81.6, 84.8]
Very/somewhat strong sense of community belonging	70.0 [67.1, 72.8]	82.8 [81.2, 84.4]	73.3 [69.8, 76.6]	81.6 [80.1, 83.1]

Note: ^E High sampling variability, interpret with caution.

Youth

The relationships between suicide (ideation and attempts) and key personal wellness, community wellness, and social experience variables were assessed for First Nations youth (see *Table 6.8*).

Lifetime suicide ideation was significantly associated with all key personal wellness, community wellness and social experience variables, including mastery, mental health, general health, the four aspects of balance, stress, bullying, cyber-bullying, need for



support, community safety and community belonging. Overall, youth who never considered suicide reported significantly higher levels of personal and community wellness, fewer bullying experiences, and less need for emotional and mental health support when compared with those who had considered suicide.

The same pattern of results was obtained for lifetime suicide attempts. Having attempted suicide at some

point in one's life was significantly associated with all key personal wellness, community wellness and social experience variables (see *Table 6.8*). Overall, First Nations youth who never attempted suicide reported significantly higher levels of personal and community wellness, fewer bullying experiences and less need for emotional and mental health support when compared with those who attempted suicide at some point in their lives.

Table 6.8: Factors associated with lifetime suicide ideations and attempts among First Nations youth

	Lifetime suicide ideation		Lifetime suicide attempt	
	% Yes [95% CI]	% No [95% CI]	% Yes [95% CI]	% No [95% CI]
High mastery	17.1 [12.4, 23.1]	35.7 [33.0, 38.5]	14.2 E [9.1, 21.4]	33.7 [31.3, 36.3]
Excellent/very good mental health	29.0 [23.8, 34.9]	62.4 [59.6, 65.1]	25.9 [19.7, 33.2]	60.8 [58.1, 63.5]
Excellent/very good general health	43.7 [37.5, 50.1]	64.3 [61.4, 67.1]	40.7 [31.8, 50.3]	63.5 [60.6, 66.3]
Physically balanced all/most of the time	57.7 [51.4, 63.7]	76.5 [74.0, 78.9]	59.5 [51.2, 67.3]	75.3 [72.9, 77.5]
Emotionally balanced all/most of the time	43.8 [37.4, 50.5]	70.0 [67.1, 72.6]	44.4 [35.9, 53.2]	68.4 [65.8, 71.0]
Mentally balanced all/most of the time	38.4 [31.6, 45.8]	70.7 [67.9, 73.3]	39.5 [31.4, 48.2]	68.8 [66.0, 71.4]
Spiritually balanced all/most of the time	41.5 [35.3, 48.0]	66.3 [63.4, 69.1]	41.3 [33.4, 49.8]	65.2 [62.4, 67.9]
Most days not at all stressful	3.8 E [2.4, 6.0]	24.9 [22.5, 27.4]	5.0 E [3.1, 7.8]	22.9 [20.8, 25.3]
No experience of bullying in the 12 months prior to survey	44.6 [38.9, 50.3]	78.9 [76.6, 81.1]	46.7 [39.6, 54.0]	75.9 [73.3, 78.3]
No experience of cyberbullying in the 12 months prior to survey	52.9 [46.1, 59.7]	87.5 [85.3, 89.5]	51.2 [43.7, 58.7]	85.8 [83.6, 87.7]
No need for emotional/mental health support in the 12 months prior to survey	44.1 [38.7, 49.7]	86.9 [84.7, 88.7]	46.3 [38.6, 54.2]	83.9 [82.0, 85.6]
Feeling very/reasonably safe in the community	72.3 [66.9, 77.1]	85.7 [83.7, 87.5]	68.5 [60.5, 75.6]	85.3 [83.3, 87.0]
Very/somewhat strong sense of community belonging	66.8 [62.6, 74.3]	78.6 [76.5, 80.6]	67.5 [59.3, 74.6]	78.2 [76.0, 80.2]

Note: ^E High sampling variability, interpret with caution.



DISCUSSION

The purpose of this chapter was to examine indicators of personal and community wellness among First Nations adults and youth, within a First Nations holistic health context of wellness. The results from the RHS Phase 3 reveal many personal and community strengths, challenges and realities impacting on the wellness of First Nations adults and youth.

In terms of the specific community strengths and challenges that contribute to personal wellness, the most frequently reported strengths were Elders, awareness of First Nations culture, and community health programs. The least reported challenges were racism, natural environment/resources, culture, and suicide. While there have been methodological changes since the RHS Phase 2 on this survey item, generally the current trends parallel that of the RHS Phase 2.

There is evidence of an upward linear trend of youth and adults placing a greater importance on cultural/traditional activities and spiritual/religious practice in helping to keep them healthy as they age. Specifically, those aged 50 years or older had the significantly highest reports of cultural/traditional activities compared to younger age groups.

The findings showed a number of highly correlated protective factors of personal wellness. High mastery is significantly associated: with excellent/very good general and mental health, no experiences of daily stress, aggression (in the past 12 months), or suicidal tendencies (in the past 12 months), having all forms of social support available all/most of the time, and not having a need for social support for emotional or mental health (in the past 12 months).

In other research, high mastery has been consistently associated with improved mental and physical health, social support, adaptive coping mechanisms, and

resilience (Andersson & Ledogar, 2008; Burns, Anstey, & Windsor, 2011; Daniel, Cargo, Lifshay, & Green, 2004; FNIGC, 2012; Seery, 2011). However, this research has largely focused on non-Indigenous populations, and the concept of mastery and scales that assess the construct (such as the Pearlin and Schooler (1978) utilized in the RHS) have not been readily validated in a First Nations context. Taking this into account, the limited research on First Nations populations suggests that high mastery is an important factor in fostering resilience and social support in on- and off-reserve First Nations people (Andersson & Ledogar, 2008; Daniel et al., 2004).

Further, findings from the RHS Phase 2 show that higher mastery scores in adults is associated with less psychological distress and experiences of aggression (in the past 12 months), a higher consumption of nutritious and balanced meals, and more engagement in physical activity (FNIGC, 2012). However, the correlational nature of these findings makes it difficult to infer, for instance, whether high mastery predicts nutritional food intake, or whether those living in a community with higher socioeconomic status, which contributes to food security (FNIGC, 2012), leads to high mastery. This is because higher socioeconomic status is found to enhance mastery by providing more opportunities for control in daily life (Alder & Snibbe, 2003). Regardless of the limitations of cross-tabulation analyses, the findings from current and past research suggest that high mastery can act as a protective factor for personal wellness.

The RHS Phase 2 also found that lower levels of mental health (i.e., depressive symptoms, more psychological distress) is associated with more chronic health conditions, experiences of aggression (in the past 12 months), and suicidal tendencies (FNIGC, 2012). Further, a higher percentage of social support and mastery were found to be associated with less psychological distress (FNIGC, 2012).



The Truth and Reconciliation Commission of Canada: Calls to Action outlined the need for the Federal Government to address inequities in such areas in mental health and addictions, and employment to assist First Nations people in healing from the historical and contemporary effects of colonization. Beaudin and colleagues (2018), highlight that while culturally relevant mental health services are an important resource for enhancing personal wellness in communities, service use is more likely to be facilitated when First Nations people experience other protective factors, namely stability at the familial and community-level. The community challenges highlighted in the current findings are heavily modifiable with appropriate funding and programming. Evidence suggests that policies aimed at increasing socioeconomic status in communities can reduce such negative outcomes as lifetime suicide ideation and gendered violence (Daoud, Smylie, Urquía, Allan, & O'Campo, 2013; Lemstra et al., 2009).

Youth

According to the RHS Phase 3, First Nations youth generally reported good mental health, low daily stress, and feeling balanced most or all of the time. Youth reported a strong sense of community belonging and safety, and an increase was shown in youth reporting awareness of culture as a community strength since the RHS Phase 2. Community challenges remain the same for youth since the RHS Phase 2 with the main ones being drugs, housing and employment/number of jobs.

The current findings also suggest that younger First Nations people place a greater level of importance on regular exercise and being active in sports in helping to keep them emotionally, spiritually, mentally, and physically healthy, which decreases as they age. Participation in sports is important in keeping youth healthy whereas cultural engagement is for older adults. Encouraging culturally appropriate social

engagement in youth may foster protective factors, such as culture and sport, against declines in personal wellness.

There is a need for a gender-specific focus for mental wellness programs and services, as the results showed that female youth have significantly higher percentages of lifetime suicidal thoughts compared with male youth. Females had significantly higher reports of attempting suicide in their lifetime compared with males.

Considered as forms of violence, bullying and cyberbullying were reported more frequently by youth aged 12-14 years, than those aged 15-17, and younger adults aged 18-29. With enhanced technology and internet now able to reach rural and remote First Nations, there is an increased need for education and resources on the dangers and safety of the internet. Ensuring that First Nations youth have timely access to mental health services, strong social supports, and someone they can talk to is essential for their well-being and resilience.

Adults

First Nations adults living on-reserve and in Northern communities demonstrate a high prevalence of personal wellness and the results support that there are a variety of protective factors for their personal wellness. Generally, these findings are in contrast with the deficits-based narrative that dominates much of Western science (e.g., focus on suicide and addiction; Nelson & Wilson, 2017) and often fails to address the unique contribution that community-level factors have on First Nations people's experiences of personal wellness (e.g., Chandler & Lalonde, 2009; Aboriginal Healing Foundation, 2007).

First Nations adults reported a higher percentage of high mastery, not experiencing suicidal tendencies or cyberbullying (in the past 12 months), and a greater



sense of belonging and safety in their community than youth. Adults also reported a higher percentage of speaking to formal sources of support about their mental or emotional health in the past 12 months, such as a Traditional healer, mental health worker, and a family doctor, than youth.

Adults who reported excellent or very good mental health reported a significantly higher percentage of high mastery, feeling in balance all or most of the time, excellent or very good general health, no suicidal tendencies or experiences of aggression or daily stress (in the past 12 months), not needing social support (for mental or emotional health in the past 12 months), and having all forms of social support available almost all or all of the time. Adults who did not experience suicidal tendencies (in the past 12 months) also paralleled these trends, as did those who reported feeling in balance all or most of the time. However, feeling in balance all or most of the time was not found to be associated with experiences of aggression (in the past 12 months) or with daily stress.

In terms of the factors perceived by adults that help make them healthy, or in balance across spiritual, physical, emotional, and mental realms, good sleep/proper rest, good diet, happiness/contentment, and good social supports were the most frequently credited. Surprisingly, spiritual/religious practice and cultural/traditional activities were the least frequently credited.

The results suggest that living in a First Nations community can provide protective factors against declines in personal wellness. First Nations adults who reported living in a community with seven or more strengths and felt a very strong sense of belonging and safety in their community had a significantly higher percentage of high mastery.

The remaining indicators of personal wellness

that were assessed were also found to be uniquely associated with community-level factors. Specifically, First Nations adults who reported a stronger sense of belonging and safety in their community also reported a significantly higher percentage of excellent or very good mental health, feeling in balance all or most of the time, and not experiencing any suicidal tendencies (in the past 12 months). Further, First Nations adults who reported living in a community with more than seven strengths had significantly higher reports of feeling in balance all or most of the time, and those who reported living in a community with less than seven challenges reported significantly more instances of not experiencing suicidal tendencies (in the past 12 months). These findings are in line with the trends from RHS Phase 2, which found that First Nations adults who reported being in better physical and mental health also reported residing in a community with more strengths (when compared to those with poorer health; FNIGC, 2012).

Older adults aged 50 and over reported the highest levels of mastery, low daily stress, and reports of feeling in balance most or all of the time. Mastery was significantly associated with lifetime suicidal thoughts and attempts, which helps to explain their significantly lower reports of lifetime suicidal thoughts and attempts compared to younger adults.



CONCLUSIONS

In light of the methodological and analytical limitations, the current analysis provides a necessary foundation for building future research, rooted in a strengths-based approach, that can examine the protective and risk factors, in particular, as they relate to personal and community wellness of First Nations people living on reserve and in Northern communities.

More research and work is needed to address modifiable risk factors of personal wellness, particularly at the community level in order to facilitate personal wellness for future generations of First Nations people. In terms of community wellness, improvements in socioeconomic status can foster opportunities for such indicators of personal wellness as mastery, such as through stable and safe housing, food security, and employment and education opportunities in communities. The results also show that sense of belonging in your community is a predictor factor for personal wellness.

There are broad implications of these findings that not only provide a fruitful avenue for future research, but also provide opportunities for policy and program development that would foster wellness at the individual, family, community, and environmental level. One implication is that there are sources of resilience that are unique to living in a First Nations community. Due to the historical and present-day colonial pressures and associated societal structures that can conflict with First Nations values (e.g., healthcare system; Goodman et al., 2017), and separate First Nations people from their families, communities, and the land (e.g., criminal justice and child welfare system, construction of reserves) (Department of Justice Canada, 2017; Kirmayer, Simpson, & Cargo, 2014; Toombs, et al, 2018), the tight-knit and integrated social structure of First Nations communities can provide a safe haven for engaging in traditional ways of living (Richmond &

Ross, 2008). This notion has largely been neglected in Western science, which often focuses on the challenges of some communities, which can be easily misrepresented and inaccurately homogenize First Nations people (Oliver, Penny, & Peter, 2016; Mota et al., 2012; Nelson & Wilson, 2017; Walls, Hautala, & Hurley, 2014).

This is not to say that risk factors for decreases in community and personal wellness should not be examined, but that it should be done while also investigating why some communities fare better than others. Such analysis would be useful in informing effective strategies for intervening with risk factors and promoting those factors found in communities that fare better to facilitate wellness. For example, the notion of cultural continuity, which emphasizes the need for keeping First Nations families intact, and engaging Elders to pass knowledge and traditional ways of living to subsequent generations is found to be a protective factor of wellness in communities that could be integrated into program and policy development (Auger, 2016; Chandler & Lalonde, 1998, 2009).



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APPENDIX I

RHS PHASE 3 REPORT AUTHORS

Kyla Marcoux, Fei Xu and Fan Zhang (Chapter One: Introduction)

Kyla Marcoux joined FNIGC in the summer of 2013. Her previous role at FNIGC involved providing oversight, technical guidance, and analytical support for the First Nations Early Childhood, Education and Employment Survey (FNREEES). She is currently working with the Survey Management team at FNIGC as Program Manager of Survey Management overseeing the production of all FNIGC survey initiatives including the production of the RHS 3 National Report.

Fei Xu, FNIGC's Senior Manager of Methodology and Statistics, had the opportunity to grow up with the organization since its inception in 2010. Fei has been working on the survey methodology and sampling design for all FNIGC surveys. She also reviews and oversees reports and publications to ensure data quality. Fei is proud to see how the survey results have impacted First Nations communities across Canada.

Fan Zhang joined FNIGC in April, 2017. She is currently working as the Statistical Data Analyst with the Methodology and Statistics team. Her role at FNIGC involves statistical support for the Regional Health Survey (RHS) Phase 3 to ensure data accuracy and integrity. Prior to joining FNIGC, Fan's experience was with public health surveillance overseeing communicable disease databases and disease control reports.

Drew Pihlainen (Chapter Two: Health Care Access)

Drew Pihlainen, MA Economics, is a Senior Researcher with Academica Group. Previously he spent five years at the University of British Columbia's Okanagan Campus, where he had the opportunity to help build and grow a relatively new institutional research office. While there, he supported a variety of projects related to student surveys, strategic enrolment management, institutional reporting, and key performance metrics. Prior to working in higher education, Drew spent time as an economic development officer with the Canadian International Development Agency in Peru, where he conducted community consultation and research on grassroots entrepreneurship support programs. He has previously been involved with BC institutional research and planning (BCIRP) and served as Vice-President and President of the Pacific Northwest Association for Institutional Research and Planning (PNAIRP).

Angela Mashford-Pringle (Chapter Three: Language and Culture)

Dr. Angela Mashford-Pringle is an Assistant Professor and Associate Director for the Waakebiness-Bryce Institute for Indigenous Health, Dalla Lana School of Public Health, University of Toronto. She is an urban Algonquin woman from Timiskaming First Nation in northern Quebec whose research is at the intersection of Indigenous health and education. She has held leadership and administrative positions at Peel District School Board, St. Michael's Hospital's Well Living House, and Centennial College as the inaugural Aboriginal Programs Manager where she developed the Aboriginal Business Diploma. Angela worked for more than 10 years at Health Canada and the Public Health Agency of Canada managing a



variety of Aboriginal social programs like Aboriginal Head Start Urban and Northern Communities. She has been a lecturer at the University of Toronto, a part-time faculty member at Sheridan College, and a sessional lecturer at Ryerson University, York University, and University of Victoria.

**Elisa Levi and Kelly Skinner
(Chapter Four: Nutrition and Food Security)**

Elisa Levi is a health and food systems consultant. Active in non-profit leadership, Elisa sits on the boards of the Circle on Philanthropy and Aboriginal Peoples in Canada, Edkaagmik Nbiizh Neyaashiinigamiingninwag Edbendaagzijig Trust, the Toronto Board of Public Health, Anishnawbe Health Foundation and Red Sky Performance. She draws upon a Master of Public Health from Lakehead University and Bachelor of Applied Science with a focus on Nutrition from Ryerson University where she currently teaches an Indigenous Food Systems course with the Chang School. Elisa is proud Anishinaabekwe, mother of two and member of the Chippewas of Nawash Ontario.

Kelly Skinner is an Assistant Professor in the School of Public Health and Health Systems at the University of Waterloo where she leads and teaches in the new online Master of Health Evaluation program. Kelly's research and evaluation interests focus on the health and well-being of First Nations populations and Northern communities in the areas of chronic disease prevention, evaluation of health programs, youth health, and community capacity development. Within these areas, Kelly has expertise in nutrition and food security issues and her work covers the areas of social justice and social policy for improving food security, advocacy for food sovereignty, and building resilient and sustainable Northern food systems. Because of the community-based nature of this work, Kelly has extensive experience with stakeholder engagement and working with communities as an evaluation consultant. Recent evaluation and research projects

cover various aspects of Northern food environments on the topics of food costs, food quality, retail food environments, and community food initiatives.

Christine Cameron (Chapter Five: Physical Activity)

Dr. Christine Cameron has a Ph.D. from the School of Sport, Exercise, and Health Sciences from Loughborough University. Christine Cameron is the President and principal researcher of the Canadian Fitness and Lifestyle Research Institute and has over 25 years of experience in population level data collection. This research includes obtaining contracts for and having overall responsibility for national population surveys and associated setting-based surveys, such as those in Canadian workplaces, municipalities, and schools. Christine Cameron has served on several Boards, and currently serves on several research advisory and work groups pertaining to physical activity and sport.

**Courtney Humeny and Amy Nahwegahbow
(Chapter Six: Personal and Community Wellness)**

Courtney Humeny completed her doctorate in Cognitive Science from Carleton University where she examined the effects of trauma on cognitive and social functioning through her dissertation research on resilience and mental health in survivors of a romantic relationship with a psychopath, and employment at the Personnel and Family Support Section of the Department of National Defence. Following completion of her degree she shifted focus toward pursuing a career that would allow her to be more connected to her Cree ancestry and apply her academic background to address First Nations issues. She was contracted by the Wabano Centre for Aboriginal Health to conduct a study on the experiences of Indigenous families involved with the child welfare system. Courtney worked at FNIGC as a Statistical Data Analyst from May 2017 to April 2018. She is currently a Policy Analyst at Employment and Social Development Canada (ESDC).



Amy Nahwegahbow is a Senior Research Advisor at the First Nations Information Governance Centre. Amy is Anishnaabe and a member of the Whitefish River First Nation who is currently working and raising a family in Ottawa. For over 20 years, she has worked in research, policy and advocacy at National Indigenous Organizations. Amy's work has focused on supporting Indigenous health knowledge and ethical research practices to advance health policy and programs.



APPENDIX 2

RHS 3 PARTICIPATING COMMUNITIES (NATIONAL SAMPLE)

The First Nations Information Governance Centre would like to thank the following First Nations communities for participating in the RHS Phase 3.

Alberta

Alexander First Nation
Beaver Lake Cree Nation
Bigstone Cree Nation
Blood Tribe
Cold Lake First Nation
Dene Tha' First Nation
Duncan's First Nation

Enoch Cree Nation
Horse Lake First Nation
Kapawe'no First Nation
Kehewin Cree Nation
Loon River First Nation
O'Chiese First Nation
Piikani Nation

Samson Cree Nation
Siksika Nation
Sturgeon Lake Cree Nation
Sucker Creek First Nation
Sunchild First Nation
Swan River First Nation
Tallcree First Nation

British Columbia

Alexis Creek
Blueberry River First Nations
Campbell River
Canim Lake
Cape Mudge
Cheslatta Carrier Nation
Cowichan
Esk'etemc
Gitsegukla
Gitwangak
Gitxaala Nation
Gwa'Sala-Nakwaxda'xw
Heiltsuk
Iskut
Katzie
Kispiox
Kitasoo
Lake Babine Nation
Lax Kw'alaams
Lower Kootenay
Lower Nicola
Lower Similkameen

Malahat First Nation
Matsqui
McLeod Lake
Metlakatla
Moricetown
Mount Currie
Musqueam
Nak'azdli
Namgis First Nation
Nisga'a Village of Laxgalt'sap
Nisga'a Village of New Aiyansh
N'Quatqua
Okanagan
Old Massett Village Council
Osoyoos
Penelakut
Penticton
Quatsino
Saik'uz First Nation
Saulteau First Nations
Sechelt
Seton Lake

Simpw First Nation
Sliammon
Soowahlie
Squamish
Sts'ailes
Stz'uminus First Nation
Takla Lake First Nation
Tk'emlúps te Secwépemc
Tla-o-qui-aht First Nations
Tl'etinqox-t'in Government Office
Tobacco Plains
Tsartlip
Tsawout First Nation
Tseycum
Tsleil-Waututh Nation
Ucluelet First Nation
Ulkatcho
Upper Nicola
Wet'suwet'en First Nation
Williams Lake
Yekooche First Nation
Yunesit'in Government



Manitoba

Birdtail Sioux Dakota Nation
Bloodvein First Nation
Bunibonibee Cree Nation
Canupawakpa Dakota First Nation
Ebb and Flow First Nation
Fisher River Cree Nation
Fox Lake Cree Nation
Garden Hill First Nation
Hollow Water First Nation
Keeseekoowenin First Nation
Kinonjeoshtegon First Nation
Long Plain First Nation

Manto Sipi Cree Nation
Mathias Colomb Cree Nation
Misipawistik Cree Nation
Mosakahiken Cree Nation
Nisichawayasihk Cree Nation
Northlands Denesuline First Nation
Norway House Cree Nation
O-Chi-Chak-Ko-Sipi First Nation
Opaskwayak Cree Nation
O-Pipon-Na-Piwin Cree Nation
Peguis First Nation
Pimicikamak Cree Nation (Cross Lake)

Pinaymootang First Nation
Roseau River Anishinabe First Nation
Sagkeeng First Nation (Fort Alexander)
Sapotaweyak Cree Nation
Sandy Bay First Nation
St. Theresa Point First Nation
Swan Lake First Nation
Wasagamack First Nation
Waywayseecappo First Nation
Wuskwi Sipiik First Nation
York Factory First Nation

New Brunswick

Eel Ground First Nation
Eel River Bar First Nation
Elsipogtog (Big Cove) First Nation

Esgenoopetitj First Nation
Kingsclear First Nation
Madawaska Maliseet First Nation

Metepenagiag Mi'kmaq First Nation
Saint Mary's First Nation

Newfoundland

Maiwpukek First Nation

Nova Scotia

Acadia First Nation
Annapolis Valley
Bear River
Eskasoni First Nation
Glooscap First Nation

Membertou First Nation
Millbrook First Nation
Paqtnkek First Nation
Pictou Landing
Potlotek First Nation

Sipekne'katik First Nation
Wagmatcook First Nation
We'koqma'q First Nation

Ontario

Alderville First Nation
Beausoleil First Nation
Biinjitiwaabik Zaaging Anishinaabek
(Rocky Bay)
Bkejwanong Territory (Walpole Island)
Chippewas of Kettle & Stony Point
Curve Lake First Nation
Fort William First Nation
Hiawatha First Nation
Kasabonika Lake First Nation

Kee-Way-Win First Nation
Kitchenuhmaykoosib Inninuwug
M'Chigeeng First Nation
Mississaugas of the New Credit First
Nation
Mohawks of Akwesasne
Mohawks of the Bay of Quinte
Moose Cree First Nation
Moravian of the Thames (Delaware
Nation)

Naotkamegwaning First Nation
Oneida Nation of the Thames
Pic Moberg First Nation
Red Rock First Nation
Sagamok Anishnawbek First Nation
Serpent River First Nation
Sheshegwaning First Nation
Shoal Lake No.40 First Nation
Wiwemikong Unceded Indian Reserve



Prince Edward Island

Lennox Island First Nation

Quebec

Essipit

Gesgapegiag

Kahnawá:ke

Kanesatake

Kawawachikamach

Kebaowek

Kitigan Zibi

Lac Simon

Listuguj

Manawan

Mashteuiatsh

Matimekush-Lac John

Nutashkuan

Odanak

Opitciwan

Pessamit

Pikogan

Timiskaming

Uashat mak Mani-Utenam

Wemotaci

Wendake

Saskatchewan

Ahtahkakoop

Birch Narrows First Nation

Canoe Lake Cree Nation

Cote First Nation

Day Star

Fishing Lake First Nation

George Gordon First nation

Hatchet Lake

James Smith

Kawacatoose

Keeseekoose

Lac La Ronge

Mistawasis

Montreal Lake

Moosomin

Muskeg Lake

Nekaneet

Ocean Man

Ochapowace

Okanese

One Arrow

Onion Lake

Peepeekisis

Pheasant Rump Nakota

Piapot

Red Earth

Red Pheasant

Sakimay First Nations

Saulteaux

Sturgeon Lake First Nation

Wahpeton Dakota Nation

Waterhen Lake

Northwest Territories

Acho Dene Koe First Nation (Fort Liard)

Behchoko

Behdzi Ahda First Nation (Colville Lake)

Dechi Laot'i First Nations

Deh Gah Got'ie Dene Council (Fort

Providence)

Deline

Gameti

Liidlíi Kue First Nation

Lutsel K'e

Sambaa K'e

Tetlit Gwich'in Council (Fort McPherson)

Tulita Band Council

Twichya Gwich'in Band Council

Whati

Yellowknives Dene First Nation

Yukon

Champagne & Aishihik First Nations

Carcross/Tagish First Nation

First Nation of Na-Cho Nyak Dun

Kluane First Nation

Kwanlin Dün First Nation

Liard First Nation

Little Salmon/Carmacks First Nation

Ross River Dena Council

Selkirk First Nation

Ta'an Kwäch'än Council

Teslin Tlingit Council

Tr'ondëk Hwëch'in

Vuntut Gwitchin First Nation

White River First Nation

NOTES

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