




# RESEARCH ON THE HEALTH OF QUÉBEC FIRST NATIONS AND INUIT: AN OVERVIEW 1986 to 2006



FIRST NATIONS OF QUEBEC AND LABRADOR  
HEALTH AND SOCIAL SERVICES COMMISSION

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## **AUTHORS**

Marie-Jeanne Disant, Direction recherche, formation et développement  
Institut national de santé publique du Québec

Mathieu-Olivier Côté, Research Department  
First Nations of Quebec and Labrador Health and Social Services Commission

## **RESEARCH TEAM**

Suzanne Bruneau  
Institut national de santé publique du Québec

Mathieu-Olivier Côté  
First Nations of Quebec and Labrador Health and Social Services Commission

Marie-Jeanne Disant  
Institut national de santé publique du Québec

## **STEERING COMMITTEE**

Guylaine Gill  
First Nations of Quebec and Labrador Health and Social Services Commission

Nancy Gros Louis McHugh  
First Nations of Quebec and Labrador Health and Social Services Commission

Pierre Joubert  
Institut national de santé publique du Québec

Marjolaine Sioui  
First Nations of Quebec and Labrador Health and Social Services Commission

## **REVISIONS**

Odile Bergeron  
Institut national de santé publique du Québec

Valérie Boudreault  
Ministère de la Santé et des Services sociaux

Michel Deschesnes  
First Nations of Quebec and Labrador Health and Social Services Commission

Julie Gauthier  
Ministère de la Santé et des Services sociaux

Denis Hamel  
Institut national de santé publique du Québec

Marie-Claire Laurendeau  
Institut national de santé publique du Québec

**CONTRIBUTORS**

Zineb Laghdir  
First Nations of Quebec and Labrador Health and Social Services Commission

Mickel Robertson

**TRANSLATION AND REVISIONS**

Susie Bernier

Marie-Christine Gagnon  
Institut national de santé publique du Québec

**PAGE SETTING**

Line Mailloux  
Institut national de santé publique du Québec

**COVER**

Chantal Cleary  
First Nations of Quebec and Labrador Health and Social Services Commission

**CARTOGRAPHY**

Mathieu-Olivier Côté  
First Nations of Quebec and Labrador Health and Social Services Commission

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## FOREWARD

For almost 10 years now, First Nations and Inuit have increased their efforts to acquire frameworks to better structure research activities conducted on their territories. Research projects conducted in First Nations and Northern Inuit communities are numerous, but their contribution to local populations is not always tangible. First Nations and Inuit population's concerns are sometimes far from researcher's and research funding organization's interests.

Yet, the inclusion of First Nations and Inuit in research activities and decisions is crucial if we want to have a better understanding of their distinctive features and to take into account the geopolitical and sociodemographic stakes that characterize them. Often misunderstood, these characteristics are at the heart of differences of opinion between the research world and the First Nations and Inuit world in regards to research priorities that need to be set. Often perceived as a whole, First Nations and Inuit are nevertheless a mixture of peoples with much diversity and concerns. The Royal Commission on Aboriginal Peoples is in fact clear on the subject:

*“The more than 50 First Nations have much in common, but they are different from one another - and very different from Inuit, whose culture was shaped by the demanding northern environment.”<sup>1</sup>*

In addition to the numerous geopolitical and sociodemographic disparities between Aboriginals and non-Aboriginals, we also find a number of disparities between the different First Nations and Inuit peoples. This inescapable fact is a great challenge for research and makes it difficult to include First Nations' point of view in the research world, in Canada and Québec. Although a number of Aboriginal organizations set action priorities in various areas (health, education, economy, etc.), they are rarely taken into account by research funding agencies. Even today, First Nations have little or no influence on the allocation of research funds in areas that concern them.

In 2007, the First Nations of Québec and Labrador Health and Social Services Commission (FNQLHSSC) released their master plan for the next ten years in which the Québec and Labrador First Nations have set priorities in order to address disparities and accelerate changes in health. This document is one of the cornerstones of health and social services planning for First Nations represented by the Commission.

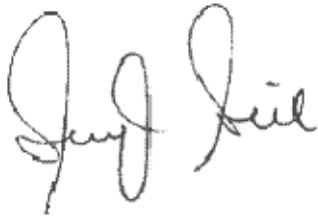
This overview is in line with the Blueprint that foresees an intensification of research activities in order to adequately respond to priorities and needs identified by First Nations on health and social services issues, and this, based on a holistic approach to health that integrates all health determinants, including its spiritual dimensions. It was carried out in partnership with the *Institut national de santé*

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<sup>1</sup> Highlights from the Report of the Royal Commission on Aboriginal Peoples: <http://www.ainc-inac.gc.ca/ap/pubs/rpt/rpt-eng.asp>

*publique du Québec* (INSPQ), following commitments made by the *ministre de la Santé et des Services sociaux*, during the First Nations socioeconomic forum held in October 2006 in Masteuiatsh. It was agreed that the INSPQ would share its expertise with the FNQLHSSC to support the development of research capacity at the Commission.

This work meets a need to better understand research on Québec First Nations and Inuit, in order to specify research needs to be addressed and to ensure that research binds into the objectives pursued by the FNQLHSSC master plan. In short, we hope that the information in this document, the result of a fruitful collaboration between our respective organizations, will initiate a new form of dialogue between funding agencies, governments and other groups representing the interests of Québec First Nations and Inuit to ensure that research on health and social services is better adapted to their reality and priorities.



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Guylaine Gill  
Managing Director  
FNQLHSSC



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Pierre Joubert, Director  
Research, training and development  
INSPQ

## SUMMARY

This document presents the results of a review conducted in 2008 of Québec First Nations and Inuit health research, with the goal to identify priorities for research development and in order to shed light on decisions in regards to the health needs of Aboriginal populations.

A conceptual framework was developed to accurately define the area of Aboriginal health research. This area was defined as being composed of: *The entirety of research activities on the health and well being of the Aboriginal population and on their determinants focused on producing, integrating and applying scientific knowledge, valid and relevant to the FNQLHSSC in the exercise of its mandate towards communities, families and individuals.*

This review looked at 230 Aboriginal health research projects funded between 1986 and 2006. These projects, selected on the basis of the principles and criteria defined in the conceptual framework, were indexed in the *Banque de la recherche sociale et en santé* (BRSS) of the *ministère de la Santé et des Services sociaux du Québec* (MSSS), this database listing all research projects funded by Québec or Canadian organizations since the late 1980's.

One of the characteristics of these projects is that the majority covers territories *under agreement* and that certain thematic areas of research and segments of populations are more frequently studied; *Lifestyles & Chronic Diseases* as well as *Prevention & Promotion of health and well-being* are the two themes most often addressed while *Children & Youth* and *Perinatality & Early Childhood* are the two groups most frequently targeted. However, it is not the territories, thematic areas or segments of the population most frequently funded that receive the highest funding amounts. In fact, we observed some form of duality in Aboriginal health research with on one side, a few research areas where the majority of funding is focused on acute problems (e.g. Climate Change, Mental Health, Nutrition and Diabetes Prevention) and on the other side, numerous projects with modest funding that cover a large spectrum of subjects.

The contextualization of these results with those of the array of the BRSS projects allows us to bring to light the distinctive features of the support for Aboriginal health research, particularly the respective contributions of the *Programme de subventions en santé publique du Québec* (PSSP) and the Institute for Aboriginal Peoples' Health-Canadian Institutes for Health Research (IAPH-CIHR); the form and extent of their support is nevertheless quite different.

Over the 1986-2006 study period, we observed an overall increase in the number of projects funded and amounts invested. However, there are variations in the evolution as we observed, on the one hand, a decrease in projects and amounts invested for certain thematic areas and segments of the population such as *Children & Youth* and *Perinatality & Early Childhood*, and on the other hand, a steep increase in funded projects and amounts invested in the areas of *Physical environment* and *Mental Health*. Additionally, we noticed an important increase in infrastructure investments (Networks of Centres of Excellence, research networks, chairs, etc.) that we can link to the establishment of the Institute for Aboriginal Peoples' Health in 2000.

By presenting the distinctive features of this area of research, this review allows us to better define the perspectives on, and challenges to, the support and development of research on the health of Québec First Nations and Inuit. We can also speculate that it will shed light on decisions to be made and orientations to take in order for research to further contribute to improving the health of Québec First Nations and Inuit.



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## LIST OF ACRONYMS

BRSA	Banque de recherche en santé autochtone (Aboriginal Health Research Database)
BRSS	Banque de recherche sociale et en santé
CIHR	Canadian Institutes of Health Research
CQRS	Conseil québécois de la recherche sociale
DSP	Direction de santé publique
FNQLHSSC	First Nations of Quebec and Labrador Health and Social Services Commission
FQRSC	Fonds québécois de recherche sur la société et la culture
FRSQ	Fonds de la recherche en santé du Québec
IAPH	Institute of Aboriginal Peoples' Health
INSPQ	Institut national de santé publique du Québec
MSSS	Ministère de la Santé et des Services sociaux
NCCAHA	National Collaborating Centre for Aboriginal Health
NHRDP	National Health Research and Development Program
PNSP	Programme national de santé publique
PSSP	Programme de subventions en santé publique
SSHRC	Social Sciences and Humanities Research Council



## INTRODUCTION

This research overview follows the 2007-2017 First Nations of Quebec and Labrador Health and Social Services Commission (FNQLHSSC) Blueprint<sup>2</sup> and aims to shed light on decisions in matters of research development geared towards Québec First Nations and Inuit health. It was jointly carried out in 2008-2009, by the *Institut national de santé publique du Québec* (INSPQ) and the First Nations of Quebec and Labrador Health and Social Services Commission (FNQLHSSC). This collaboration is part of the many commitments made by the *ministère de la Santé et des Services sociaux* at the First Nations Socioeconomic Forum held in October 2006 in Masteuiatsh, where it was agreed that the INSPQ would contribute to strengthening the research capacity of the FNQLHSSC by sharing its expertise and skills.

In 2008, a research team and a steering committee were formed to conduct this review. During this process, the research team and the steering committee, composed of INSPQ and FNQLHSSC personnel, shared and further developed their mutual expertise in the Québec First Nations and Inuit health research field.

This review thereby supports the planning process of the FNQLHSSC, as the public health research in Québec assessment did in 2007 for the *Programme national de santé publique* (PNSP). The research team adapted the approach of this latest assessment in order to better define the research area on Aboriginal<sup>3</sup> health and to identify the research direction and strategies to be supported or developed.

Relatively few studies substantiate directions in order to support or develop research on Québec Aboriginal health. As such, the study completed in 2006 by the National Collaborating Centre for Aboriginal Health (NCCAHA) enabled us to define a few of the many characteristics of Aboriginal health research<sup>4</sup>. However, this study does not present a detailed analysis of the research status in Québec. By highlighting certain characteristics of Québec Aboriginal health research, this review should clarify a few of the issues and challenges associated with research development in this field.

First, the methodological orientations and conceptual framework of this study are specified. The results section presents the general characteristics of Aboriginal health research projects, followed by their funding and evolution. In the last section, main findings are discussed before the presentation of perspectives and challenges associated with Aboriginal health research development.

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<sup>2</sup> <http://www.cssspnql.com/eng/nouvelles/documents/Blueprint.pdf>

<sup>3</sup> To simplify the text, the expression “Aboriginal health research” will be used to designate research on Québec First Nations and Inuit health.

<sup>4</sup> Greenwood, M., 2006, *Landscapes of Indigenous Health, an environmental scan*, NCCAHA.

## 1. METHODOLOGY

The objective of this review is to draw a portrait of Aboriginal health research in Québec, highlighting its characteristics, strengths and weaknesses, in order to clarify development priorities, such as research areas, strategies or funding modes.

To do so, the project involved the following activity sequence:

- Elaboration of a conceptual framework defining and circumscribing Québec Aboriginal health research;
- Identification and review of existing Aboriginal health research in Québec;
- Development of an Aboriginal health research database;
- Processing, analysis and use of the results collected in the database;
- Interpretation and dissemination of results.

The steering committee was established at the start of the project and has participated in an advisory and decision-making capacity during its various phases on issues of methodology as well as to validate and clarify the research team's findings and analysis.

### 1.1 CONCEPTUAL FRAMEWORK

The development of the conceptual framework was based on several reference documents as well as similar approaches aimed at defining and classifying research within an intervention field.

As such, we mostly relied on the following:

- The FNQLHSSC Blueprint<sup>5</sup> and its health priorities;
- The approach taken by the Dialog<sup>6</sup> Network to index Aboriginal research projects;
- The environmental scan of Aboriginal health research in Canada, conducted by the National Collaborating Centre for Aboriginal Health<sup>7</sup>;
- The review of public health research in Québec<sup>8</sup>.

In order to better circumscribe the research conducted on Aboriginal health, “Aboriginal health Research” is here defined as:

*“The entirety of research activities on the health and well-being of the Aboriginal population and on their determinants focused on producing, integrating and applying scientific knowledge, valid and relevant for the FNQLHSSC in the exercise of its mandate towards communities, families and individuals.”*

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<sup>5</sup> Blueprint 2007-2017 : <http://www.cssspnql.com/eng/nouvelles/documents/Blueprint.pdf>

<sup>6</sup> Dialog : <http://www.reseaudialog.qc.ca/rubEN3.asp?rub=3>

<sup>7</sup> Greenwood, M., 2006, *Landscapes of Indigenous Health, an environmental scan*, NCCA.H.

<sup>8</sup> Laurendeau, M.-C., Hamel, M., Colin, C. & Disant, M.-J., 2007, *Bilan de la recherche en santé publique au Québec (1999-2004)*, INSPQ-MSSS.

This definition draws its inspiration from the FNQLHSSC definition of health and from the *Bilan de la recherche en santé publique au Québec* (Laurendeau and al, 2007).

For the FNQLHSSC, health is understood as “*an indivisible whole, taking into account the physical, mental, spiritual, emotional, economical, environmental and cultural well-being of communities, families and individuals*” (FNQLHSSC).

In regards to research on public health, it is “*all research activities related to population health and wellness and their determinants, the purpose being the production, integration, dissemination and application of valid scientific knowledge pertinent to exercising the functions of public health*” (Laurendeau and al, 2007- *Free translation*).

Starting from this definition, principles and selection criteria allowing to exclude or to include research projects were specified. During the development of the conceptual framework, these principles and criteria were refined repeatedly through an ongoing clarification and validation exercise.

Two selection principles were used: the first one stipulates that “the Aboriginals in Québec are the population or one of the Aboriginal populations under study” and the second that “health be the dependent variable of the research”. Details of the selection principles and criteria are presented in Appendix 1.

A classification of all research was then elaborated in order to compare, measure and identify relevant trends to develop Aboriginal health research and the FNQLHSSC’s direction. This classification was also inspired by the one used in the *Bilan de la recherche en santé publique*, the index developed by Dialog Network for health research projects coding as well as the priorities listed in the FNQLHSSC Blueprint.

This categorization of projects enables us to specify the following:

- a) Aboriginal populations (communities, Nations) targeted by the project;
  - b) Groups of people targeted by the project;
  - c) Themes covered by the project.
- a) **Classification by Aboriginal population** allows us to distinguish research aimed at populations located in:
- Territories *under agreement* (Inuit, Cree and Naskapis);
  - Territories *not under agreement* (Abenakis, Algonquins, Atikamekw, Hurons/Wendat, Innus, Malecites, Mi’gmaqs and Mohawks);
  - Vast and/or undefined territories (*under agreement* and *not under agreement* common to circumpolar populations, to Québec Aboriginals and to other Aboriginal populations).

These three categories are mutually exclusive, thus a project cannot be classified in more than one category. The map, in Appendix 2, presents the distribution of Québec’s communities and territories *under agreement/not under agreement*.

**b) Classification by groups of people** allows us to identify specific needs in matters of care, support, protection or prevention; seven groups were identified as follows:

- Perinatality and Early childhood
- Children and Youth
- Women
- Men
- Adults
- Families
- Elders.

These categories are not mutually exclusive, thus a project can include early childhood, children and youth. The definitions associated to these populations are presented in Appendix 3.

**c) Categorization by theme** allows us to identify the importance of certain health priorities. In total, fourteen themes were selected (definitions in Appendix 4), as follows:

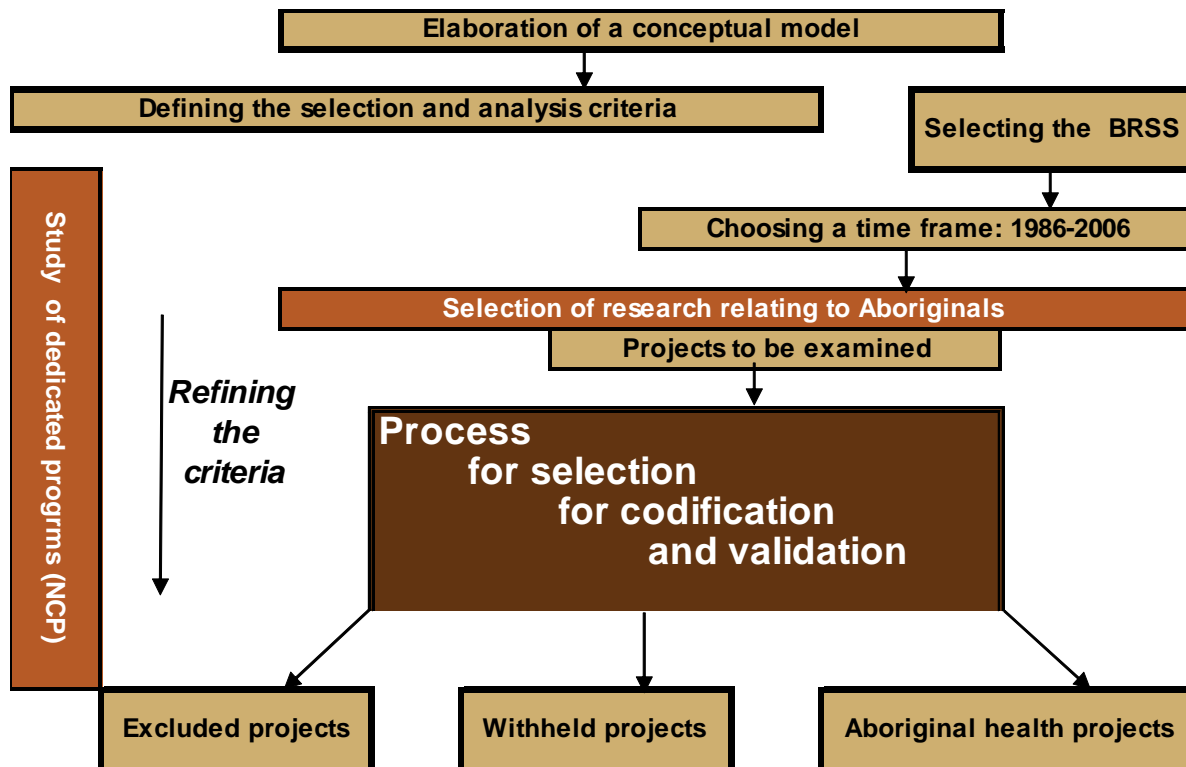
- Living conditions and Social environment
- Physical environment
- Lifestyles and Chronic diseases
- Infectious diseases
- Mental health
- Addictions
- Violence
- Unintentional injuries
- Food and Nutrition
- Traditional practices and knowledge
- Intervention, prevention and promotion programs
- Organization of health and social services
- Public policy, theories and methods
- General health.

These themes are not mutually exclusive; a project can fall under more than one theme.

## **1.2 DEVELOPMENT OF THE ABORIGINAL HEALTH RESEARCH DATABASE (BRSA)**

At the time of the development of the conceptual framework, various databases were examined and a strategy was developed to identify and extract Aboriginal health projects in order to develop a separate Aboriginal health research database. The following diagram summarizes the main activities and phases related to the development of this database detailed in the following sections.

**Diagram 1** Activities and phases to develop the database



### 1.2.1 Selection of the database and time frame

Before putting together an Aboriginal health research database (BRSA), several data sources were consulted including the *Banque de recherche sociale et en santé* (BRSS) from the *ministère de la Santé et des Services sociaux du Québec* and the Dialog Bibliographical Codex. This examination allowed us to estimate the number of Aboriginal health research projects in Québec and to conceive of strategies to locate and inventory them. The BRSS and the Dialog Bibliographical Codex, both containing an important number of references (nearly 40,000 research projects for the BRSS and 9,000 titles for Dialog), it was necessary to develop a strategy, other than examining the references one by one, to extract Aboriginal health research projects.

After examining the limits and advantages of each data bank, it was decided to put together the database using the BRSS, due to the working possibilities offered by this data source and the relevance of the information. The Dialog Codex offers a complete selection as it lists all research publications (books, reports, thesis, articles, DVDs, etc.) developed under funded or non funded research (reports, briefs, thesis, etc.) on Aboriginals from Québec, Canada and worldwide. However, the use of this bibliography base seemed limited at the moment of this review since it was not indexed nor did this database provide data on funding or research context.

The quantity and quality of the data as well as its accessibility are the greatest interests of the BRSS. It is relatively exhaustive as it lists data from most funding sources (Québec or Canada) of the so-called “funded” research in Québec. As well, the BRSS provides information not only on research content

but also on researchers, the management or collaborating organizations as well as on funding. Finally, the various project descriptors are useful tools to locate and select projects.

We must also mention the consultation of the Indian and Northern Affairs Canada's Northern Contaminants Program (INAC-NCP) database. Indeed, this program supports research specifically on human health and environmental surveillance in the North. A summary analysis of the projects under this program was done to approximate the number of Aboriginal health research-focused projects in Québec. In order to be cohesive, the program, which also includes funding of non research-related projects, was not integrated in the BRSS.

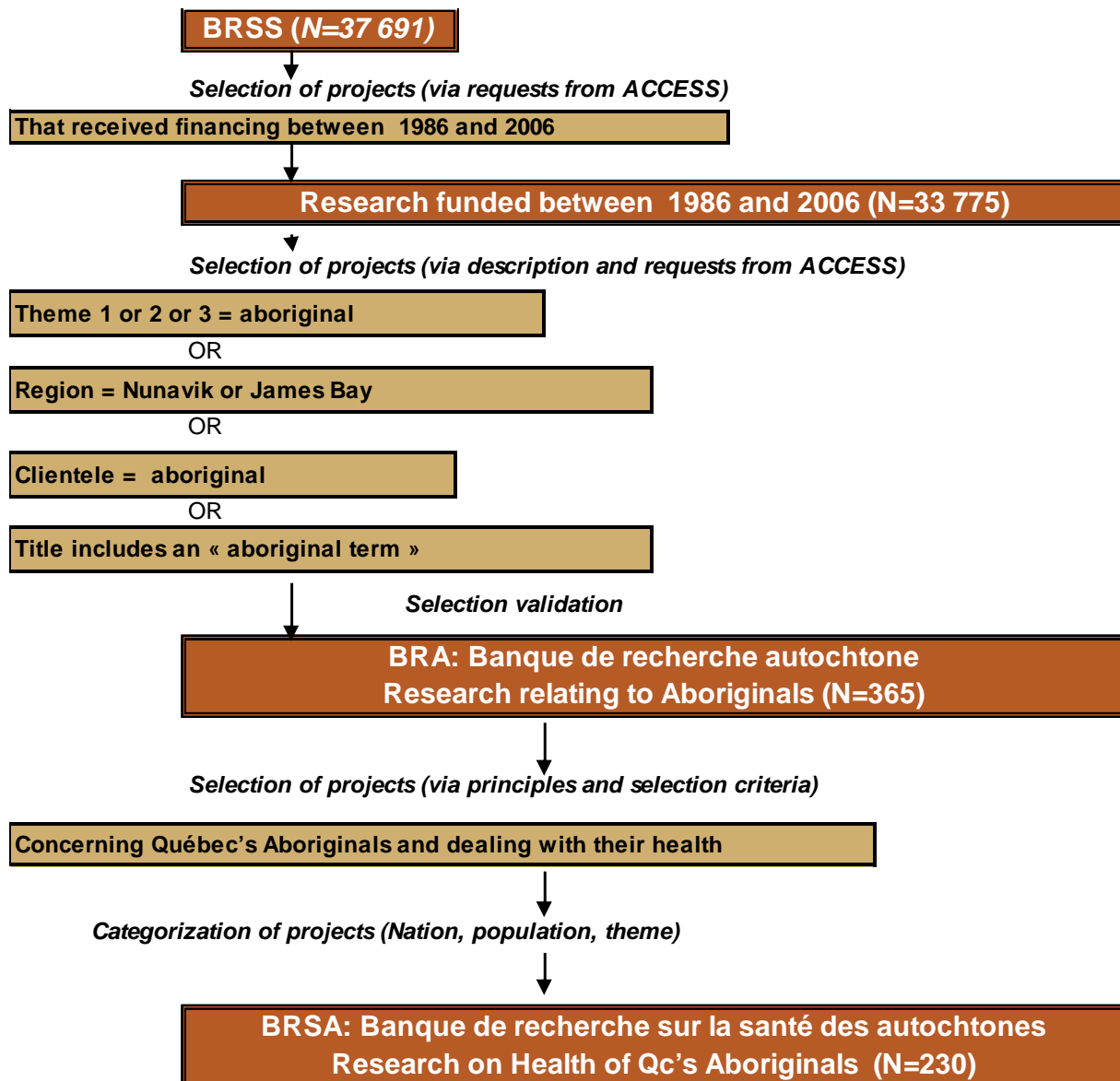
We decided to select projects over a rather extended time-period in order to establish a consistent base to observe trends and evolution. The chosen period spans twenty years, between the 1986-1987 and 2006-2007 fiscal years.

### **1.2.2 Selection and classification of projects**

The selection and classification of projects were done by following the criteria and principles established in the conceptual framework. As well, testing and validation mechanisms were implemented to ensure the validity and the performance of the selection and classification activities. The features of the BRSS were used to operationalize and validate selections. Furthermore, a coding strategy and procedure were established to ensure the validity of the operations. The diagram that follows summarizes the main selection and classification phases.



**Diagram 2** Selection and categorization phases



We can distinguish two main activities in the development process of the Aboriginal Health Research Database (BRSA), the selection of the BRSS research projects using the Access software, as well as the research team's work to select and categorize the projects pertaining to Aboriginals.

***The selection of research projects in the BRSS***

First, all projects in the BRSS having received funding between the 1986 and 2006 fiscal years were selected, including projects funded before 1986 or whose funding continued after 2006. The selection of the period was determined in reference to fiscal years (e.g.: for the 1986-1987 fiscal years, the reference year is 1986). In total, 33,775 research projects were selected.

An intermediary database of projects pertaining to Aboriginals was then developed using the BRSS descriptors. More than twenty descriptors allowed us to locate projects inventoried in the BRSS,

including research theme, clientele and targeted region. These three descriptors were used to list all projects relating to Aboriginals in an Access software database, using the category *Aboriginal* for descriptors *Theme 1*, *Theme 2*, *Theme 3* as well as for the *Clientele* descriptor, and the categories *Nunavik* and *James Bay* for the *Regions* descriptor. Finally, starting with series of key words (more than thirty in all), queries were made to list all projects having in their title a reference, in French or in English, to Aboriginal Nations (e.g.: Huron, Wendat) or an Aboriginal term (e.g.: First Nations, Native People, Indigenous).

Following this selection process and after eliminating duplicates, a validation was performed on the one hand by examining the list of projects generated to locate any inconsistencies (e.g.: CRI-VIFF selected with the term Cree) and, on the other hand, by controlling the complete list generated, with other lists generated through other queries (e.g.: starting with researchers known for their work in the Aboriginal field or Aboriginal organizations potentially associated to research). In total, 365 projects were identified as pertaining to Aboriginals.

### ***Selection and classification work by the research team***

It is important to highlight the principles and criteria in terms of the coding of projects that were refined during the process. Taking into consideration difficulties in coding and gray areas, further specifications were made to better define the categories. Any modification to the selection or classification principles and criteria were systematically recorded and validated by the steering committee, in order to ensure the precision of the classification operations.

A procedure was also established to supervise and guarantee the validity of the coding operations of the research team. All projects to be coded were examined on an individual basis by three members of the research team; the results of this first coding were then compared and discussed by the team until consensus was reached. In case of differences or any doubt on the code to be applied, problematic cases were brought to the steering committee for them to rule on the precisions and changes to be done. Furthermore, validation operations (through computer queries) were carried out in order to verify the consistency of the classifications.

Projects were examined starting with their title and abstract when available. In case of any doubt on the nature of the project, additional research was done through the BRSS (author's research, his/her affiliation, etc.) or through the Internet (with university websites, granting agencies, foundations, etc.).

Based on the principles and criteria established under the reference framework, 230 Aboriginal health research projects out of the 365 projects examined were retained and categorized.

### **1.2.3 Data processing and analysis**

Multiple validation and clarification operations were done on the data in order to guarantee its accuracy and validity. These operations allowed us to verify the consistency in coding and the correction of abnormal (e.g.: a research ending in 2207) or missing data (total amount, duration of the projects).

We can distinguish within the analysis dimensions, those belonging to the BRSA and those belonging to the BRSS. Nations, population groups and themes are three dimensions of Aboriginal health research projects. However, data on funding sources and research context (the origin of the

organizations involved in the research and the researchers) are dimensions that allow us to characterize each project itemized in the BRSS.

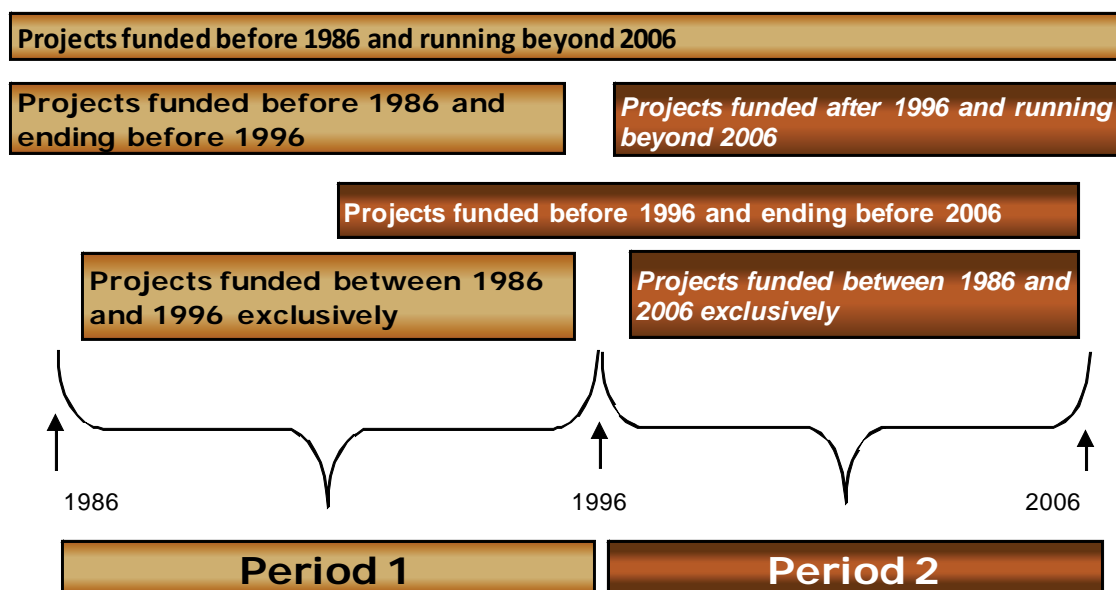
To identify trends using significant analysis units, groupings were done particularly concerning data on amounts allocated, funding sources, researcher affiliations, organizations managing the funds and partner organizations.

In order to trace evolution and changes, two ten-year observation periods were identified. The projects were distributed between these two periods to create two sets of distinct periods.

- The first period shows projects funded between 1986 and 1996 exclusively, those that started before 1986 and ended before 1996 or ran beyond 1996;
- The second period shows projects funded between 1996 and 2006 exclusively, those that started during this interval and ended before 2006 as well as those that were funded after 1996 and ran beyond 2006.

Diagram 3 illustrates the distribution of these projects according to the two periods.

**Diagram 3** Distribution of the projects over two observation periods



Data were treated using Access and Excel software programs. The processing of data consisted mainly in summations and calculations of the mean and median for funding data using univariate and bivariate analysis methods.

In total, 14 projects were withdrawn from the database due to missing information and 121 projects were excluded. Among the excluded projects, 35 did not concern Québec Aboriginals and 95 did not focus on health. As the exclusions could be duplicated, the sum of the exclusions is greater (n=130) than the number of excluded projects (n=121).

### 1.3 LIMITS

This review of Aboriginal health research projects only covers part of the research conducted on Aboriginal health, as information from non-subsidized research was not collected by the BRSS.

As such, research not accounted for in this review include:

- Research completed as a thesis or dissertation (with the exception of those supported by scholarships from major granting agencies inventoried in the BRSS);
- Surveys on the health status of the Aboriginal population (monitoring, screening, etc.);
- Evaluations (of impacts, of programs, etc.) mandated by government administrations and services;
- Research subsidized by private funds (Fondation Chagnon, pharmaceutical companies, Aboriginal Healing Foundation, university foundations, etc.);
- Research projects subsidized under the Northern Contaminants Program (NCP) and the International Polar Year (IPY);
- Research projects subsidized by infrastructures such as the Network of Centres of Excellence of Canada ArcticNet or the Nasivvik Centre (IAPH-CIHR).

Furthermore, the BRSS does not allow us to capture all dimensions of Aboriginal health research such as researchers' production and research impacts on the health of individuals and communities and the sharing of knowledge. All funded research projects however do provide indications on the characteristics and organization of Aboriginal health research.

The BRSS allows us to account for funded research projects, but not for the amount of research carried out on a given subject by a researcher or a team. Indeed, one project may have obtained several grants consecutively or simultaneously from various granting agencies. As an example, a research project on diabetes in a school environment may have received funding from the NHRDP (National Health Research Development Program), from the FRSQ at the beginning, then from the CIHR and SSHRC; at the same time, a project may have received funding to study children's lifestyles, and then funds to disseminate the results of the study or to support the operation of research infrastructure dedicated to this field (chairs, centres, institutes, networks, etc.). It is also impossible to establish the number of Aboriginal health research projects based on the number of applications for funding, nor on the number of research publications.

These limits and restrictions also have consequences on the interpretation of the quantitative data: it is indeed essential to contextualize the data as absolute values are not relevant, but the differences, variations and trends observed are. The caution required in the interpretation of the results applies most particularly to the financial data. These provide information on the amounts allocated to Aboriginal health research projects, but not on the total amount invested in Aboriginal health research. It is therefore inappropriate to use the numerical or monetary data as "absolute values" or to mention them in isolation and outside of this review context. As well, monetary data were not converted to constant dollar value.

Finally, we must highlight that the BRSS enables us to access a relatively exhaustive inventory of subsidized research in social sciences and health, as it records data on projects funded by more than

40 sources (17 in Canada and 28 in Québec), including all the major granting agencies in the health sector since the beginning of the 1980s. As well, the indexing processes of these projects ensure the quality of the information recorded in this database. The accuracy of selection and validation procedures to locate and select Aboriginal health research projects in the BRSS (as defined in the conceptual framework) allows us to guarantee the reliability and exhaustivity of the database studied.



## 2. RESULTS

In the first section, we introduced the general characteristics of Aboriginal health research followed by funding and its organization. Then, several Aboriginal health research dimensions are put in perspective with social and health research. The last section presents various aspects of the evolution of Aboriginal health research.

### 2.1 GENERAL CHARACTERISTICS OF THE BRSA

This section presents the major characteristics of Aboriginal health research starting with the three dimensions specific to the BRSA (nations or targeted communities - targeted segments or groups of population - thematic areas of research) and from dimensions common to subsidized research projects while specifying the context (organizations managing the funds and partner organizations, university affiliation of the researchers).

#### 2.1.1 The territories and targeted population groups

The characteristics of Aboriginal health research can be determined according to:

- Targeted territory (Nations or communities located in territories *under agreement* or *not under agreement*)<sup>9</sup>;
- Targeted segments or groups of population (Perinatalité, Early Childhood, Children, Youth, Families, etc.).

Nearly two thirds of the Aboriginal health research projects are carried out on territories *under agreement* (Table 1), corresponding mainly to those of the administrative health regions of James Bay Cree and Nunavik. Less than 10% of the research specifically concerns territories *not under agreement*. The *Others* category (less than one third of the projects) groups together projects that do not relate to a Nation's territory or a specific Aboriginal community, these referring to a wider group of populations than that of one Nation (e.g.: circumpolar populations, First Nations of Québec).

Some Nations and communities seem to be more investigated. Thus, almost one third of the research targeted Inuit and one quarter targeted the Cree. As well, if we add projects concerning the Cree or Inuit non-exclusively, it is close to one-third of the research that will pertain to the Cree (30.9%, including the projects concerning Inuit and Cree, jointly) and almost one half to Inuit (47.5% if we group together those projects concerning Inuit, Inuit and Cree, Inuit and First Nations as well as those targeting Arctic communities).

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<sup>9</sup> As a reminder, the distinctions between territories were established as per the research project's targeted Nations: this classification was done after identifying the population(s) targeted by the project.

**Table 1 Status of Aboriginal populations targeted by research projects**

Status	n	%
<b><i>Under agreement</i></b>	<b>146</b>	<b>63.5</b>
Inuit	74	32.2
Cree	65	28.3
Inuit & Cree	6	2.6
Naskapis	1	0.4
<b><i>Not under agreement</i></b>	<b>19</b>	<b>8.3</b>
Mohawks	9	3.9
Innus	4	1.7
Algonquins	4	1.7
Atikamekw	2	0.9
<b><i>Others</i></b>	<b>65</b>	<b>28.3</b>
Aboriginals	29	12.6
Inuit & FNQ	17	7.4
Circumpolar Population	12	5.2
FNQ	7	3.0
<b>Total projects</b>	<b>230</b>	<b>100.0</b>

*Note:* In *Others*, *Aboriginals* groups together research concerning Québec Aboriginals in general, as well as (eventually) other Aboriginal populations of Canada or other countries. FNQ indicates First Nations of Québec.

In regard to targeted groups of population (Table 2), more than one-half of the projects focuses on health and well-being issues that are not related to a particular segment of the population (e.g.: *Analysis of a survey on the living conditions in the Arctic*). Otherwise, certain population groups are more often targeted; as such, almost one third of the research focuses either on *Children & Youth* or on *Perinatality & Early Childhood*.

**Table 2 Groups of population targeted by research projects**

Population groups	Citations	%
Adults	4	1.7
Children – Youth	51	22.2
Elders	2	0.9
Family	7	3.0
Men	1	0.4
Perinatality – Early childhood	22	9.6
Women	12	5.2
<i>Without distinction</i>	<i>136</i>	<i>59.1</i>
<b>Total citations</b>	<b>235</b>	

*Note:* The percentage is calculated on the sum of the projects (N=230), the categories being non-exclusive, the sum of citations is greater than the number of projects.

### 2.1.2 Research themes

The majority of the projects only deals with one theme (60.9%), approximately one third (31.7%) deals with two themes and 7.4% with three.



The distribution of research projects between the fourteen themes is uneven, some being more frequently covered than others (Table 3). As such, one-quarter of the projects addresses the question of *Lifestyles & Chronic Diseases* and nearly one fifth *Health and Well-Being Promotion and Prevention*. As well, five themes are addressed by one project out of ten, in decreasing order of mention: *Food & Nutrition*, *Living Conditions & Social Environment*, *Mental Health*, *Organization of Services* and *Infectious Diseases*. Finally, seven themes were addressed by fewer than 10% of the projects: *Traditional Practices and Knowledge*, *Physical Environment*, *Addictions*, *Unintentional Injuries*, *Violence* and *Policy & Theories & Methods*.

**Table 3 Themes addressed by the research projects**

Themes	Citations	%
Addictions	8	3.5
Chronic diseases – Lifestyles	60	26.1
Food – Nutrition	37	16.1
General health	16	7.0
Infectious diseases	26	11.3
Living conditions – Social environment	32	13.9
Mental health	31	13.5
Organization of health and social services	31	13.5
Physical environment	17	7.4
Policy – Theories – Methods	3	1.3
Prevention – Promotion	42	18.3
Traditional practices and knowledge	18	7.8
Unintentional injuries	6	2.6
Violence	6	2.6
<b>Total citations</b>	<b>333</b>	

*Note: The percentage is calculated on the total of all projects (N=230), themes not being exclusive, the number of the citations is greater than the number of projects.*

### 2.1.3 Research context

The type of organizations committed in the management or as a partner of a research project as well as the university affiliation of the researchers enable us to specify some aspects of the research context.

#### *The institutions involved in a research project*

The carrying out of a research project involves the participation of institutions to administer the grant, as a subsidy cannot be deposited in a researcher's personal account. Two major types of institutions stand out: those that are in an academic environment (university or research institute) and those in the health and social services network. Other types of organizations that can also be involved are public or parapublic institutions or a group of several institutions, as the completion of a project may require the collaboration of organizations other than the one to which the researcher is affiliated.

Most Aboriginal health research projects are managed by organizations from the health and social services network (51.1% of the projects) while 40.2% of the projects are managed by a university and 8.7% by other types of organizations. Among the health and social services network organizations

involved in project management, we find hospital centres affiliated or not to a university (e.g. Royal Victoria Hospital, Hudson Bay Hospital Centre), state controlled or Regional Boards of Health and Social Services, as well as primary health care centres. Under the other category falls Aboriginal organizations (e.g.: First Nations of Québec and Labrador Health and Social Services Commission, Makivik Corporation, Kativik School Board) or community organizations (e.g.: Avataq Cultural Institute). Funding sources are listed in Appendix 5.

Almost half of the projects have collaborating organizations listed as team members (n=111). Organizations from the health and social services network prevail as three-quarters of the collaborating organizations are from this network, universities representing 17.1% and other institutions 8.1%.

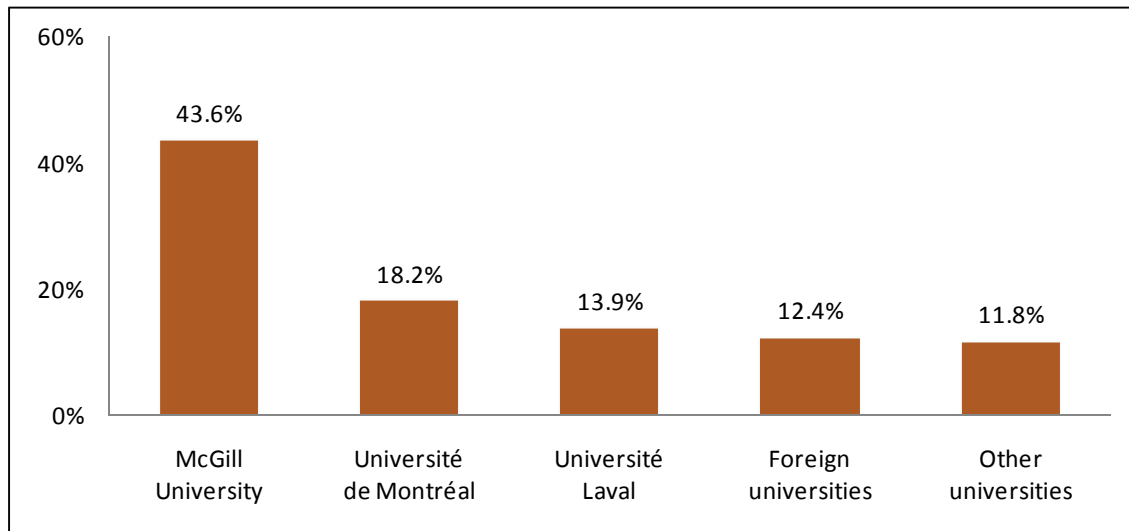
### 2.1.4 Aboriginal health researchers

The number of people involved in the 230 projects adds up to 488. However, a little more than one-third of these people (38.9%) are affiliated to a university; this percentage is not as high as it is in the BRSS, as 48% of all people involved in projects between 1986 and 2006 have a university affiliation. People who are not affiliated are mainly from the health and social services network.

Only 15 individuals have a student or trainee status, the percentage of students/trainees being higher in the BRSS (3.1% in BRSA versus 25% in the BRSS).

We note that the majority of the researcher university affiliations (students and trainees not included) is tied to McGill University (43.6%) followed by the Université de Montréal and Université Laval (Figure 1). The *Others* category mainly shows affiliations to the Université du Québec network (4.7%) and those tied to Concordia University and Université de Sherbrooke. In the *Foreign* category appear universities located outside of Québec (either in Canada or outside of Canada).

**Figure 1 Researchers university affiliation**



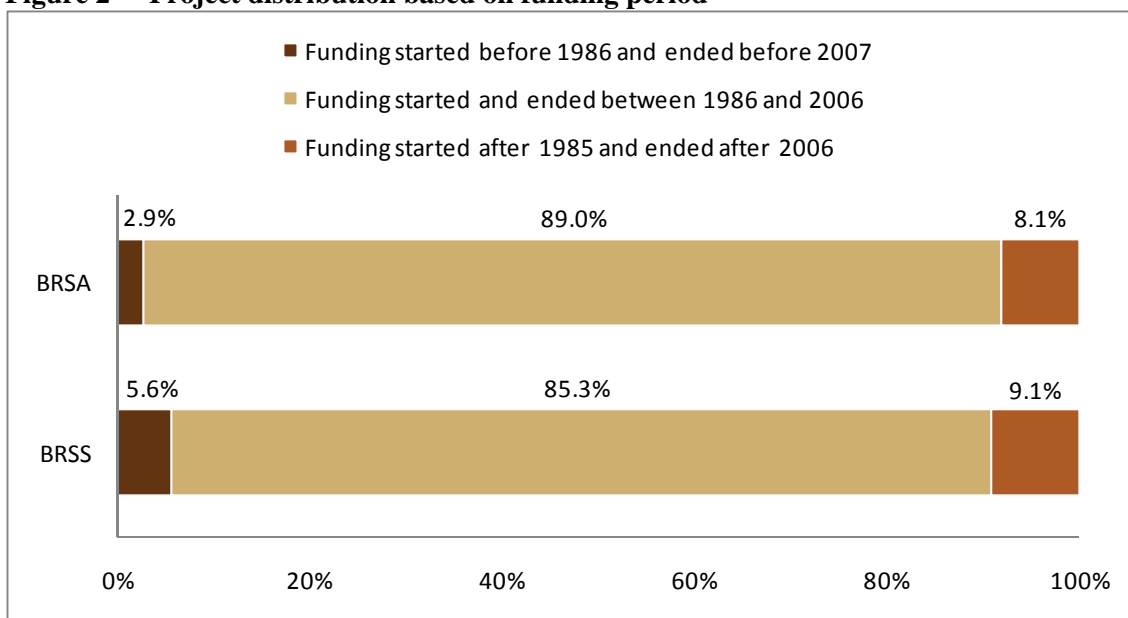
*Note:* The percentages are calculated on the sum of affiliations mentioned (n=330). The number of affiliations mentioned is higher than the number of people affiliated (n=190), one person could have more than one university affiliation.

## 2.2 FINANCIAL DATA

Financial data is provided by the funding source (granting agencies, foundations, etc.) and corresponds to the amount awarded by these sources following a request for funding. Financial data is missing for 10 projects from the BRSA (4.3% of the 230 projects) and for 3,730 projects in the BRSS (11.1% of the 33,755 projects, including the BRSA projects).

Calculations are based on the total amount awarded for the duration of the project. If the majority of the projects are exclusively funded between 1986 and 2006 (see Figure 2), for a few, funding started before 1986 (n=6 for the BRSA and n=1,696 for the BRSS) and for others, it carried on beyond 2006 (n=17 for the BRSA and n=2,726 for the BRSS).

**Figure 2 Project distribution based on funding period**



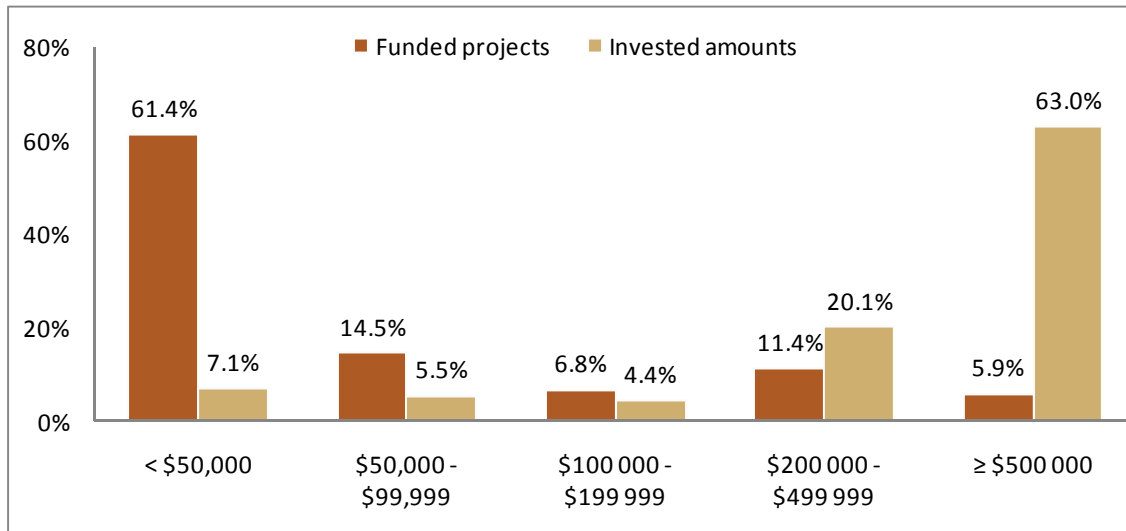
Note: BRSS N=30 025, BRSA=210.

### 2.2.1 Project duration and amounts

Mean duration of projects is two years (26.3 months), median duration is 20.5 months. The mean amount allocated for a project is \$192,766, the median is \$34,156. The difference between mean amount and the median shows significant variation and a disproportion in the distribution of amounts allocated.

In fact, as shown in Figure 3, if a majority of the projects received modest funding (61.4% of the projects received less than \$50,000), approximately ten of the projects received important grants. As such, 13 projects (5.9% of the projects) received funding over \$500,000, benefitting from 63% of the total amount. Among these well endowed projects, 5 stand out, as they take up 46.6% of all the amounts.

**Figure 3 Funded projects and invested amounts based on size of funding**



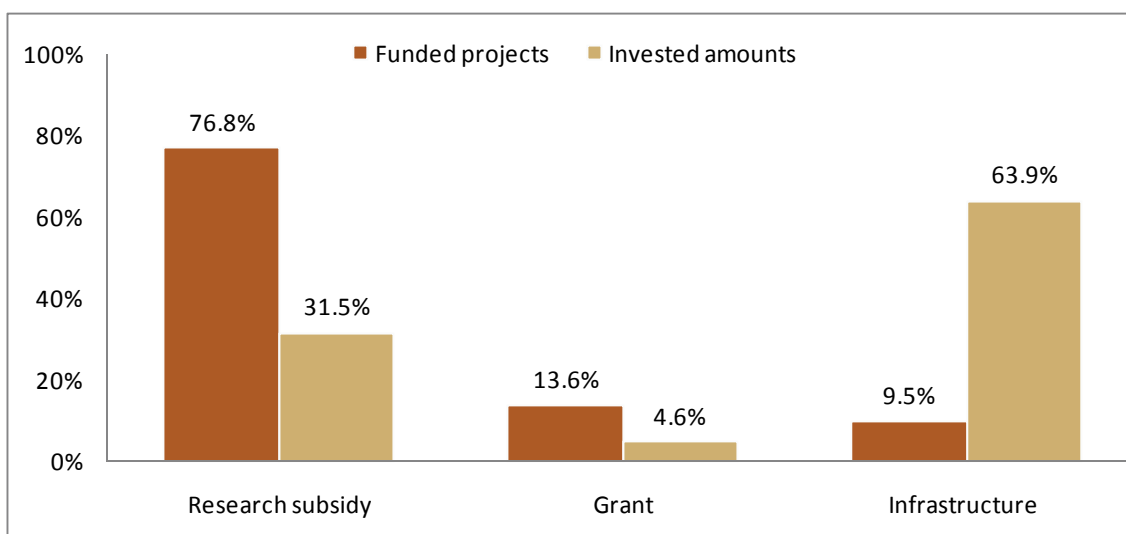
Note: Percentages are calculated on the number of projects and on invested amounts (N=220).

### 2.2.2 Type of funding

Projects were coded to differentiate, among types of funding, those that subsidize:

- Research activities and work (data collection, processing and analysis, dissemination of the results, etc.);
- Research infrastructure (chairs, centres of excellence, networks, etc.);
- Grants for upcoming researchers (fellowships, scholarships, etc.).

More than three-quarters of the projects are “classic” funded research projects (collection, processing and analysis of data, dissemination of the results, etc.); however, those only received 31.5% of all amounts (Figure 4). By contrast, if the infrastructure projects are few (9.5% of the projects), those represent an important financial force as they benefit from almost two thirds of the amounts. The majority of the projects over \$500,000 are infrastructure projects (10 projects out of 13). Five of the highest funded projects (more than one million dollars) are all infrastructure projects.

**Figure 4 Funded projects and invested amounts based on funding program**


Note: Percentages are calculated on the number of projects (N=199) and invested amounts.

The mean and median amounts of infrastructure projects are much higher than those of research grants and subsidies (Table 4). The former presents a median amount lower than grants; as such, 50% of the subsidies are under \$28,500 whereas only 50% of the grants are less than \$61,336. Mean and median amounts of grants are almost similar; thus, there is no significant variation between the amounts allocated.

**Table 4 Median and mean amounts of projects based on funding program**

Funding program	Amount	
	Median \$	Mean \$
Infrastructure (n=21)	475,000	1, 291,294
Grant (n=30)	61,136	64,902
Research subsidy (n=169)	28,500	78,960

Note: N=220

### 2.2.3 Funding sources

The 230 projects are funded by 6 Canadian institutions and 3 from Québec. At the beginning of 2000, several changes took place in the support of research projects following program reforms and the arrival of new players in the research funding field. The presentation of the funding sources in Canada and Québec, and of the main changes that occurred provides few contextual elements required to interpret the data.

### *Canadian funding sources – Characteristics*

The following Canadian funding sources for research in health and social services have been present since the 80's:

- National Health Research and Development Program (NHRDP);
- Canadian Institutes of Health Research (CIHR);
- Social Sciences and Humanities Research Council (SSHRC);
- Health Transition Fund (HTF);
- Natural Sciences and Engineering Research Council (NSERC);
- Employability and Social Partnerships (ESP).

The NHRDP played a significant role in the development of Aboriginal health research, in particular with the establishment of the Aboriginal Research Program (ARP) in 1999 which disappeared at the end of 2000 following research funding restructuring and the establishment of the CIHR.

It is important to highlight the creation of the Canadian Institutes of Health Research (CIHR) in 2000. Indeed, among the 13 Institutes that make up the CIHR, one is entirely dedicated to Aboriginal health: Institute of Aboriginal Peoples' Health (IAPH). This institute is the only funded organization in Canada and Québec that is exclusively dedicated to the health of Aboriginals. The IAPH is also at the root of several initiatives to support Aboriginal health research, such as:

- The Network Environments in Aboriginal Health Research (NEAHR);
- The Aboriginal Capacity and Development Research Environments (ACADRE);
- The International Collaborative Indigenous Health Research Partnership on Resiliency (2005).

Furthermore, following a 2002 decision of its board of directors, the SSHRC decided to strategically prioritize Aboriginal research. In 2004, the SSHRC, therefore, launched the Aboriginal Research Pilot Program.

Finally, the SSHRC and the CIHR worked on many structural documents for research development, such as the *CIHR Guidelines for Health Research Involving Aboriginal People* (2007)<sup>10</sup> and the *Opportunities in Aboriginal Research* (2003)<sup>11</sup>.

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<sup>10</sup> <http://www.cihr-irsc.gc.ca/e/29134.html>

<sup>11</sup> [http://www.sshrc-crsh.gc.ca/site/apply-demande/background-reseignements/aboriginal\\_background\\_e.pdf](http://www.sshrc-crsh.gc.ca/site/apply-demande/background-reseignements/aboriginal_background_e.pdf)

### ***Québec's funding sources – Characteristics***

The main sources of funding for Aboriginal health research projects since the mid-80s are:

- The *Fonds de recherche en santé du Québec* (FRSQ) created in 1964;
- The *Programme de subventions en santé publique* (PSSP) created in the early 80s;
- The *Fonds pour la formation de chercheurs et l'aide à la recherche* (FCAR) created in 1984. The human and social sciences part was transferred to the FQRSC at the beginning of the years 2000;
- The *Conseil québécois de la recherche sociale* (CQRS), transferred for the most part to the FQRSC at the beginning of the years 2000;
- The MSSS, including the *Comité de la santé mentale du Québec*.

The *Programme de subventions en santé publique* (PSSP) is jointly administered by the *ministère de la Santé et des Services sociaux* (MSSS) and the *Agences régionales de la santé et des services sociaux du Québec*. The program aims “through the funding of research and evaluations, the achievement of activities promoting health and well-being as well as the prevention of diseases, psychosocial problems and traumas”<sup>12</sup>. This program is two-fold one; however, only regional projects are indexed in the BRSS, whereas, national projects are not featured.

In Québec, programs exclusively dedicated to Aboriginal health research do not exist. However, we note the recent introduction of this field of research in the 2007-2010 strategic direction of the *Fonds de recherche en santé du Québec* (FRSQ).

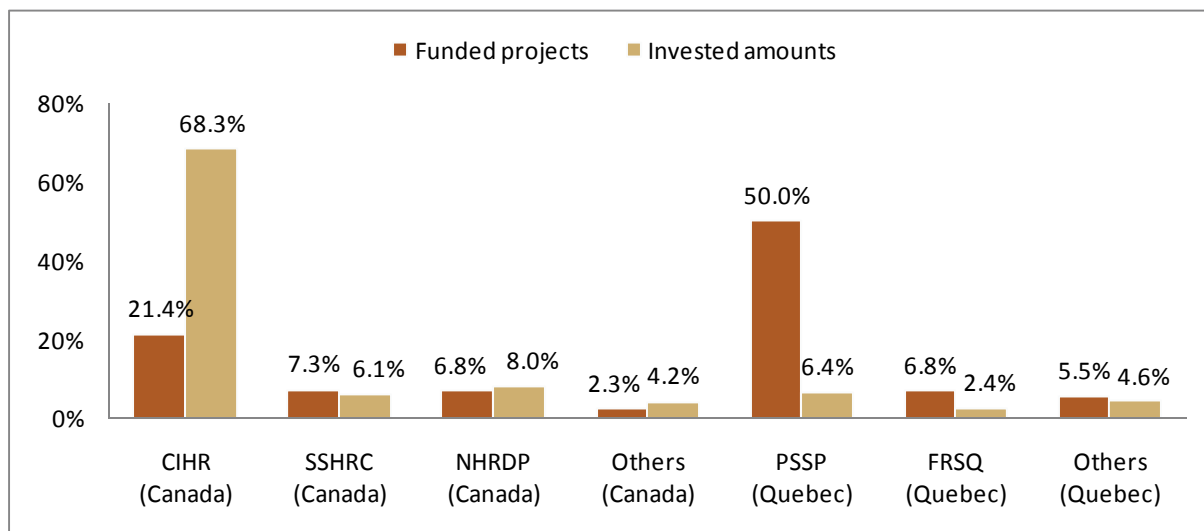
### ***The contribution of Canada and Québec's funding sources***

The CIHR and the PSSP are the two main funding sources for Aboriginal health research (Figure 5), as these two sources jointly fund close to three-quarters of the projects and allocate close to three-quarters of the amounts. However, the structural support of these two sources differs greatly: indeed, if the PSSP funds a great number of projects (50% versus 21.4% for the CIHR), the financial contribution from the PSSP is proportionately insignificant compared to that of the CIHR (6.4% of the amounts versus 68.3% for the CIHR).

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<sup>12</sup> Free translation: <http://publications.msss.gouv.qc.ca/acrobat/f/documentation/2001/01-221-02.pdf>

**Figure 5 Funded projects and invested amounts based on funding source**



*Note:* Percentages are calculated on the number of projects and invested amounts (N=220). Other Canadian funding sources (“Others Canada”) include the Medical Research Council of Canada (MRCC), the Health Transition Fund (HTF) and the Natural Sciences and Engineering Research Council of Canada (NSERC). Other Québec sources (“Others Québec”) include the *Conseil québécois de la recherche sociale / Fond québécois de recherche sur la société et la culture* (CQRS/FQRSC) and the MSSS.

The difference between the amounts allocated by the PSSP and the CIHR is important: for the PSSP, mean and median amounts are \$24,770 and \$20,000, whereas those for the CIHR are \$616,262 and \$119,500.

The majority of infrastructure funding comes from Canadian sources (17 projects out of 21), the CIHR represents the main source (14 projects out of 17), the SSHRC and the NSERCC funding the other projects. In Québec, the FRSQ and the CQRS/FQRSC fund four infrastructure projects all associated to mental health.

### 2.2.4 Funding based on territory status

The make-up of the funding differs according to the status of the concerned territories (Table 5). The projects aimed at communities *not under agreement* or *under agreement* show mean and median amounts lower than those that involve larger populations (*Others* category).

**Table 5 Funded projects and invested amounts based on territory status**

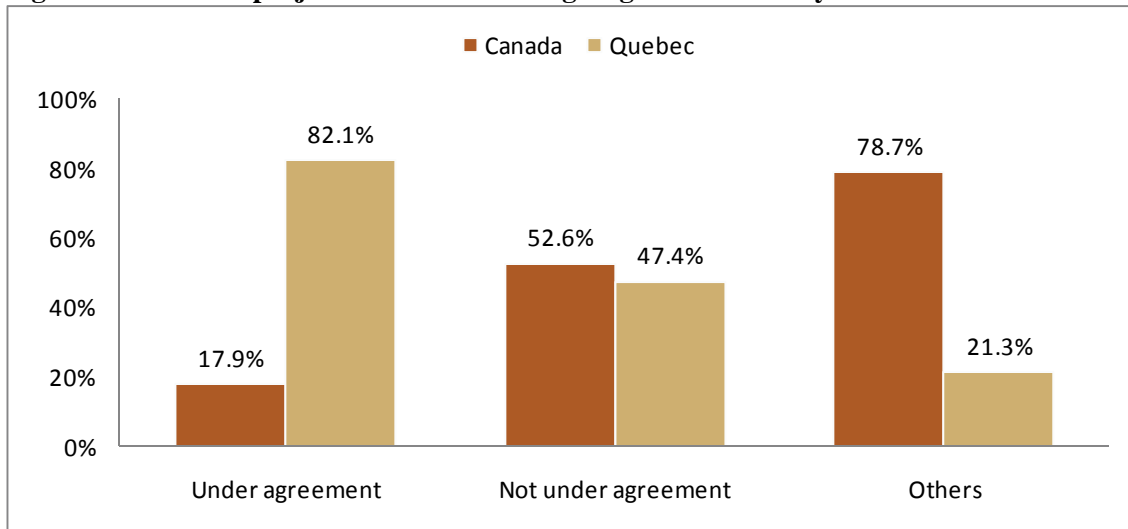
Status	Project	Amount	Amount	
	%	%	Median \$	Mean \$
Not under agreement (n=19)	8.6	10.0	31,660	222,156
Under agreement (n=140)	63.6	24.7	27,000	74,872
Others (n=61)	27.7	65.3	86,000	454,189
<i>Total</i>	<i>100.0</i>	<i>100.0</i>	<i>34,156</i>	<i>192,766</i>

*Note:* The percentages are calculated on the total number of projects or the total sum of amounts (N=220).



Based on territory status, funding sources differ (Figure 6). As such, for territories *under agreement*, the majority of the projects are funded by sources from Québec (82.1%) whereas it is the opposite for those in *Others* (78.7% of the projects are funded through Canadian sources). As for territories *not under agreement*, there is no predominant funding source; however, the low number of funded projects calls for caution in the interpretation of the results.

**Figure 6 Funded projects based on funding origin and territory status**



Note: N=230

We should emphasize that it is mainly the PSSP that funds projects in territories *under agreement* (67.8% of the projects); its contribution is nevertheless significant in territories *not under agreement* (25%). Furthermore, the funding contribution of the PSSP is proportionally more important for Cree than for Inuit: for projects pertaining to Cree, the PSSP funds 85.1% of the projects and allocates 58% of the amounts whereas, for projects concerning Inuit, it funds 56.7% of the projects, but only provides 11.6% of the amounts. The funding of projects pertaining to Inuit mainly comes from Canadian sources: supporting 28.4% of the projects, but allocating 80.7% of the grants.

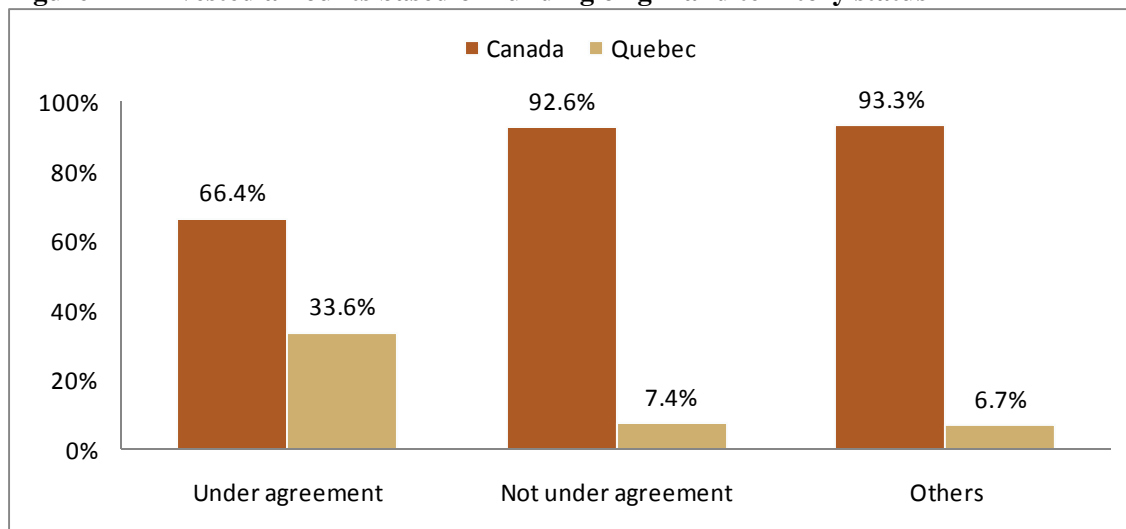
For the territories in *Others*, it is mainly the CIHR that funds the projects (53.1% of the projects), the PSSP supporting only 10% of the projects.

Most of the PSSP projects (90%) concern Cree and Inuit (respectively 52% and 38%). As for the FRSQ, projects pertaining to Inuit are predominant (68%). However, a minority of the projects supported by the CIHR and the SSHRC are specifically related to Inuit or Cree (22% of the CIHR projects are related to Inuit and/or Cree and 18% of the SSHRC projects are related to Inuit).

Concerning invested amounts, the financial contribution from Canadian sources prevails in comparison to those from Québec, and this, regardless of territory status (Figure 7). In territories *under agreement*, financial contributions from Québec sources are proportionately higher (33.6% of the amounts), whereas they remain lower at 10% for territories *not under agreement* and *Others*. As a reminder, amounts allocated by the CIHR and the SSHRC are significantly higher than those of the PSSP (mean and median amounts respectively \$620,000 and \$120,000 for the CIHR, \$160,000 and

\$70,000 for the SSHRC, and \$25,000 and \$20,000 for the PSSP), which explains the important financial contribution from Canadian sources in the territories *not under agreement* and *Others*.

**Figure 7 Invested amounts based on funding origin and territory status**



Note: N=220.

We note a strong variation in the distribution of projects based on funding program (Table 6). Research subsidies prevail for territories *under agreement* whereas infrastructure funding prevails for larger populations (*Others*). This is in line with the mean and median amounts much higher for larger population groups due to the predominance of Canadian funding sources (see previous section). We can also mention that the infrastructure funding of territories *under agreement* (n=2) concern the Cree and Inuit, those territories *not under agreement* (n=2) concern the Mohawks. Furthermore, variations are lower in subsidies between *territories under agreement*, *not under agreement* and *Others*.

**Table 6 Funded projects and invested amounts based on funding program and territory status**

Status	Research subsidy (n=169)		Grant (n=30)		Infrastructure (n=21)	
	Project %	Amount %	Project %	Amount %	Project %	Amount %
Under agreement	74.6	61.3	40.0	31.6	9.5	6.2
Not under agreement	7.7	9.7	13.3	16.5	81.0	84.2
Others	17.8	29.0	46.7	51.9	9.5	9.6
Total	100.0	100.0	100.0	100.0	100.0	100.0

Note: N=220.

### 2.2.5 Funding based on client group

As shown in Table 7, the majority of research projects do not target a specific population group, these receiving high amounts (61% of the projects that collect 86% of the amounts). Moreover, the allocated amounts differ slightly based on targeted population group. As such, we can see that close to one-third of the projects concern *Children & Youth* or *Perinatality & Early Childhood* while those total less than

10% of the amounts. The median amounts for projects on *Children & Youth* or *Perinatality & Early Childhood* are lower than the median amounts of all projects (\$33,000).

**Table 7** Funded projects and invested amounts based on targeted population groups

Population groups	Project		Amount	
	Citations	%	%	Median \$
Adults*	4	1.8	0.3	33,841
Children and Youth	47	21.4	10.1	33,000
Elders*	2	0.9	0.1	24,497
Families*	7	3.2	1.3	32,518
Men*	1	0.5	0.1	55,000
Perinatality and Early childhood	20	9.1	3.5	29,500
Women*	11	5.0	2.9	36,000
<i>Without distinction</i>	<i>132</i>	<i>60.0</i>	<i>82.6</i>	<i>36,776</i>

*Note:* Percentages are calculated in relation to the number of projects (n=220) and the total sum of their amounts. The asterisk indicates that the result should be interpreted with caution, due to the low number of citations.

Comparing the distribution of projects and amounts based on themes enables us to see some variations (Table 8). Thus, a minority of projects concerns *Physical Environment* or *Mental Health*, benefitting from more significant amounts than other themes. Furthermore, if 7% of the projects pertain to *Physical Environment*, those have benefited from 40% of the total amounts while 12.7% of the projects on *Mental Health* have received 23.1% of the amounts.

The situation is the opposite for the *Lifestyles & Chronic Diseases*, *Organization of Health and Social Services* and *Living Conditions & Social Environment* themes, where the ratio of citations is much higher than the ratio of amounts. Median amounts are somewhat lower for *Lifestyles & Chronic Diseases* and *Organization of Services* as well as *Prevention & Promotion*.

**Table 8 Funded projects and invested amounts based on themes**

Themes	Project		Amount	
	Citations	%	%	Median \$
Addictions*	7	3.2	1.0	30,000
Food – Nutrition	35	15.9	12.8	37,500
General health	16	7.3	2.2	35,775
Infectious diseases	23	10.5	5.5	34,000
Lifestyles – Chronic diseases	59	26.8	18.8	27,615
Living conditions – Social environment	32	14.5	5.8	39,576
Mental health	28	12.7	23.1	91,831
Organization of health and social services	31	14.1	4.9	20,000
Physical environment	15	6.8	40.4	99,962
Policy – Theories – Methods*	3	1.4	1.4	154,055
Prevention – Promotion	42	19.1	14.7	25,624
Traditional practices and knowledge	17	7.7	9.7	39,576
Unintentional injuries*	6	2.7	0.4	25,044
Violence*	6	2.7	0.5	22,330

Note: Percentage are calculated in relation to the total number of projects (N=220) and on the sum of the amounts of the 220 projects. The asterisk indicates that the result should be interpreted with caution, due to the low number of citations.

As well, we note a difference in funding composition based on themes (Table 9). Infrastructure funding focuses on *Mental Health and Physical Environment*; we also note that the proportion of grants is higher for these two themes.

**Table 9 Funded projects based on themes and funding program**

Themes	Infrastructure	Grant	Subsidy	Total
	(n=22) %	(n=36) %	(n=172) %	(n=230) %
Addictions*	0	28.6	71.4	100
Food – Nutrition	11.4	11.4	77.1	100
General health	0.0	6.3	93.8	100
Infectious diseases	4.3	8.7	87.0	100
Lifestyles – Chronic diseases	6.8	20.3	72.9	100
Living Conditions – Social environment	9.7	22.6	67.7	100
Mental health	35.7	21.4	42.9	100
Organization of health and social services	3.2	3.2	93.5	100
Physical environment	33.3	46.7	20.0	100
Policy – Theories – Methods*	0	0	100	100
Prevention-Promotion	4.8	2.4	92.9	100
Traditional practices and knowledge	17.6	5.9	76.5	100
Unintentional injuries*	0	0	100	100
Violence*	0	0	100	100
<i>Total projects</i>	<i>9.5</i>	<i>15.6</i>	<i>74.8</i>	<i>100</i>

Note: The asterisk indicates that the result should be interpreted with caution due to the low number of citations.

Funding details enable us to underline the importance of infrastructure funding represented in *Physical Environment* and *Mental Health*:

Thus, among the 14 projects in *Physical Environment* we note:

- 5 infrastructure projects of which 3 are over one million dollars (out of a total of 8 projects of more than one million dollars in the BRSA).

Among the 28 projects in *Mental Health*, we find:

- 10 infrastructure projects of which 4 are over one million dollars (out of a total of 8 projects of more than one million dollars in the BRSA).

The importance of infrastructure funding is also less significant for the themes displaying lower amounts, therefore:

Among the 59 projects mentioned in *Lifestyles & Chronic Diseases*, we find:

- 4 infrastructure projects of which one is over one million dollars (associated with *Food & Nutrition*).

Among the 42 projects pertaining to *Prevention & Promotion* there are:

- 2 infrastructure projects (one under the theme *Mental Health* and the other *Food & Nutrition*) of which one is over one million dollars.

Among the 31 projects in *Living Conditions & Social Environment*, there are:

- 3 infrastructure projects under \$100,000.

Among the 31 projects under the *Organization of Health and Social Services* theme, we find:

- 1 infrastructure project (\$10,000).

If we exclude infrastructure funding (Table 10), the ratio and importance of the amounts (mean and median) decrease significantly in *Physical Environment* and *Mental Health*. However, median amounts remain higher, indicating that the majority of the projects pertaining to these two themes benefit from higher amounts, whether for research subsidies or grants. As well, it is a fact that the grants are highly represented under those two themes, as they are more numerous than research subsidies in *Physical Environment* (see Table 9).

Furthermore, two themes stand out as being less well funded: *Organization of Health and Social Services* and *Prevention & Promotion*. Under these two themes, the mean and median amounts are lower, grants also being less represented in this group.

As far as *Lifestyles & Chronic Diseases* projects are concerned, the variation between the median and mean indicates that small projects are fewer (50% of the projects are lower than \$28,000). There are however a few projects of greater magnitude.

**Table 10 Funded projects and invested amounts based on themes, excluding infrastructure funding**

Themes	Project	Amount	Amount	
	%	%	Mean \$	Median \$
Food – Nutrition	16.1	16.8	80,202	32,358
General health	8.0	6.1	58,131	35,775
Infectious diseases	11.6	15.1	100,587	34,000
Lifestyles – Chronic diseases	27.6	34.5	95,877	27,615
Living conditions – Social environment	14.5	15.1	79,802	40,564
Mental health	9.0	13.8	117,449	61,709
Organization of health and social services	15.1	13.5	69,036	21,500
Physical environment	5.0	6.1	92,728	60,429
Prevention – Promotion	20.1	15.9	60,689	23,999
Traditional practices and knowledge	7.0	8.6	93,455	34,788

*Note:* For relevance and validity reasons, the data for the themes having a number of citations lower than 10 are not presented (N=199 projects). Gray cells indicate ratios of amounts lower than the number of projects.

### 2.3 THE BRSA AND BRSS FINANCIAL DATA IN PERSPECTIVE

In order to highlight certain trends, the data associated to project funding in the BRSA were put into perspective with those of all projects as a whole indexed in the BRSS during the same period, including those of the BRSA.

#### 2.3.1 Comparison of duration and amounts

The volume of research projects in Aboriginal health represents 0.7% of all BRSS projects, the volume representing 0.9% of all amounts.

The duration (mean and median) and the median amount of the projects proved to be higher in the BRSS; however the mean amount is higher in the BRSA (Table 11).

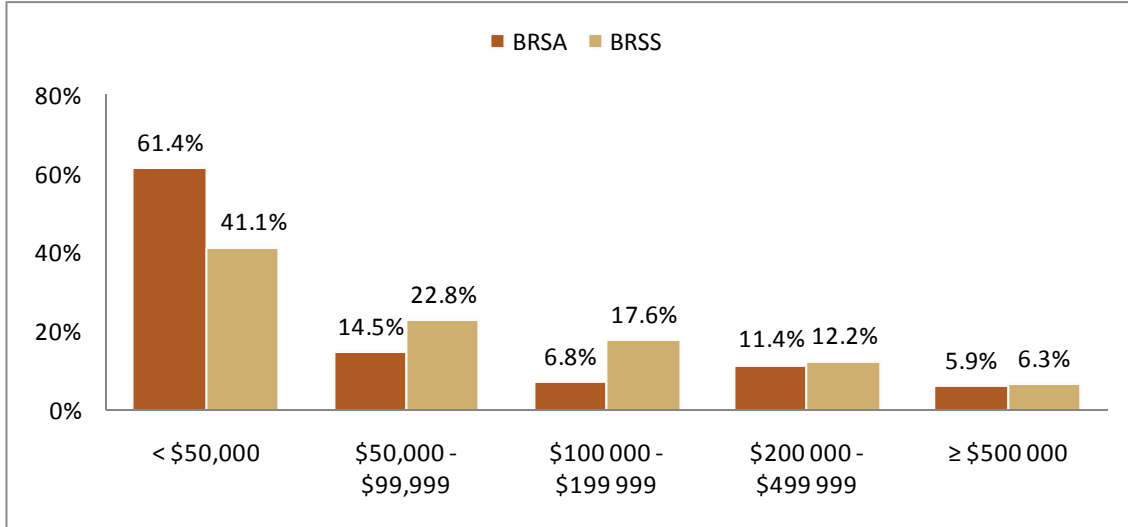
**Table 11 Comparison of the duration and amount in the BRSA and the BRSS**

	BRSA (N=220)	BRSS (N=30,025)
Duration (months)		
Mean	26,6	37
Median	21	36
Amount (\$)		
Mean	192,766	162,625
Median	34,156	64,000

The comparison of project distribution (Figure 8) and invested amounts (Figure 9) based on size of funding, enables us to clarify the differences between the amounts (mean and median) of the BRSS with those of the BRSA. Indeed, there are more projects with lower budgets in the BRSA than in the BRSS (in the BRSA, 61.4% of the projects display amounts lower than \$50,000 versus 41.1% in the BRSS), which translates into lower median amounts in the BRSA. However, projects of greater

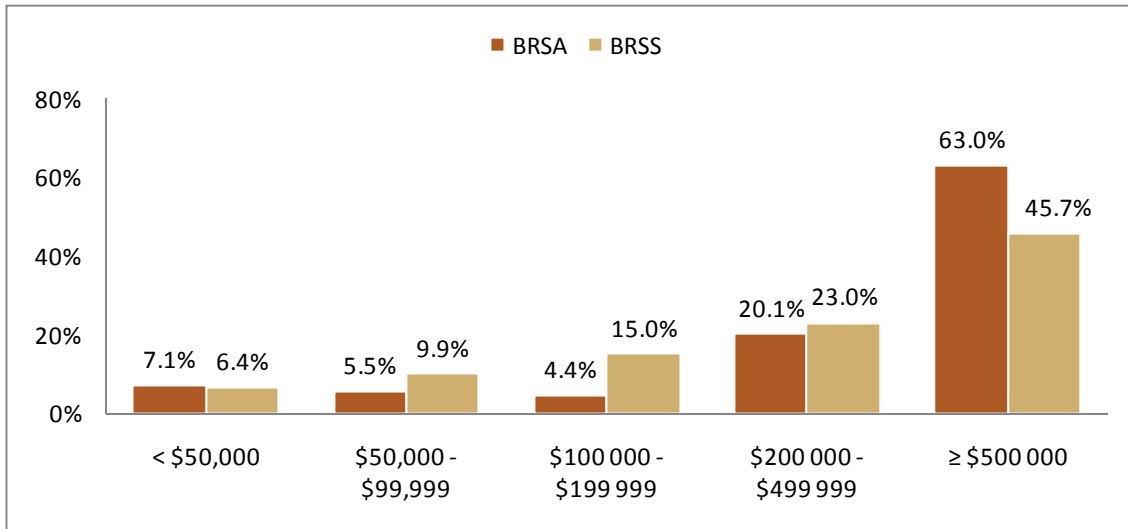
magnitude have significantly more financial weight in the BRSA than in the BRSS (respectively 63.0% versus 45.7% of the projects display amounts higher than \$500,000), which translates to a higher mean amount in the BRSA.

**Figure 8 Comparison of funded projects based on funding size in the BRSA and the BRSS**



*Note:* The percentage is calculated on the number of projects found in one of the 5 amount categories in relation to the total number of the projects (BRSA N=220 and BRSS N=30,025).

**Figure 9 Comparison of the invested amounts based on the funding size in the BRSA and the BRSS**



*Note:* The percentage shows the ratio of the total amounts found in one of the 5 amount categories in relation to the total sum of all amounts (BRSA N=220 and BRSS N= 30,025).

### 2.3.2 Comparison of funding sources

We can observe the same trends in the BRSA and the BRSS, that is, if the number of projects supported by Québec funding sources is high, the amounts invested by Canadian sources are more significant (see Table 12). These trends are more predominant in the BRSA: so, more projects are funded through sources from Québec (62.3% of the projects versus 39.7% in the BRSS) and the financial contribution from Canadian sources is higher (86% of the amounts against 79.6% in the BRSS).

If the PSSP and the CIHR play an important role in funding in the BRSA, their contribution is different in the BRSS. The PSSP funds more than 16 times more projects in the BRSA than in the BRSS (50% of the projects against 3.2% in the BRSS). Also, the financial contribution is higher in the BRSA, even if it remains less important (respectively 3.2% and 0.7% of invested amounts). The CHIR contribution is also higher in the BRSA: they fund more projects proportionately (23.6% compared to 18.1% of the projects in the BRSS) and provide a more important financial contribution (68.3% against 35.2% of the invested amounts in the BRSS).

**Table 12 Comparison of funded projects and invested amounts based on source of funding**

Source	Project		Amount	
	BRSA %	BRSS %	BRSA %	BRSS %
Canada	37.7	60.3	86.6	79.6
Québec	62.3	39.7	13.4	20.4
<i>Total</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>

*Note:* Percentages are calculated in relation to the number of the projects and their amounts (N=220 for the BRSA and N= 30,025 for the BRSS).

## 2.4 EVOLUTION OF RESEARCH

In order to better define the evolution of Aboriginal health research, two observation periods were carried out over a period of ten years each.

Several projects overlapped the two periods or started before and ended after these two periods (see Diagram 3 for their classification), their distribution being as follows:

- 20 projects in the BRSA (8.7% of the projects) started during the first period (between 1986 and 1996) and continued over the second period (1997 and 2006);
- 6 projects in the BRSA (2.6%) started before 1986 and ended before 1996;
- No project in the BRSA started before 1986 and carried on beyond 1996.

### 2.4.1 Evolution of funding

If the number of projects and the invested amounts increased during the second period, the increase in amounts was proportionally more significant than the increase in projects. Thus, 59.1% of the projects



were funded during the second period, taking up 89.7% of the invested amounts (see Table 13). The mean and median amounts are significantly higher in the second period.

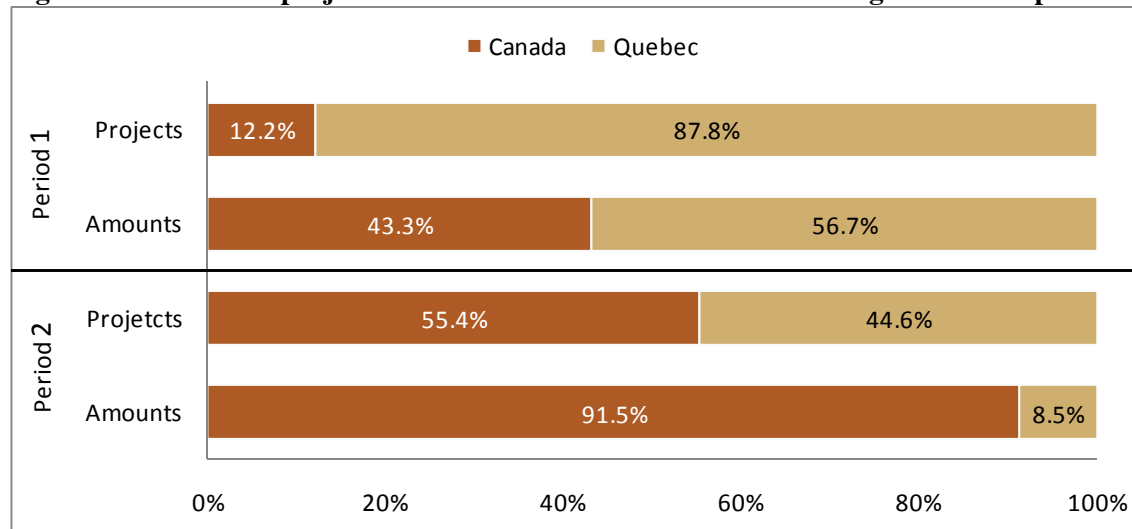
**Table 13 Evolution of funded projects and invested amounts based on periods**

Period	Project	Amount	Amount	
	%	%	Mean \$	Median \$
Period 1	40.9	10.3	48,682	26,250
Period 2	59.1	89.7	292,517	57,500
1986-2006	100.0	100.0	192,766	34,156

*Note:* The percentages are calculated in relation to the total number of projects or to the sum of the amounts (n=90 in period 1 and n=130 in period).

For Aboriginal health research, the contribution from Canadian sources in comparison to sources from Québec strongly varied according to the 2 periods. So, even if the Canadian sources are mostly absent during the first period, they are predominant in the funding of Aboriginal health research during the second period in regard to funded projects and even more so in invested amounts (Figure 10). We may insist on the fact that during the first period, all projects are funded by the NHRDP and the NSERCC. Projects funded by the SSHRC and the CIHR are all part of the second period.

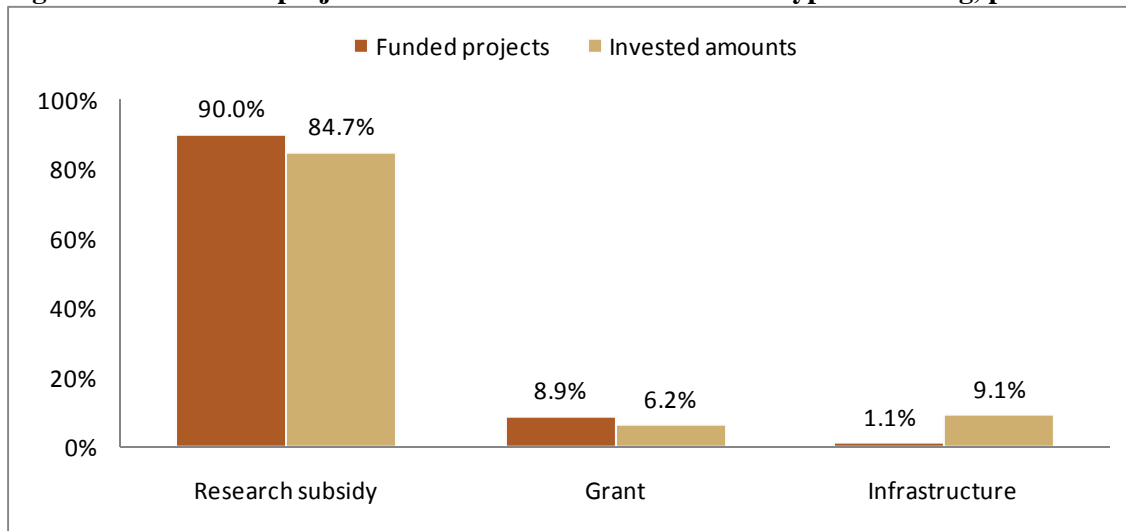
**Figure 10 Funded projects and invested amounts based on funding source and period**



*Note:* Percentages are calculated in relation to the total number of projects or to the sum of the amounts (n=90 for period 1 and n=130 for period 2).

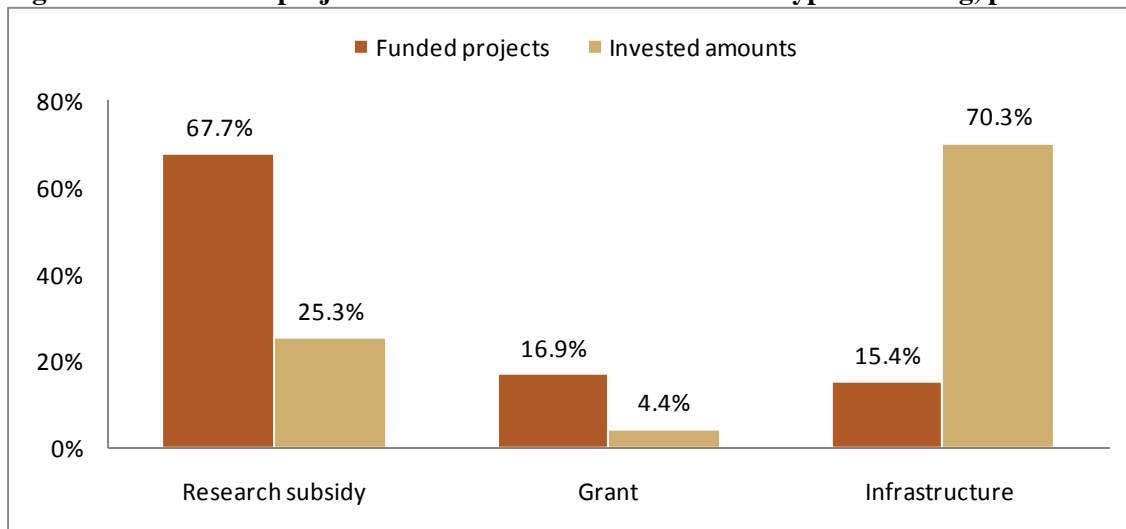
The type of funding also varied between these two periods (Figures 11 and 12). If during the first period, research project subsidies are predominant (90% of the projects and 84.7% of the amounts), during the second period, there is a significant increase in infrastructure projects: the number of infrastructure projects was multiplied by 20 and their financial weight increased accordingly. Infrastructure projects gathered close to 70.3% of the amounts during the second period. Investment in grants also increased as the number was multiplied by 2.75 and total amounts by 6.

**Figure 11** Funded projects and invested amounts based on type of funding, period 1



Note: Percentages are calculated in relation to the total number of projects or to the sum of amounts (n=90).

**Figure 12** Funded projects and invested amounts based on type of funding, period 2



Note: Percentages are calculated in relation to the total number of projects or to the sum of amounts (n=130).

### 2.4.2 Project evolution

If the funding evolution is irregular, we also note that evolution and changes are more or less acute depending on themes, territories, populations or research context.

The coverage of some themes varied between the 2 periods in matters of number of funded projects and invested amounts (Table 14).

On the one hand, there was a significant increase in research focusing on the themes of *Mental Health*, *Physical Environment* and *Living Conditions & Social Environment*. In parallel to this increase, we note a very important increase in amounts for *Physical Environment* (from 9.9% to 44% of the amounts) and an important one in *Mental Health* (14.2% to 24.1% of the amounts). This evolution is

related to research infrastructure funding: so, in *Physical Environment*, the 5 infrastructure projects (of which 3 are over \$1M) were all allocated during the second period; in the same way for *Mental Health*, 8 of the 9 infrastructure projects (4 of which are over \$1M) were allocated during the second period. For *Living Conditions & Social Environment*, we note that the ratio of amounts hardly varied, remaining lower during the two periods and the 3 infrastructure projects remaining under \$100,000.

On the other hand, we note a decrease in the weight of the citations in two themes: *Lifestyles & Chronic Diseases* (33.3% during period 1 against 22.3% during period 2) and *Organization of Health and Social Services* (18.9% to 10.8%). In parallel to this decrease in the weight of citations, the decrease in amounts is proportionally significant (these varying from 33.2% to 17.2% for *Lifestyles & Chronic Diseases* and from 9.6% to 4.4% for *Organization of Health and Social Services*), the variation between the ratio of citations and amounts also increased during the second period.

Finally, we also note a decrease in the amounts for *Infectious Diseases* and *Food & Nutrition*.

**Table 14** Funded projects and invested amounts based on themes and periods

Theme	Period 1		Period 2	
	Citations %	Amount %	Citations %	Amount %
Food – Nutrition	15.6	19.0	16.2	12.1
General health	7.8	13.0	6.9	0.9
Infectious diseases	11.1	15.9	10.0	4.3
Lifestyles – Chronic diseases	33.3	33.2	22.3	17.2
Living conditions – Social environment	10.0	5.7	17.7	5.8
Mental health	5.6	14.2	17.7	24.1
Organization of health and social services	18.9	9.6	10.8	4.4
Physical environment	3.3	9.9	9.2	44.0
Prevention – Promotion	21.1	10.0	17.7	15.2
Traditional practices and knowledge	7.8	8.0	7.7	9.9

*Note:* Percentages are calculated in relation to the total number of projects or to the sum of amounts (N=220). For reasons of relevance and validity, theme data below 10 citations are not presented.

Concerning targeted territories (Table 15), the number of projects varied less for both the territories *under agreement* and *not under agreement* between the two periods. However, there was an important increase of projects targeting territories in *Others*, as well as a surge in the amounts (mean and median). Finally, we note a significant increase in the amounts (median and mean) for territories *not under agreement*.

**Table 15 Funded projects and invested amounts based on territory status and periods**

Period 1	Project		Amount		
	N	%	%	Mean \$	Median \$
Others	9	10.0	15.5	75,588	30,000
Under agreement	72	80.0	77.1	46,916	25,624
Not under agreement	9	10.0	7.4	35,900	26,250
<i>Total</i>	<i>90</i>	<i>100.0</i>	<i>100.0</i>	<i>48,682</i>	<i>26,250</i>
Period 2	Project		Amount		
	N	%	%	Mean \$	Median \$
Others	52	40.0	71.1	519,716	101,925
Under agreement	68	52.3	18.7	104,471	32,759
Not under agreement	10	7.6	10.3	389,787	160,607
<i>Total</i>	<i>130</i>	<i>100.0</i>	<i>100.0</i>	<i>292,517</i>	<i>57,500</i>

Note: N=220.

For targeted populations, there is a significant decrease in the number of projects and invested amounts for one specific group: *Children & Youth* (Table 16).

**Table 16 Funded projects and invested amounts based on population groups and periods**

Population group	Period 1 (n=90)		Period 2 (n=130)	
	Citations %	Amount %	Citations %	Amount %
Children – Youth	24.4	28.5	19.2	7.9
Others	7.8	3.6	13.8	4.8
Perinatality – Early Childhood	6.7	2.6	10.8	3.6
<i>Without distinction</i>	<i>61.1</i>	<i>65.3</i>	<i>59.2</i>	<i>84.6</i>

Note: Percentages are calculated in relation to the total number of projects and total sum of amounts; the number of citations is higher than the number of projects.

### **3. DISCUSSION**

This review allows us to define the scope of “funded” Aboriginal health research and to define its main characteristics. In fact, it allows us to account for trends observed in targeted populations, segments or groups of people, research themes, as well as in the evolution of funding and research.

#### **3.1 SCOPE OF RESULTS**

One of this review’s contributions is to have established a conceptual framework which, on the one hand, agrees with the FNQLHSSC’ strategic priorities and, on the other hand, enables the reproduction of the exercise and the monitoring of the evolution of research in this field.

If this review cannot account for all research in this field (in particular non-subsidized research), the findings and facts observed bear witness to the specific reality on Aboriginal health research.

This review enables us to draw a portrait of not only the subsidized research field, but of the funding agency itself, its composition and scope as well. Considering that this review covers a long time period, it also allows us to identify trends in research support. Also, the examination of the granting agencies and research centre working on Aboriginal issues as well as the consultation of the report completed by the National Collaborating Centre for Aboriginal Health<sup>13</sup> allowed us not only to specify some aspects of the organization affiliated with the research but also to clarify some observed phenomena. Several trends highlighted in this current review are corroborated by those stated in the NCCAH *Landscapes of Indigenous Health* report published in 2006, specifically where it concerns population groups and themes, and this, even though the studied sources (subsidized research projects versus peer-reviewed scientific papers), the study fields (Canada versus Québec) and the targeted periods (1987-2006 versus 2001-2006) are different.

Finally, using the BRSS allows us to put into perspective some trends with those in social and health research. The fact that we were inspired by the approach borrowed from the *Bilan de la recherche en santé publique* also enabled us to easily identify the specificities of Aboriginal health research, on top of testing some assumptions on the influence of certain factors on the direction and organization of research.

#### **3.2 MAIN TRENDS IN ABORIGINAL HEALTH RESEARCH**

One of the main findings that emerges from the results is the growth of Aboriginal health research over a period of 20 years, which conveys an increase in volume of research projects (multiplied by 1.4) but mostly by the growth in invested amounts (multiplied by 8.7) during the second period. If there has been a global expansion of Aboriginal health research, refining and delving deeper into the analysis, this evolution was not constant, that is to say it does not give way to the same variations based on theme, population segment or Nation.

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<sup>13</sup> Greenwood, M., *Landscapes of Indigenous Health, an environmental scan*, NCCAH, 2006.

The second trend is the diversity in research projects on the health of First Nations and Inuit, which conveys not only the variety of contents and subjects addressed or the approaches developed, but also, trends specific to certain Nations, groups of people or themes.

Concerning targeted Nations, it appears that research projects relating to territories *under agreement* (Inuit or Cree) are more numerous and more frequently associated to smaller budgets, the vast majority being funded by the PSSP. The number of projects related to Inuit is slightly higher than those relating to Cree. As well, their funding sources being more diversified, these are also more adequately funded. Projects concerning larger *population groups* (*Others* category) are less numerous; however funded projects of great magnitude funded by the CIHR, the SSHRC or the NHRDP are more numerous. The growth has mostly affected projects aimed at larger population groups whether on the volume of the projects or on allocated amounts, these including most of the infrastructure projects funded by the CIHR. Projects concerning Nations located on territories *not under agreement* are less numerous, but their funding increased during the second period, in particular with the emergence of research in the diabetes prevention field (*Kahnawake Centre for Research and Training in Diabetes Prevention-KCRTDP*).

Among the segments of targeted populations, *Perinatality & Early Childhood* and *Children & Youth* are the two most frequently studied. However, projects relating to these groups benefit from lower amounts compared to projects that do not just study one specific segment of the population. The evolution of the volume of projects and mostly, that of the invested amounts indicate that the general growth has hardly benefitted projects relating to *Perinatality & Early Childhood* and even less to those relating to *Children & Youth*. Otherwise, we note that the rate of projects on *Perinatality & Early Childhood* is almost equivalent to that observed in the NCCAH report concerning publications related to mother's health and early childhood (9.1% of the projects vs 11.4% of publications, see Appendix 6).

Concerning themes, some seem less covered and others more. First of all, it seems that it is not the themes that gave rise to more requests for funding that are receiving more funds. So, if the *Lifestyles & Chronic Diseases, Prevention & Promotion* stand out in the number of projects (two fifths of the projects are related to these two themes), three-quarters of the amounts are directed towards two other themes where the projects of greater magnitude are concentrated: *Physical Environment* and *Mental Health*. Interest for certain themes has varied considerably between the two periods. Thus, there was a significant growth in projects especially in invested amounts in *Physical Environment* and *Mental Health*, and to a lesser degree in *Living Conditions & Social Environment*. Furthermore, the emergence of research was less concerned by *Organization of Services, Lifestyles & Chronic Diseases*, and to a lesser degree, *Infectious Diseases*. Also, some themes are still poorly covered, such as *Addictions, Policy & Theories & Methods, Unintentional Injuries* and *Violence*. Finally, we note that the results tend to corroborate those mentioned in the NCCAH report; there is less than 5% variation between the rate of projects (BRSA) and publications (NCCAH) on several themes common to both studies. We find similar results for the following themes: *Physical Environment and Toxicology, Chronic Diseases, Infectious Diseases, Mental Health* and *Unintentional Injuries* grouped with *Violence* (see Attachment 6). Based on the fact that the classifications are not similar, we cannot compare the results for the following themes: *Food & Nutrition, Living Conditions & Social*

*Environment, Organization of Health and Social Services, Policy & Theories & Methods, Traditional Practices and Knowledge, Prevention & Promotion and General Health.*

Finally, another trend is the presence of the Québec Health and Social Services network in this field of research. Indeed, the majority of Aboriginal health research projects are not managed by universities, as it is the case for most projects indexed in the BRSS, but most often by organizations within the health and social services network. This fact could be related to the important proportion of PSSP funded projects, the latter encouraging partnerships with the communities involved. This also bears witness to the role played by the key players possessing a good knowledge of the field and of the social networks to facilitate the accomplishment of research within the Aboriginal communities. Indeed, in many research projects, we find as collaborators people working in the health and social services field among Aboriginal communities. The data, however, does not permit us to focus on the actual participation of Aboriginal communities in the research projects.

We note that in Aboriginal health research the majority of the researchers' affiliations are to McGill University. This situation differs from social and health research where the proportion of affiliations to the *Université de Montréal* and, to a lesser degree, to *Université Laval* is much higher.

### 3.3 FUNDING

The analysis of funding and its organization show divergent trends in Aboriginal health research. We notice a certain form of dichotomy in research centered on two very different realities with, on the one hand, the reality of research more or less disparate, composed of many small projects, and on the other hand, that of major infrastructure projects that drain a great part of research funding around specific themes. The PSSP and the CIHR appear to play a major role in this organization of research development on Aboriginal health, the contribution of these two funding sources differing greatly.

**The PSSP** has funded close to half of the indexed projects, but its contribution represents less than 10% of the invested amounts, this investment having otherwise hardly varied. One of this program's characteristics is to support applied research projects targeted to one specific population. Indeed, "the PSSP is decentralized in order to account for regional needs<sup>14</sup>". It is also logical that this program was mainly used by the public health departments specifically serving Aboriginal peoples, this being: the Nunavik Regional Board of Health and Social Services and the Cree Board of Health and Social Services of James Bay. Furthermore, it is interesting to note that this program has also supported projects targeting Aboriginal populations located in territories *not under agreement*, particularly projects within the Algonquin communities (DSP Abitibi-Témiscamingue) and the Atikamekw (DSP Haute-Mauricie-Centre du Québec). Otherwise, the management of the PSSP tends to agree with the new directions promoted by the major funding agencies (CIHR, SSHRC) and Aboriginal authorities in matters of participation, and research usefulness; indeed the latter aims to "link the world of intervention with the research world to ensure scientific accuracy and to generate concrete effects, whether with targeted populations or the interventions and practices of the different players".<sup>13</sup>

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<sup>14</sup> *Free translation*

[http://www.santeestrie.qc.ca/sante\\_publique/direction/programme\\_de\\_subventions\\_en\\_sante\\_publique.php](http://www.santeestrie.qc.ca/sante_publique/direction/programme_de_subventions_en_sante_publique.php) -

However, notwithstanding the allocated amounts, this program's ambitions can only remain humble, the latter being only able to contribute to the development and structure of Aboriginal health research.

**The CIHR** occupies a dominant position in the funding of Aboriginal health research. Although relatively recent, the CIHR's role is major, through its important financial support, but also through its directions in matters of content and research organization (scientific programming, support for future relief, networking activities and infrastructure development).

It is indeed difficult not to relate the emergence of research projects to the establishment of programs aimed specifically at the development of Aboriginal health research. First, we must mention the Aboriginal research support program from the NHRDP in 1999, which preceded, in 2000, the establishment of the CIHR and the Institute on Aboriginal Peoples Health, the IAPH being a first on the Canadian and international scenes, as the only funding organization exclusively dedicated to Aboriginal health.

Second, within its activity framework, the IAPH has contributed to directing research investments on specific themes such as *Physical Environment* and *Mental Health*. Indeed, within the program's context, "Aboriginal Capacity and Development Research Environments (ACADRE)", the IAPH has established a national network of research centres around specific issues, with two of them in Québec:

- The National Network for Aboriginal Mental Health Research<sup>15</sup> (created in 2001 and located at the Sir Mortimer B. Davis- Jewish General Hospital in Montréal);
- The Nasivvik Centre for Inuit Health and Changing Environments<sup>16</sup> (created in 2002 and located at *Université Laval*).

Other than these two areas of research, the CIHR participated in the strengthening of a research infrastructure of great magnitude around Inuit and the physical environment:

- The ArcticNet Centre of Excellence ArcticNet on climate change and the Inuit<sup>17</sup> (which also benefitted from financial support from major funding sources related to Industry Canada and the International Polar Year).

These three large infrastructure programs draining an important part of research funding are the poles of research development: although they possess funds to subsidize research projects (ArcticNet and Nasivvik), they also provide the necessary conditions to promote the pooling and emergence of

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<sup>15</sup> The National Network for Aboriginal Mental Health Research (NAMHR) is a collaborative approach between practitioners in community mental health and university researchers. The team is composed of specialists in social sciences, of practitioners in mental health, of teachers, and of first line social and health workers who constantly revisit the hypothesis of the different research practices in Aboriginal mental health. <http://www.mcgill.ca/namhr/>

<sup>16</sup> The Nasivvik Centre (Laval University NEAHR) is investigating the complex interactions which determine the health of populations in the theme areas of food, water, and traditional and natural medicines and remedies while actively engaging Inuit and other students and community individuals in the four Inuit regions of the Canadian North: Nunatsiavut, Nunavik, Nunavut and the Inuvialuit Settlement Region. <http://www.cihr-irsc.gc.ca/e/27071.html>

<sup>17</sup> ArcticNet groups "over 110 ArcticNet researchers from 27 Canadian Universities, 8 federal and 11 provincial agencies and departments collaborate with research teams in Denmark, Finland, France, Greenland, Japan, Norway, Poland, Russia, Spain, Sweden, the United Kingdom and the USA". <http://www.arcticnet.ulaval.ca/index.php?fa=ArcticNet.aboutUs.fr>



initiatives. The fact that research subsidies as well as grants are much higher in *Physical Environment* and *Mental Health* illustrates not only the synergetic but also centripetal effects that these great research infrastructure projects create.

The **CIHR** also contributed to the strengthening of research teams on certain specific questions affecting *Lifestyles and Chronic Diseases*, with:

- The Canada Research Chair on Environment, Nutrition and Health or the Centre for Indigenous Peoples' Nutrition and Environment (CINE) whose researchers have collaborated with ArcticNet researchers.
- The Kahnawake Centre for Research and Training in Diabetes Prevention - KCRTDP for diabetes prevention (subsidized by the CIHR as community alliances for health research<sup>18</sup>).

The same dichotomy can apply to the theme *Lifestyles and Chronic Diseases*: on one side there is a multitude of small projects dispersed throughout the whole spectrum related to this theme, and on the other side, two research infrastructures with specialized research directions.

If we can question the implications of Aboriginal health research, from this kind of “sprinkling” in funds from the PSSP or of the funding concentration from the CIHR, we can also question the poor contributions of some funding sources.

**The SSHRC and the FRSQ** appear to be absent from Aboriginal health research. We can suppose that the new directions of these two funding sources will translate into an increase in their support of the Aboriginal health research field. In fact, these two organizations have since a short while, included Aboriginal research to their strategic directions agenda, effective as of 2002 for the SSHRC (Aboriginal Realities Program established in 2004) and more recently for the FRSQ, in the statement of their strategic directions for 2007-2010. We must highlight the data from the BRSS and the studied period does not allow us to account for new directions from these two granting agencies.

Finally, we can also highlight the low number of research infrastructure projects developed on a partnership basis with communities in the Aboriginal health field. As such, during the study period, there was only one infrastructure project created under the Community Alliances for Health Research (CAHR), the *Kahnawake Centre for research and training in diabetes Prevention* and none under the Alliance for Community-University Research (ACUR). We can however highlight that a grant was allocated recently for the constitution of an ACUR involving Dialog and the Native Friendship Centres, around the question of Aboriginals and the city: *Les Autochtones et la ville au Québec, qualité de vie et gouvernance*.

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<sup>18</sup> The ACRS were created by the CIHR on the ARUQ models in 2001. The aim with the ACRS program is to promote research of great quality that will be useful to community groups or organizations.

### 3.4 PERSPECTIVES AND CHALLENGES

This review, as does the Portrait of Public Health Research in Québec, allows us to better define the Aboriginal health research field, as well as account for the influence of health policies and research direction on the organization and extent of the support granted to this research field.

As such, the *Politique de la santé et du bien-être* (MSSS, 1992), which influenced the development of public health in Québec, had a marked effect on the directions of public health research, notably on development, adaptation and social integration issues. As well, this study highlights the role played by the Institute of Aboriginal Peoples' Health (IAPH) on the development of research focusing on specialized issues such as physical environment, mental health or nutrition and chronic diseases prevention (diabetes). If we can acknowledge this initiative, we can also ask, as in the Portrait of Public Health Research, if the current funding structure “will not prompt those researchers that are interested in other themes and fields that are less funded but nevertheless as important, to run out of steam” (Laurendeau and al, 2007 p87- *Free translation*).

The fact that the great majority of Aboriginal health research benefits from modest funding and that the support of the next generation outside the research poles is weak, leads to question oneself on the capacity of research contributions to improve Aboriginal peoples' health.

Aboriginal health research is a fairly new field and still under construction, in which it seems essential to anchor its development to the realities and concerns of Aboriginal communities. In their guiding documents, the main public granting agencies (CIHR, SSHRC and PSSP) promote the importance of individual and community participation in a research process, whether as players or main beneficiaries. The current review does not allow us to specify the actual participation of Aboriginal communities in the research process, or its usefulness or benefit; we can, however, ask ourselves if some research practices anchored in the reality of communities, such as action research, participatory research and intervention research are getting their fair share. The current rules of academic acknowledgement restrain and often limit this type of practice. As well, the sharing and use of knowledge, which are key elements to this type of research, are time and fund consuming and are not always well supported.

## CONCLUSION

This review confirms interest in having a portrait of Aboriginal Health Research, detailing outlines and characteristics, so we can appropriately act on its evolution and more efficiently, on its shortcomings and weaknesses. We can also hypothesize that this review effectively meets the objective to “*identify gaps in our knowledge and propose new research paths*” from the First Nations of Quebec and Labrador Health and Social Services Commission’s Blueprint.

In fact, its analysis clearly indicates that Aboriginal health is a field under development and that it is far from being consistent. It is also appropriate to approach this field, not as a homogeneous whole, but in considering its specificities and its various trends that exist within its scope.

Furthermore, as research support modes and financial incentives have repercussions on the choice of researchers’ subjects and initiatives, we can question if current research development around the main research poles is not being done at the expense of research development of other themes as important for Aboriginal health. We can also ask ourselves if the current organization of research support fully meets the Aboriginal health research concerns and needs of communities.

As the National Collaborating Centre for Aboriginal Health specifies in its report on Aboriginal health research, it seems that there is a need “for a stronger presence of evaluation and applied research, as well as suggestions about the need for more work on the social determinants of health.” (Greenwood, 2006, p.5).

An update of this review, either in the short or long term, would account for the evolution of research and the re-orientation or not of some trends. Finally, we can only wish that to contribute to the improvement of Aboriginal People’s health, the results of this review will be considered and used by various Aboriginal authorities, health and social services network managers, public granting agencies and decision-makers at different levels of government.



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## **APPENDIX 1**

### **SELECTION PRINCIPLES AND INCLUSION/EXCLUSION CRITERIA**





## APPENDIX 1 Selection principles and inclusion and exclusion criteria

### **Selection Principles: “Québec Aboriginals are targeted as a specific population or as one Aboriginal population under study”**

Research projects to be included are those whose population includes Québec Aboriginals such as a research project that has for population under study, one or more Québec First Nations, Québec Inuit, or that concerns Aboriginals in general, including those from Québec.

IS EXCLUDED from the *Aboriginal Health Research Database (BRSA)* a project whose population under study is exclusively Aboriginals living outside Québec.

IS EXCLUDED from the *Banque de recherche sur les Autochtones (BRA)* a project whose population is from Québec, without any mention of the Aboriginal population.

### **Example of projects included in the BRSA**

*E.g.: The social support and health relationship: establishing its value for Aboriginal health in Canada.*

*E.g.: The determinants of non-insulin-dependent diabetes in a Canadian Aboriginal population: Shifting the focus from genetics to social and economic circumstances.*

*E.g.: Features of epidemiology of Streptococcus pneumoniae (serotype 1) in the Arctic (ASTIS).*

### **Examples of projects excluded from the BRSA**

*E.g.: Aboriginal health in British Columbia: policy and representation.*

*E.g.: Food security in Nunavut: Traditional and market foods.*

### **Example of projects excluded from the BRA**

*E.g.: Recherche interdisciplinaire sur la violence familiale et la violence faite aux femmes.*

### **Decisions concerning gray areas (ratified by the steering committee)**

*E.g.: Projet d'intervention et d'évaluation auprès des clientèles les plus à risque de suicide ou de tentative de suicide*

The project is excluded as it does not address this issue specifically for Québec Aboriginals.

*E.g.: Les effets des contaminants de l'environnement sur le système immunitaire des nouveau-nés de la Basse-Côte-Nord*

This project is included as it studied the effects among a population of newborns including Aboriginal newborns.

**Selection Principle “Health is the dependent variable”**

The following projects must be included in the health research database: research projects that have an obvious tie with Aboriginal health, or more specifically projects for which health is a dependent variable.

IS EXCLUDED any project that addresses living conditions, social environment, physical environment, lifestyles, etc. of Aboriginals (from Québec or in general) etc., without an obvious link to individual or population health.

**Examples of projects EXCLUDED based on this principle:**

**Studies on physical, chemical, biological, etc. phenomena, with no direct link to individual or population health:**

- *E.g.: Arctic microbial biodiversity and ecology*
- *E.g.: Surveillance des contaminants atmosphériques dans le Nord : mesure des concentrations d'organochlorés<sup>19</sup>.*
- *E.g.: Étude des nouveaux contaminants dans les œufs d'oiseaux de mer de l'Arctique<sup>1</sup>*
- *E.g.: Effets neurotoxicologiques, thyroïdiens et systémiques d'une exposition transplacentale et par le lait maternel des rats de Sprague-Dawley aux éthers diphényliques polybromés (PBDE).*

**Studies on social, environmental, technological, etc. phenomena or changes that have no direct tie with the health of the population**

- *E.g.: Aide à la publication de la démographie des Autochtones du Canada.*
- *E.g.: L'enseignement des mathématiques auprès d'élèves inuit de 5 à 8 ans : une nécessaire prise en compte du contexte.*
- *E.g.: Les entités suprahumaines dans la tradition orale inuit contemporaine : éléments d'étude de l'univers invisible aux îles Belcher et au Nunavik.*
- *E.g.: Language socialization in homes and schools of Mohawk and Algonquin children*
- *E.g.: Leaders, discours et changement social chez les Inuit du Nunavik.*
- *E.g.: La transmission des valeurs spirituelles et des savoirs chamaniques : l'ukpirijatuqait comme dialogue entre les aînés et les jeunes Inuit.*
- *E.g.: DIALOG - Réseau de recherche et de connaissances relatives aux peuples autochtones.*

**Examples of projects INCLUDED based on this principle:**

**Medical, genetic, toxicology, pharmacological, clinical studies related to individual health:**

- *E.g.: Addressing the needs of First Nations and Aboriginal communities: genetics research as a focus.*
- *E.g.: Facteurs génétiques et environnementaux déterminant le statut hormonal des hommes et des femmes Inuit.*
- *E.g.: Conséquences neurologiques et motrices à long terme d'une exposition prénatale à des substances neurotoxiques chez des enfants inuit d'âge préscolaire.*

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<sup>19</sup> Northern Contaminants Program (NCP)

**Research on the pathology, treatment and experience of disease:**

- *E.g.: Équipe de recherche sur la santé mentale des Autochtones.*
- *E.g.: The role of chlamydia trachomatis in respiratory disease in Inuit children.*
- *E.g.: Facteurs de rémission des femmes autochtones de la réserve de Mashteuiatsh ayant présenté une consommation problématique de substances psychoactives.*
- *E.g.: The determinants of non-insulin-dependent diabetes in a Canadian Aboriginal population: Shifting the focus from genetics to social and economic circumstances.*

**Research on the links between population health and well-being status and its determinants:**

- *E.g.: Kinship, colonialism and well-being among the Inuit.*
- *E.g.: Le rôle du rejet dans l'étiologie du suicide dans les communautés autochtones.*
- *E.g.: Style de vie et VIH/sida chez les Premières Nations du Québec.*
- *E.g.: La violence physique faite aux femmes inuit : facteurs socioculturels.*
- *E.g.: Le savoir des femmes inuit en rapport avec la nourriture et les soins à donner à l'enfant.*
- *E.g.: Réseaux sociaux et alimentation chez les Inuit.*
- *E.g.: Autochtones en milieu urbain : stratégies d'adaptation.*

**Research pertaining to the knowledge and surveillance of population health and well-being status:**

- *E.g.: Proportion de crimes attribuable à l'alcool et aux drogues.*
- *E.g.: Characterization of the human papillomavirus infection among a population of Inuit women in Quebec.*
- *E.g.: État de santé des populations autochtones du Nord québécois : vers une planification des soins de santé (PLASANNOUQ : Planification-Santé-Nouveau-Québec).*
- *E.g.: Effets de l'exposition prénatale aux substances organochlorées sur l'incidence d'infections aiguës chez les enfants Inuit du nord du Québec.*
- *E.g.: Effets de l'exposition prénatale et postnatale aux contaminants et aux métaux lourds sur le système immunitaire des enfants Inuit.*
- *E.g.: Environmental contaminants, food security and indigenous peoples of the North.*
- *E.g.: Le virus du papillome humain et le cancer du col utérin dans une population inuit du nouveau Québec.*

**Research on the organization of services, intervention/prevention/promotion and health protection projects:**

- *E.g.: L'intervention en santé mentale : pour une méthodologie du développement communautaire chez une population autochtone.*
- *E.g.: Évaluation du projet de cuisine éducative en vue de contrer l'anémie ferriprive chez les femmes enceintes et les enfants de la communauté inuit de Kuujjuaraapik.*
- *E.g.: Prévention et contrôle des maladies infectieuses dans une population autochtone urbaine et vulnérable : Perspectives pour une intégration et une continuité des services s'adressant à cette population.*

**Decisions concerning gray areas (ratified by the steering committee)**

**\*Are considered as FALSE due to missing information (FMI)**, projects relating to Aboriginals on which not enough information is available (either by title, summary, specifications from the BRSS, authors) to rule on their belonging or not to the Aboriginal health research field.

- *E.g.: Relogement à Umiujaq des Inuit de Kuujjuarapik : reconstruction des formes de solidarités.*
- *E.g.: Rôle et place des institutions pénales dans la trajectoire de vie des femmes autochtones.*
- *E.g.: Les savoirs autochtones, un rapport aux savoirs de l'humanité.*
- *E.g.: « Métiers non-traditionnels » ou « personnes non-traditionnelles » ? Catégories sociales de sexe et division sexuelle des tâches en milieu inuit et québécois.*
- *E.g.: Les facteurs déterminants de la qualité des relations entre autochtones et non-autochtones dans les villes de taille moyenne.*

## **APPENDIX 2**

# **MAP OF QUÉBEC ABORIGINAL NATIONS**



APPENDIX 2 Map of Québec Aboriginal Nations







**APPENDIX 3**

**TARGET GROUPS DEFINED**



### APPENDIX 3 Target groups defined

#### **1- Perinatal and early childhood**

Under this category are inventoried projects relating to perinatality, pregnancy, mother-child relations, breastfeeding, childhood illnesses, congenital diseases, etc.

*E.g.: Effets de l'exposition prénatale et postnatale aux contaminants et aux métaux lourds sur le système immunitaire des enfants Inuit*

*E.g.: Conséquences de la macrosomie infantile chez les Cris.*

#### **2- Children and youth**

Under this category are inventoried projects relating to infant diseases and to the health and well-being of children and youth (teenagers and young adults)

*E.g.: La santé dentaire des enfants cris de la Baie-James.*

#### **3- Women**

Under this category are research projects specifically relating to women's health and well-being.

**Note:** The projects more specifically related to the health and well-being of mothers are inventoried under Perinatality and early childhood.

*E.g.: Évaluation du projet de cuisine éducative en vue de contrer l'anémie ferriprive chez les femmes enceintes et les enfants de la communauté inuit de Kuujuaaraapik.*

#### **4- Men**

Under this category are research projects specifically relating to men's health and well-being.

*E.g.: Pour sortir de l'impasse, la trajectoire de demande d'aide des hommes du Nord-du-Québec.*

#### **5- Adults**

Under this category are research projects specifically relating to adult health and well-being.

#### **6- Family**

Under this category are research projects specifically relating to the family health and well-being.

*E.g.: La famille inuit contemporaine. Vers une meilleure harmonisation des besoins, des ressources et des interventions.*

#### **7- Elders**

Under this category are research projects specifically relating to elders health and well-being and of persons experiencing loss of autonomy due to age.

*E.g.: Puurtaq project (Inukjuak elders' need assessment).*

#### **8- Without distinction**

Under this category are research projects that do not target any specific population group.



## **APPENDIX 4**

### **DEFINITION OF THEMES**



## APPENDIX 4 Definition of themes

### 1- Living Conditions and Social environment

Under this theme are inventoried projects that deal with deleterious or protective effects on the health of individuals or populations:

a- psychosocial, sociocultural, socioeconomic phenomena such as exclusion, marginalization, homelessness, violence, abuse, school drop-out, cultural losses or rupture, poverty, unemployment and working conditions, residential school experience, children placement, food insecurity, etc.

b- social, economic, cultural and other resources, individual or collective within their different living environment (family, work, community).

*E.g.: Les effets du surpeuplement des maisons sur la santé de la communauté cri de Chisasibi, au Québec.*

*E.g.: Réseaux sociaux et alimentation chez les Inuit.*

#### **Note:**

Studies on economic and social exclusion, poverty and residential school experience fall under this category.

Projects dealing specifically with violence issues, addictions or suicide are not inventoried under this theme, they are under *Violence, Addictions* or *Mental Health*, unless these are explicitly related to social phenomena.

### 2- Physical environment

Under this theme are inventoried projects that are in line with individual and population health, dealing with climate changes and biological, chemical and physical environmental (water, air, soil) or domestic (housing, food, etc.) contamination.

*E.g.: Effets de l'exposition prénatale et postnatale aux contaminants et aux métaux lourds sur le système immunitaire des enfants Inuit.*

*E.g.: Facteurs génétiques et environnementaux déterminant le statut hormonal des hommes et des femmes Inuit*

*E.g.: Évaluation de l'exposition au plomb provenant du gibier chez les Cris de Whapmagoostui.*

#### **Note:**

Projects dealing with psychosocial aspects of housing (overcrowding, promiscuity) are inventoried under the theme *Living Conditions and Social Environment*.

### 3- Lifestyles and Chronic diseases

Under this theme are inventoried projects dealing with lifestyles having an effect on health, and/or chronic disease promotion/prevention and protection, surveillance, screening and treatment (cardio-vascular, obstructive pulmonary (*MOPC*), diabetes, dental diseases, musculoskeletal, obesity, cancers, etc.).

*E.g.: Prévalence du diabète chez les Cris, élaboration du matériel éducatif à l'intention de cette clientèle.*

#### **Note:**

Projects relating to iron deficiency anemia are inventoried under this theme. Projects relating to *human papilloma virus* and cervical cancer are classified under *Infectious Diseases*.

#### **4- Infectious diseases**

Under this theme are inventoried projects dealing with prevention/promotion, protection, screening, treatment, etc. in matters of infectious diseases caused by various biological agents and transmitted through various methods.

*E.g.: Risques compris : bâtir des compétences pour résister contre les maladies transmises sexuellement (y compris le VIH) dans une communauté de Eeyou Istchee (le Nord-du-Québec).*

#### **5- Mental health, and/or psychological and neurological development**

Under this theme are inventoried projects concerning individual and population feelings of mental and psychological well-being, adaptation problems and social integration, suicide, autism spectrum disorders, intellectual deficiency as well as neurological, psychological and cognitive problems.

*E.g.: Le rôle du rejet dans l'étiologie du suicide dans les communautés autochtones.*

*E.g.: Profil de la clientèle et description des services de santé mentale au sein de la population crie.*

*E.g.: Conséquences neurologiques et motrices à long terme d'une exposition prénatale à des substances neurotoxiques chez des enfants inuit d'âge préscolaire.*

*E.g.: Category theoretic study of cognition : theory and experiment (thème associé BRSS: santé mentale, développement de l'enfant, éducation et socialisation).*

#### **Note**

Projects dealing with psychosocial problems (violence, abuse, homelessness, pathological gambling, fostering, etc.) may be included in this category when they are related to or deal with detrimental effects on the mental health of individuals or populations.

#### **6- Addictions**

Projects inventoried under this theme deal with consumption and addiction problems, whether to alcohol, illicit or prescription drugs or pathological gambling.

*E.g.: Consommation de substances psychoactives chez les jeunes et leur famille au Nunavik : Enquête épidémiologique et données contextuelles.*

*E.g.: Facteurs de rémission des femmes autochtones de la réserve de Mashteuiatsh ayant présenté une consommation problématique de substances psychoactives.*

#### **Note:**

Projects under this theme are not categorized in *Mental Health* or in *Living Conditions*, unless other specific aspects are mentioned (Fictitious examples: Consumption of hard drugs and psychosis or alcohol consumption and marital abuse).



## **7- Violence**

Projects inventoried under this theme deal with various forms of violence: family, assault, homicide, sexual abuse, destructive acts, vandalism, etc.

*E.g.: La violence physique faite aux femmes inuit : facteurs socioculturels.*

*E.g.: Étude de l'incidence de la violence faite aux enfants à Pikogan et perception du problème de la violence familiale par ses résidents.*

Note: Suicide being a self-inflicted act of violence is not inventoried under this theme, but under the *Mental Health* theme.

## **8- Unintentional injuries**

Projects inventoried under this theme deal with accidents and injuries (unprovoked) that take place in the home, on roads, in public places or in a recreation or sports context.

*E.g.: Décès causés par des véhicules à moteur : analyse de la situation dans le Nord-du-Québec.*

*E.g.: Documentation statistique des blessures qui ont nécessité une hospitalisation en Nunavik.*

## **9- Food and Nutrition**

Projects inventoried under this theme deal with food practices, nutritional deficiency/intake as well as protective or harmful effects of food on the health of individuals or populations.

*E.g.: A Review of Foodborne Diseases in Nunavik.*

*E.g.: Anthropometry and diet of Mohawk schoolchildren in Kahnawake.*

*E.g.: Le sel de Table fluoré au Nunavik, une étude sur l'ingestion.*

*E.g.: Inuit health in transition study: Omega-3 fatty acids and oxidative stress in obese and diabetic Inuit subjects.*

*E.g.: Évaluation de l'exposition au plomb provenant du gibier chez les Cris de Whapmagoostui.*

*E.g.: Effets de l'exposition prénatale à l'alcool sur le développement des enfants Inuit : le rôle protecteur des antioxydants.*

### **Note:**

Projects relating exclusively to obesity are inventoried under *Lifestyles and Chronic diseases*.

## **10- Traditional practices and knowledge**

Projects inventoried under this theme deal with Aboriginal traditional medicine as well as knowledge, cultural practices and Aboriginal spirituality in relation to individual and population health and well-being.

*E.g.: Faisabilité d'inclure des éléments de médecine traditionnelle dans le programme Bush Kit.*

*E.g.: Combining traditional and scientific knowledge to maximise use of traditional food and minimise toxic risk.*

## **11- Intervention, promotion and prevention programs**

Projects inventoried under this theme deal with existing or developing interventions and programs in matters of promotion and prevention of individuals and communities' health and well-being. Projects may deal with interventions/programs established within the health and social services or not, based on a collective approach or other.

*E.g.: Projet cri de santé en milieu scolaire : Évaluation de la mise en application du programme à Wemindji.*

*E.g.: Planning familial.*

*E.g.: Prévalence du diabète chez les Cris, élaboration du matériel éducatif à l'intention de cette clientèle et formation des intervenants qui les soignent).*

*E.g.: Promouvoir la santé et le bien-être optimum pour les malades mentaux chroniques, leurs soignants immédiats et les communautés de la Baie-James.*

## **12- Organization of health and social services**

Projects inventoried under this theme deal with the organization and operation of health and social services as well as their impact, efficiency and adequacy with population needs.

*E.g.: Profil de la clientèle et description des services de santé mentale au sein de la population crie.*

*E.g.: La réponse du système de protection de la jeunesse aux enfants autochtones ou issus des minorités visibles.*

## **13- Public policy, theories and methods**

Projects inventoried under this theme deal with theories, methods or policies relating to health and well-being.

*E.g.: Researching models for effective public health research in the Cree region*

## **14- Health in general**

Projects inventoried under this theme cannot be qualified under any other theme or cut across several themes.

*E.g.: Addressing the needs of First Nations and Aboriginal communities: genetics research as a focus.*

*E.g.: Enquête sur la santé des populations du Grand-Nord.*

*E.g.: A summary of the Santé Québec 1992 regional results with additional information for people in Nunavik.*

*E.g.: La santé et les facteurs qui l'affectent dans les collectivités cris.*

## **APPENDIX 5**

# **FUNDING SOURCES INVENTORIED IN THE BRSS**



**APPENDIX 5 Funding sources inventoried in the BRSS**

<b>Funding Sources</b>	<b>ABBREVIATION</b>
MSSS (general category)	MSSS
Conseil québécois de la recherche sociale	CQRS
Fonds de la recherche en santé du Québec	FRSQ
Projets subventionnés en santé communautaire	PSSC
Direction générale de la planification et de l'évaluation	MSSS-DGPE
Conseil de la santé et du bien-être	CSBE
Centre québécois de coordination sur le SIDA	CQCS
Conseil d'évaluation des technologies de la santé	CETS
Office des personnes handicapées du Québec	OPHQ
Comité de la santé mentale du Québec	CSMQ
Santé-Québec	Santé-Québec
Conseil des affaires sociales et de la famille/Conseil des affaires sociales	CASF/CAS
Programme de subventions en santé publique	PSSP
Conseil de recherche socio-économique	CRSE
Programme de recherche de la Commission Rochon: Recueil des résumés	ROCHON
Consortium de recherche en réadaptation de l'Est-du-Québec	CORREQ
Réseau de recherche provincial en adaptation-réadaptation	REPAR
Canada Foundation for Innovation	CFI
National Health Research and Development Program	NHRDP
Programme de subventions nationales au bien-être social	PSNBS
Medical Council Research of Canada	MRCC
Social Sciences and Humanities Research Council	SSHRC
Natural Sciences and Engineering Research Council	NSERC
Laboratoire de lutte contre la maladie	LLCM
Employabilité et partenariats sociaux	EPS
Fonds pour l'adaptation des services de santé	FASS
Canadian Health Services Research Foundation	CHSRF
Programme de soutien à l'infrastructure de la santé	PSIS
Formation de chercheurs et aide à la recherche	FCAR
Fondation de recherche en sciences infirmières du Québec	FRESIQ
Institut de recherche en santé et sécurité au travail	IRSST
Institut québécois de recherche sur la culture	IQRC
Institut national de la recherche scientifique - Culture et société	INRS-CS
Réseau de recherche en réadaptation de Montréal et de l'ouest du Québec	RRRMOQ
Canadian Coordinating Office for Health Technology Assessment	CCOHTA
Agence d'évaluation des technologies et modes d'intervention en santé du Québec	AETMIS
Canadian Institutes of Health Research	CIHR
Fonds de recherche sur la société et la culture	FQRSC
Fonds québécois de la recherche sur la nature et les technologies	FQRNT
Société d'arthrite	SOAR
Hearth and Stroke Foundation of Canada	HSFC
National Cancer Institute of Canada	NCIC
Canadian Breast Cancer Research Alliance	CBCRA
Rapport Castonguay	CASTONGUAY



## **APPENDIX 6**

# **COMPARISON OF THE FREQUENCY OF THEMATIC AREAS OF RESEARCH**





**APPENDIX 6 Comparison of the frequency of the thematic areas of research**

Theme	Citations %	
	BRSA (N=230 research projects)	NCCAH (N=649 publications)
<b>Population groups</b>		
Perinatalité and early childhood-mother and child health	9,1	11,4
<b>Themes</b>		
Food - Nutrition	16,1	
Living conditions - Social environment	13,9	
Addictions *	3,5	8,8
Physical environment} <i>Environment and toxicology</i>	7,4	10,0
Lifestyles and CD} Chronic diseases	26,1	25,4
Infectious diseases	11,3	15,6
Organization of health and social services	13,5	
Policies - Theories - Methods*	1,3	
Traditional practices and knowledge	7,8	
Prevention - Promotion	18,3	
General health	7,0	
Mental health	13,5	12,2
Unintentional Injuries and Violence} <i>NIT and violence</i>	2,6 et 2,6	4,5

*Note:* In the NCCAH there is no equivalence for the following themes: Food-Nutrition, Living conditions-Social environment, Organization of health and social services, Policy-Theories-Methods, Traditional practices and knowledge, Prevention/promotion, General health.





