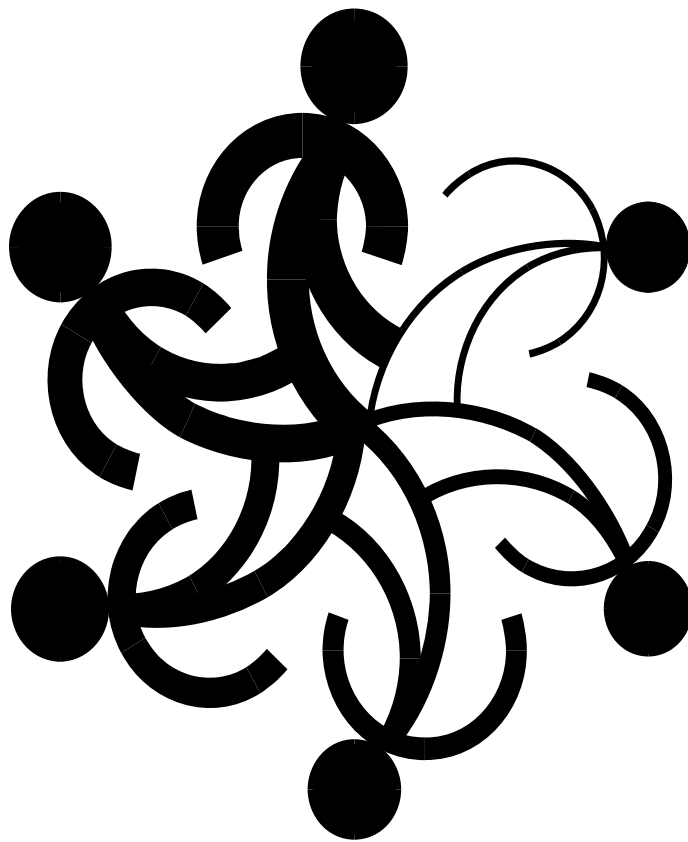


National Longitudinal Survey of Children and Youth

Survey Overview for the 2006/2007 Data Collection Cycle 7



Statistics Canada
Statistique Canada



Human Resources and Skills Development Canada
Ressources humaines et Développement des compétences Canada

Canada

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Introduction

The purpose of this document is to describe the content and design of Cycle 7 (2006/2007) of the National Longitudinal Survey of Children and Youth (NLSCY). This document builds on the information presented in the previous NLSCY Overviews for Cycles 1 to 6.

The NLSCY has been conducted by Statistics Canada and is sponsored by Human Resources and Skills Development Canada (HRSDC). Statistics Canada is responsible for data collection, while HRSDC provides the overall direction to the survey. Both agencies have played a role in funding, development of survey content, research, and dissemination of findings.

In addition, HRSDC and Statistics Canada continue to benefit from the advice and contribution of a variety of interested partners. Provincial and territorial governments are kept informed of progress and their representatives provide valuable input.

HRSDC and Statistics Canada have relied on advice provided by HRSDC's Expert Advisory Group on Children and Families, a multi-disciplinary group of Canadian and international experts in child development. They are consulted on survey design, survey questions and research priorities, and are responsible for much of the original research that is conducted using the survey data. Additional experts are consulted as required.

For further information on the NLSCY, enquiries should be directed to:

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This is a companion report to the documents containing the survey questionnaires, *National Longitudinal Survey of Children and Youth: Survey Instruments for the 2006/2007 Data collection, Cycle 7*, Books 1 and 2 available at the following link: <http://www.statcan.gc.ca/cgi-bin/imdb/p2SV.pl?Function=getInstrumentDocLink&SurvId=4450&SurvVer=1&Instald=16044&InstaVer=7&lang=en&db=imdb&adm=8&dis=2>.

Acknowledgements

The National Longitudinal Survey of Children and Youth (NLSCY) is the responsibility of a joint team of staff at Human Resources and Skills Development Canada and the Special Surveys Division at Statistics Canada.

The team would also like to acknowledge the continuing cooperation of the responding children and youth and their families, and the work of the survey interviewers and the Statistics Canada Regional Office staff.

Background

The National Longitudinal Survey of Children and Youth (NLSCY) is a long-term study conducted, every two years, by Statistics Canada and sponsored by Human Resources and Skills Development Canada (HRSDC). The primary objective of the NLSCY is to monitor the development and well-being of Canada's children from infancy to adulthood.

The NLSCY follows a representative sample of Canadian children from birth to early adulthood, with data collection occurring at two year intervals. The first collection of information (Cycle 1) took place in the winter and spring of 1994/1995. In addition to following the original longitudinal panel of children, now aged 12 to 23 years in Cycle 7, the survey has continued to add and follow a new sample at each cycle to monitor early childhood development. In Cycle 7, this sample was comprised of children aged 0 to 9 years.

Much of the information in the NLSCY is collected from parents on behalf of their children by means of a household interview. Children aged 10 and older complete a separate written questionnaire in the home. Finally, the NLSCY includes direct measures of achievement: interviewers administer a receptive vocabulary test as well as a test of early writing and numeracy skills for children aged 4 to 5 years. Children in grades 2 to 10 complete a short mathematics/computation assessment. Youth aged 16 and 17 years complete a Problem Solving Exercise. The 18- and 19-year-olds complete a Literacy assessment and the 20- and 21-year-olds complete a Numeracy assessment.

Cross-sectional data from Cycles 1 to 3 are available on a public use microdata file (PUMF); no PUMF was created for Cycles 4, 5, 6 and 7. Statistics Canada retains a master microdata file from which tabulations can be requested. Other options for access to the longitudinal data include remote data access and the Statistics Canada research data centres.

Objectives

The objectives of the National Longitudinal Survey of Children and Youth (NLSCY) are:

- to determine the prevalence of various risk and protective factors for children and youth;
- to understand how these factors, as well as life events, influence children's development;
- to make this information available for developing policies and programs that will help children and youth;
- to collect information on a wide variety of topics – biological, social, economic;
- to collect information about the environment in which the child is growing up – family, peers, school, community.

The National Longitudinal Survey of Children and Youth design

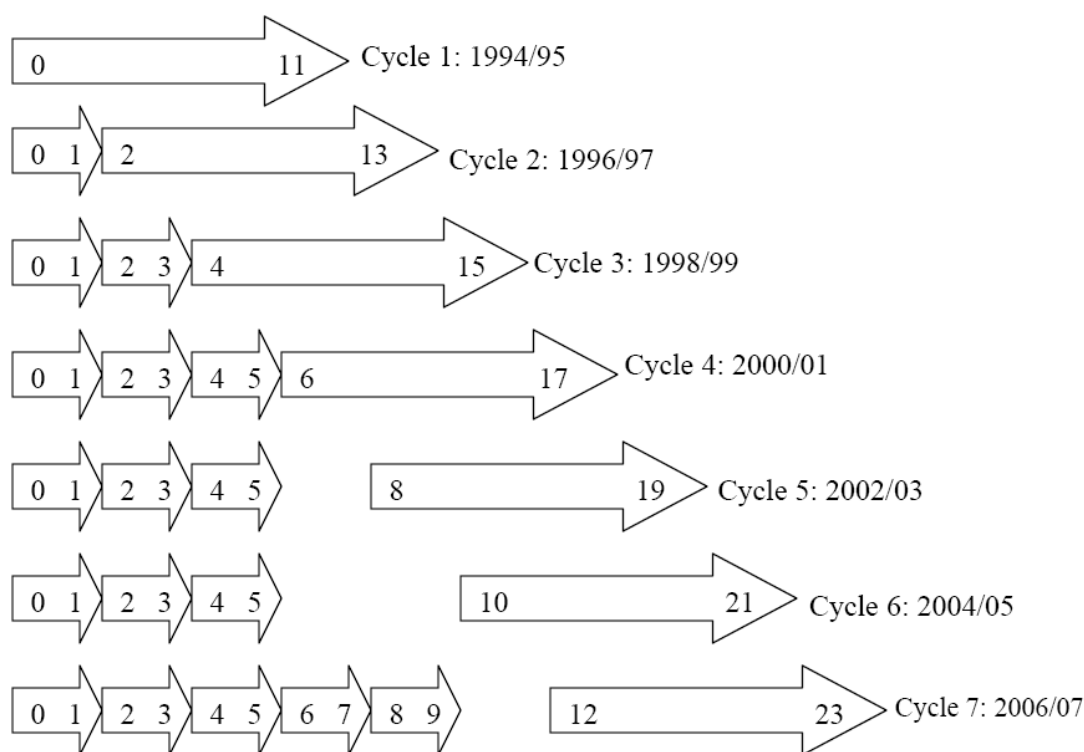
Survey methodology – Sample

The National Longitudinal Survey of Children and Youth (NLSCY) is a probabilistic survey developed to provide information on Canadian children and youth. To produce reliable estimates that respond to the expressed needs of the clients, a representative sample of children and youth was selected. This section describes the sample selection method and size.

At Cycle 7, the NLSCY sample consists of children aged 0 to 9 years old (Early Childhood Development or ECD children) and youth and young adults aged 12 to 23 years old (original cohort). The effective age at Cycle 7 is as of December 31st, 2006. Thus, 0-year-olds are born in 2006 and 1-year-olds are born in 2005.

The diagram below illustrates the NLSCY sample. The years indicate when collection occurred. The larger arrows represent the original cohort, and the smaller arrows represent the ECD cohorts.

Figure 1
Age of children at each cycle, original cohort versus ECD cohorts



Notes: Ages of children in years are shown in arrows.
Longer arrows represent the original cohort and shorter arrows represent the Early Childhood Development (ECD) cohorts.

Source: Statistics Canada, National Longitudinal Survey of Children and Youth.

Details of the National Longitudinal Survey of Children and Youth sample, Cycle 7

At Cycle 7, the NLSCY sample consists of:

- a new ECD cohort of 0- to 1-year-old children selected at Cycle 7
- a top-up sample of new 2- to 5-year-olds selected at Cycle 7.

Plus the following returning samples:

- returning 2- to 3-year-old children from the ECD cohort of 0- to 1-year-old children selected at Cycle 6
- returning 4- to 5-year-old children from the ECD cohort of 0- to 1-year-old children selected at Cycle 5
- returning 4- to 7-year-old children from the top-up sample of 2- to 5-year-old children selected at Cycle 6
- returning 6- to 7-year-old children from the ECD cohort of 0- to 1-year-old children selected at Cycle 4
- returning 8- to 9-year-old children from the ECD cohort of 0- to 1-year-old children selected at Cycle 3
- returning 12- to 23-year-old children from the original cohort of 0- to 11-year-olds selected at Cycle 1.

All children were sampled from the Labour Force Survey (LFS) with the exception of the Cycle 3 ECD cohort. Note that at Cycle 7, there are no children aged 10 to 11 years old.

This section describes which children were surveyed. Some children are sampled but not surveyed because at the previous cycle they were found to be cross-sectionally out-of-scope, e.g., they were deceased, had left the country or had too many cycles of non-response.

For details on how sampling was performed at each cycle, please refer to a cycle's Microdata User's Guide.

Original cohort, Cycles 1 to 7

The following describes the composition of the original cohort at each cycle (see Figure). The original cohort contains a maximum of two children per household.

Cycle 1

The sample of children selected at Cycle 1 was designed to produce reliable—but not equally reliable—provincial estimates for children from age 0 to 11, by two-year age groupings: 0 to 1, 2 to 3, 4 to 5, 6 to 7, 8 to 9 and 10 to 11. A maximum of four children per household was selected. Households were sampled from the following sources:

- the old LFS (prior to 1994)
- the 1994 redesigned LFS
- the National Population Health Survey (NPHS), which is conducted by Statistics Canada.

At the end of Cycle 1, there were 22,831 respondent children in the NLSCY. The child-level response rate was 86.5%.

Cycle 2

At Cycle 2, some children were dropped from the sample for budgeting reasons: all NLSCY households belonging to the NPHS sample were dropped, and to reduce the burden on households, the maximum number of children selected per household was cut from four to two. This resulted in a sample of 16,903 children at the beginning of Cycle 2. The child-level response rate for collection was 91.5%. The cumulative, longitudinal response rate for children in the original cohort was 79.1%.

Cycle 3

At Cycle 3, 185 children were excluded from the sample because at the end of Cycle 2 they were either cross-sectionally out-of-scope (71) or hard refusals (114). Children who are cross-sectionally out-of-scope include those who died, whose age was not in-scope, who had permanently left the country, or who had moved to an Indian reserve. Thus, of the 16,903 children sampled for the original cohort, collection was performed on 16,718. The child-level response rate for collection was 89.2%. The cumulative, longitudinal response rate for children in the original cohort was 76.0%.

Cycle 4

At Cycle 4, to make collection more efficient, it was decided that households with two or more consecutive cycles of non-response would be dropped from collection (along with households with one cycle of non-response followed by the status “Temporarily moved”). Consequently, 1,086 children were dropped from collection at Cycle 4 because at the end of Cycle 3 they were either cross-sectionally out-of-scope (106) or had had two or more cycles of non-response (980). A total of 15,632 children were surveyed. The child-level response rate for collection was 84.5%. The cumulative, longitudinal response rate for children in the original cohort was 67.8%.

Cycle 5

At Cycle 5, it was decided that 18- and 19-year-olds would be dropped from collection only after three consecutive cycles of non-response (versus two for younger children). The reason for this is that at age 18, the youth becomes the sole respondent, whereas before age 18 the primary respondent is the person most knowledgeable (PMK), who is typically the mother.

At Cycle 5, 469 children were dropped from collection because at the end of Cycle 4 they were either cross-sectionally out-of-scope (32) or had too many consecutive cycles of non-response (437). A total of 15,163 children were surveyed at Cycle 5. The child-level response rate for collection was 81.3%. The cumulative, longitudinal response rate for children in the original cohort was 63.1%.

Cycle 6

At Cycle 6, 1,506 children were dropped from collection because they had too many consecutive cycles of non-response by the end of Cycle 5. A total of 13,657 children were surveyed at Cycle 6. The child-level response rate for collection was 82.4%. The cumulative, longitudinal response rate for children in the original cohort was 57.6%.

Cycle 7

At Cycle 7, 613 children were dropped from collection because at the end of Cycle 6 they were either cross-sectionally out-of-scope (11) or had too many consecutive cycles of non-response (602). A total of 13,709 children were surveyed at Cycle 7. The child-level response rate for collection was 80.5%. The cumulative, longitudinal response rate for children in the original cohort was 56.6%.

Note that at Cycle 7 a new rule was applied for returning children who were 18 or older: the PMK’s history of non-response was ignored when deciding if the child should be sent to collection or not.

For more details, see the Microdata User’s Guide for Cycle 7.

Early childhood development cohorts present at Cycle 7

The ECD children present at Cycle 7 were first sampled in Cycles 3, 4, 5, 6, and 7. When the first ECD cohort of 0- to 1-year-olds was selected at Cycle 2, the rule was a maximum of one

child per household, except for twins, in which case both were sampled.¹ At Cycle 5, the rule changed to one child per household without exception. Returning twins, however, continued to be surveyed until Cycle 6.²

Prior to Cycle 7, for the ECD samples, only respondents from the previous cycle were surveyed at subsequent cycles. At Cycle 7, this rule was dropped so that non-respondents from previous cycles were surveyed. However, we did implement the rule that if there were two or more cycles of non-response, then collection would not be performed. (This rule was applied to the ECD children for the first time at Cycle 7.)

Cycle 3 ECD cohort

At Cycle 3, a sample of 0- to 1-year-olds and 5-year-olds was selected from the LFS and Birth Registry data. The total sample was 16,812 households. At the end of Cycle 3 collection, there were 13,546 responding children. The response rate was 83.3%.

At Cycle 4, the 5-year-olds in Cycle 3 were dropped (6,935 children), consequently there were 8,118 children from this cohort who returned as 2- to 3-year-olds at Cycle 4. The response rate at Cycle 4 was 88.1%.

At the end of Cycle 4, 516 households were cross-sectionally out-of-scope and 1,420 were non-respondents. Consequently, 7,115 of the returning 4- to 5-year-olds were surveyed at Cycle 5. The response rate was 89.6%. The cumulative, longitudinal response rate was 66.3%.

At the end of Cycle 5, 41 households were cross-sectionally out-of-scope and 940 were non-respondents. Consequently, 6,016 of the returning 8- to 9-year-olds were surveyed at Cycle 7. The response rate was 88.9%. The cumulative, longitudinal response rate was 58.3%.

Cycle 4 ECD cohort

At Cycle 4, a sample of 0- to 1-year-olds was selected from the LFS and a top-up sample of 5-year-olds was sampled from Birth Registry data. The total sample size was 9,439 households. At the end of Cycle 4 collection, there were 6,961 responding children. The response rate was 75.7%.

At Cycle 5, the 5-year-olds in Cycle 4 were dropped (4,405 households). At the end of Cycle 4, 125 households were cross-sectionally out-of-scope and 1,121 were non-respondents. Consequently, 3,841 of the returning 2- to 3-year-olds were surveyed at Cycle 5. The response rate was 86.8%. The cumulative, longitudinal response rate was 66.7%.

At the end of Cycle 5, 125 households were cross-sectionally out-of-scope and 1,121 were non-respondents. Consequently, 3,323 of the returning 4- to 5-year-olds were surveyed at Cycle 6. The response rate was 89.5%. The cumulative, longitudinal response rate was 59.5%.

At the end of Cycle 6, 11 children were cross-sectionally out-of-scope and 497 were non-respondents. Consequently, 3,232 of the returning 6- to 7-year-olds were surveyed at Cycle 7. The response rate was 89.6%. The cumulative, longitudinal response rate was 58.7%.

Cycle 5 ECD cohort

At Cycle 5, a sample of 0- to 1-year-olds was selected from the LFS. The total sample size was 4,492 children and households. At the end of Cycle 5 collection, there were 3,252 responding children. The response rate was 74.0%.

-
1. The ECD cohort sampled in Cycle 2 included 0- to 1-year-olds who were younger siblings of children belonging to the original cohort. This was the only cycle in which siblings from the original cohort were selected. No Cycle 2 ECD children are present in the Cycle 7 sample.
 2. For the Cycle 7 sample, it was decided that one of the returning twins would be dropped for returning ECD cohorts. The original cohort continues to have a maximum of two children per household.

At the end of Cycle 5, 98 children were cross-sectionally out-of-scope and 1,142 were non-respondents. Consequently, only 3,252 of the 2- to 3-year-olds were surveyed at Cycle 6. The response rate was 88.6%. The cumulative longitudinal response rate was 65.3%.

At the end of Cycle 6, 4 children were cross-sectionally out-of-scope and 32 were non-respondents. Consequently, only 3,216 of the 4- to 5-year-olds were surveyed at Cycle 7. The response rate was 85.9%. The cumulative longitudinal response rate was 62.4%.

Cycle 6 ECD cohort

At Cycle 6, a sample of 0- to 5-year-olds was selected from the LFS. The total sample size was 5,795 children and households. At the end of Cycle 6 collection, there were 4,684 responding children. The response rate was 81.3%.

At the end of Cycle 6, 21 children were cross-sectionally out-of-scope and 142 were non-respondents. Consequently, 5,632 of the returning 2- to 3-year-olds were surveyed at Cycle 7. The response rate was 83.0%. The cumulative longitudinal response rate was 79.7%.

Cycle 7 ECD cohort

At Cycle 7, a sample of 0- to 5-year-olds was selected from the LFS. The total sample size was 5,848 children and households. At the end of Cycle 7 collection, there were 4,691 responding children. The response rate was 80.8%.

Content of the survey

The National Longitudinal Survey of Children and Youth (NLSCY) covers a broad range of characteristics and factors affecting child growth and development. Extensive information was gathered about the child, the child's parent(s), and the characteristics of the family, the neighbourhood, and the child's school and school experiences. This was achieved by using different survey components directed at different groups of respondents such as:

- Household component collecting the basic demographic information for all household members;
- Adult component collecting information about the person most knowledgeable (PMK) and spouse;
- Child component which is completed for each selected child aged 0 to 9 years and 12 to 17 years;
- Youth component, completed by the 16- to 23-year-olds, who answer questions about themselves;
- Self-complete questionnaires, completed by the 12- to 17-year-olds, who answer questions about themselves in a paper questionnaire;
- Direct assessments which are administered directly to the children and youth.

Survey scales

For some of the concepts deemed important to measure in the National Longitudinal Survey of Children and Youth (NLSCY), it was decided that the concept would most appropriately be measured through the use of a scale. A scale is simply a group of questions or items that measures a certain concept when the answers to the items are put together.

For example, it was determined that it was important to assess three parenting behaviours using a scale on the Child Questionnaire. The scale measures positive interaction, ineffective parenting and consistent parenting.

Parent-reported scales

- Depression scale
- Home Responsibilities scale
- Family Functioning scale
- Neighbourhood Safety scale
- Social Support scale
- Behaviour scales
- Motor and Social Development scale
- Parenting scales
- Ages and Stages scale

Youth-reported scales

- Depression scale
- Neighbourhood Structure scale
- General Self-image scale
- Emotional Quotient scale
- Social Support scale
- Friends scale
- My Parents and Me scales
- Conflict Resolution scale
- Behaviour scales

Self-complete questionnaires (ages 12 to 17)

Respondents from 12 to 17 years of age completed a paper questionnaire on various aspects of their lives. They were given the questionnaire during the interview and asked to complete it. To ensure confidentiality, each respondent placed the completed questionnaire in an envelope, sealed the envelope and gave it to the interviewer.

The Self-complete questionnaires consist of a set of three booklets, one for each age group. The table below shows the topics covered by each age-group section in the booklet. The booklets are reproduced in Book 2 – Youth Questionnaires of the *National Longitudinal Survey of Children and Youth, Cycle 7 Survey Instruments 2006/2007* which can be accessed electronically at

<http://www.statcan.gc.ca/cgi-bin/imdb/p2SV.pl?Function=getInstrumentDocLink&SurvId=4450&SurvVer=1&Instald=16044&InstaVer=7&lang=en&db=imdb&adm=8&dis=2>.

Table 1
Self-complete questionnaires, by age group and booklet

Topic	Self-complete section by age and booklet		
	12 and 13 years	14 and 15 years	16 and 17 years
	Booklet #21	Booklet #22	Booklet #23
Friends and family	A	A	A
School	B	B	...
About me	C	C	B
Feelings and behaviours	D	D	C
My parent(s)	G	G	G
Smoking, drinking and drugs	F	F	D
Puberty	H	H	...
Activities	E	E	...
Dating / My relationships	H	H	F
Health	H	H	E
Work	I	I	...
Thank you	J	J	H

... not applicable

Source: Statistics Canada, National Longitudinal Survey of Children and Youth.

Main changes to Cycle 7 since Cycle 6

Content changes

At each cycle, there are changes made to the content of the National Longitudinal Survey of Children and Youth (NLSCY). Any new variable or any variable that changed in cycle 7, e.g., wording, response categories, and eligible population, will have a “g” as the fifth character of the variable name. Variable name conventions are described in Chapter 7.0 of the Microdata User Guide for Cycle 7 and the survey content is described in detail in Chapter 8.0 of the same guide.

The following is a list of the main changes to the content of the survey for Cycle 7:

- The self-complete booklet for 10- to 11-year-olds, Booklet 20, has been retired. The youngest respondents for the original cohort in Cycle 7 are 12- and 13-year-old.
- The oldest respondents in the original cohort are now 22 and 23 years old. Many of the questions for this age group are the same as those asked in Cycle 6. There are also new questions for these youth. There are new questions about training at work, financial responsibility – credit, debt, investments, wellness and health and physical activity.
- For Cycle 7 we added new content to the Childcare section that will provide information on issues of interest such as parental interactions with childcare provider, the preferred form of childcare, reasons for using childcare, criteria for selecting childcare, availability of financial assistance/subsidy and cost of childcare.
- The Problem Solving Exercise for the 16- and 17-year-olds was revised in Cycle 7. The first two items on the assessment were dropped, and the scoring methodology was changed. The changes are described in greater detail in Section 14.5 Microdata User Guide.
- In Cycle 7 a decision was made to drop the IRT scores for the Mathematics Tests and the Problem Solving Exercise. See Chapter 14.0 of the Microdata User Guide for details.
- In Cycle 7, the Adult Education section was reworked, in order that only first time respondents or longitudinal respondents who had attended school in the previous 2 years were asked about their highest level of education.

Methodology changes

Sample

Prior to Cycle 7, ECD children were aged from 0 to 5. At Cycle 7, the ECD children range in age from 0 to 9 years old. These are children who were first sampled as 0- to 1-year-olds at Cycles 3, 4, 5 and 6, plus returning children who were first sampled at age 2 to 5 at Cycle 6.

Collection

Prior to Cycle 7, ECD returning children were only surveyed if they were respondents at the previous cycle, while at Cycle 7 we began surveying returning ECD children even if they were non-respondents at a previous cycle (which leads to two different sets of longitudinal weights for the ECD children at Cycle 7).

Also prior to Cycle 7, returning children belonging to the original cohort were not surveyed if they had two consecutive previous cycles of non-response. This rule was dropped for children aged 18 and above at Cycle 7.

In Cycle 7, when basic demographic information is recorded at the beginning of the interview such as the sex, date of birth, marital status, and relationships between household members, sex and date of birth are updated for new respondents only.

Weighting

At Cycle 7, the ECD children have two sets of longitudinal weights: funnel weights for those who responded at all cycles, and non-funnel weights for those who responded at Cycle 7 but not necessarily all previous cycles. Prior to Cycle 7, the ECD children only received one set of longitudinal weights (effectively, funnel weights). More detailed information about the weighting can be found in the Cycle 7 Microdata User Guide.

Data collection

Data for Cycle 7 of the National Longitudinal Survey of Children and Youth (NLSCY) were collected between the fall of 2006 and the summer of 2007.

Child Component

A Child component was created for each selected child from 0 to 17 years of age, except for youth aged 16 or 17 years old who are living independently. The PMK answered the Child component questions. The PMK was usually the child's mother, but it could also be the father, a step-parent or an adoptive parent who lived in the same dwelling. Only the PMK or his/her spouse was permitted to answer the questions in this component.

For households in which the only child selected was 16 or 17 years old and was living with his/her parents, a shorter version of the Child component was asked. If the child was no longer living with his/her parents, the component was not created.

Youth Component

This component is used for selected respondents aged 16 and above. The youth was the only person permitted to answer the questions in this component, whether he/she was living in the family home or not.

Adult Component

An Adult component was created for the PMK and his/her spouse or partner, if the selected child was 17 years old or younger, except for youth aged 16 or 17 years old who are living independently. Only the PMK or his/her spouse was permitted to answer the questions in this component. Questions in the Adult component are asked once per household, even if more than one child was selected in the household.

For households in which the only child selected was 16 or 17 years old and was living with his/her parents, a shorter version of the Adult component was asked. If the child was no longer living with his/her parents, the component was not created.

Sample sizes at Cycle 7

The number of children and youth sampled in Cycle 7 is shown by age and province in the following tables.

Table 2
Number of sampled children and response rate, by age at Cycle 7

Age as of January 1 st , 2007	Sampled	In-scope	Respondents	Cycle 7 response rate
Years	Number			(%)
0	1,789	1,783	1,453	81.5
1	3,205	3,192	2,562	80.3
2	1,975	1,957	1,614	82.5
3	2,751	2,735	2,260	82.6
4	1,994	1,979	1,696	85.7
5	2,286	2,266	1,919	84.7
6	1,852	1,844	1,646	89.3
7	2,066	2,058	1,813	88.1
8	2,219	2,205	1,942	88.1
9	3,797	3,783	3,379	89.3
10	0	0	0	n/a
11	0	0	0	n/a
12	1,527	1,520	1,302	85.7
13	1,604	1,594	1,393	87.4
14	1,135	1,132	971	85.8
15	1,097	1,092	943	86.4
16	1,026	1,023	880	86.0
17	979	975	831	85.2
18	1,054	1,049	785	74.8
19	1,062	1,054	759	72.0
20	1,165	1,157	831	71.8
21	1,134	1,123	778	69.3
22	1,021	1,005	791	78.7
23	905	892	702	78.7
25	1	1	0	n/a
26	1	0	0	n/a
Total	37,645	37,419	31,250	83.5

Source: Statistics Canada, National Longitudinal Survey of Children and Youth.

Table 3
Number of sampled children and response rate, by province of residence at Cycle 7

Province	Sampled	In-scope	Respondents	Cycle 7 response rate
	Number			(%)
Newfoundland and Labrador	2,263	2,254	1,953	86.6
Prince Edward Island	1,583	1,580	1,353	85.6
Nova Scotia	2,574	2,560	2,143	83.7
New Brunswick	2,457	2,452	2,034	83.0
Quebec	6,063	6,041	5,134	85.0
Ontario	9,220	9,142	7,571	82.8
Manitoba	2,902	2,882	2,391	83.0
Saskatchewan	2,875	2,860	2,489	87.0
Alberta	4,225	4,190	3,445	82.2
British Columbia	3,459	3,444	2,724	79.1
Outside the 10 provinces	24	13	13	100.0
Total	37,645	37,418	31,250	83.5

Source: Statistics Canada, National Longitudinal Survey of Children and Youth.

Collection personnel (training, supervision and control)

The NLSCY is conducted by Statistics Canada interviewers. A number of them have worked on one or more cycles of the NLSCY.

At each cycle, senior interviewers are responsible for ensuring that NLSCY interviewers are familiar with the survey's concepts and procedures. The senior interviewers ensure that prompt follow-up action is taken in the case of refusal and other kinds of non-response. If necessary, the non-response cases are transferred to a senior interviewer and reassigned. The senior interviewers, in turn, report to the program managers in Statistics Canada's regional offices.

For the NLSCY, a combination of classroom training and self-study materials is used to ensure that interviewers and supervisors have a proper understanding of the survey concepts. In the self-study portion, which precedes the classroom training, the program managers, senior interviewers and interviewers read the interviewer's manual for the survey. The classroom training is initially given by Head Office to the senior interviewers who subsequently train all the interviewers in their respective areas.

Interviewing in non-official languages

The NLSCY questionnaires are only available in English and French. If a respondent wishes to be interviewed in another language, the case will be given to an interviewer who speaks the respondent's language, if possible. In Cycle 7, fewer than forty cases were not completed because of a language barrier.

Direct assessments

Research on early childhood and youth development plays a significant role in the formulation of policy for young children and youth. Using various assessment tools in the National Longitudinal Survey of Children and Youth (NLSCY) will help to enhance the knowledge about developmental processes in early childhood and youth and provide relevant data on which to base policy directions for these stages.

Choices about the assessment tools to be included in the NLSCY were made on the basis of an extended literature review, development of a research framework on child development and learning, consultations with many experts in Canada and internationally, review of material on many different possible instruments and field testing of the most likely possibilities. The instruments selected for consideration were also reviewed using a number of criteria. The criteria included reliability and validity of the instrument, coverage of domains in the research framework, ability of the instrument to indicate normal development and developmental delays, the ease of administration by lay interviewers and the availability of the instrument in English or French (or ease of translation to French or English). The final decision was strongly influenced by key experts who had a history of providing advice to the NLSCY Team.

Below is a table summarizing the many direct assessments administered to the selected respondents. For detailed information about the assessments, see Chapter 14.0 of the Cycle 7 Microdata User Guide.

Table 4
Direct assessments, by age group and method of administration

Name of assessment	Age group	Method of administration
Peabody Picture Vocabulary Test – Revised (PPVT-R)	4- and 5-year-olds	Computer-assisted interview
Who Am I?	4- and 5-year-olds	Paper questionnaire
Number Knowledge assessment	4- and 5-year-olds	Computer-assisted interview
Mathematics Computation Exercise	7- to 15-year-olds in grades 2 to 10	Paper questionnaire
Problem Solving Exercise	16- and 17-year-olds	Paper questionnaire
Literacy assessment	18- and 19-year-olds	Paper questionnaire
Numeracy assessment	20- and 21-year-olds	Paper questionnaire

Source: Statistics Canada, National Longitudinal Survey of Children and Youth.

For Cycle 7 two main changes were made in what scores are reported for some of the direct measures. First, the Item Response Theory (IRT) scores for direct measures were dropped, and second, a new variable was released which indicates the total number of questions answered by the respondent for each of these measures. Changes were also made to the Problem Solving Exercise. Detailed information about the changes to the Direct Assessments can be found in the Cycle 7 Microdata User Guide.

Weighting and data analysis

The National Longitudinal Survey of Children and Youth (NLSCY) is a probability survey. As is the case with any probability survey, the sample is selected so as to be able to produce estimates for a reference population. Therefore, each unit in the sample represents a number of units in the population.

In a longitudinal survey such as the NLSCY, two types of populations are possible: longitudinal and cross-sectional. The longitudinal population is the initial population when the sample was first drawn and does not change over time; a cross-sectional population may refer to some other time period. Differences between the longitudinal and cross-sectional populations are due to births, deaths, immigration and emigration.

The NLSCY produces three sets of weights at each cycle, two longitudinal (funnel and non-funnel) and one cross-sectional. Funnel weights are assigned to longitudinal children who have responded at every cycle, while non-funnel weights are assigned to longitudinal children who responded at the most recent cycle, but not necessarily at all previous cycles.

Survey weights are calculated by taking the child's design weight and making adjustments for survey non-response and post-stratification to ensure that the final survey weights sum to known counts of children by age, sex and province. The design weight is the inverse of the probability of selection, that is, the probability that a child in the population is selected by the NLSCY sample.

Data analysis involves summarizing the data and interpreting their meaning in a way that provides clear answers to questions that initiated the survey. Sometimes the analyst simply wishes to describe the sample, but more often he or she wants to use the sample to describe some population.

When making inferences about a population that was surveyed, Statistics Canada recommends that the survey weights be used (either cross-sectional or longitudinal, depending on the analysis). Because of the complex sample design, the distribution of a characteristic of interest in the sample is probably different from its distribution in the population. Only by applying the survey weights can the population's distribution be preserved.

Stratification and clustering (both present in the NLSCY sample design) lead to unequal probabilities of selection. For example, the probability that a child in the population is sampled by the NLSCY depends on the age of the child, the child's province of residence, etc. (In the sample there is a disproportionate number of children from small provinces.) Unequal non-response rates within the population can also lead to unequal representation of children in the sample. Finally, clustering in the sample leads to the statistical non-independence of units: children belonging to the same household are not independent.

Suppose that the analyst wants the distribution of children across Canada, i.e., by province, for the original cohort. The population of inference is children aged 0 to 11 as of December 31, 1994, who were living in any province at the time of Cycle 1 collection (1994/1995). Two different sets of longitudinal weights could be used: the 'funnel' weights (for children who have responded to every cycle) or the 'non-funnel' weights (for children who responded at Cycles 1 and 7, but not necessarily all in-between). The table below illustrates the difference between weighted and unweighted estimates of the number and proportion of children in Canada, using the funnel weights.

Table 5
Distribution of children in the population, original cohort, weighted versus unweighted estimates using Cycle 7 funnel weights¹

Province	Unweighted		Weighted	
	Number	%	Number	%
Newfoundland and Labrador	556	6.30	88,986	1.91
Prince Edward Island	268	3.04	23,148	0.50
Nova Scotia	629	7.13	144,088	3.09
New Brunswick	520	5.89	115,131	2.47
Quebec	1667	18.89	1,090,582	23.41
Ontario	2135	24.20	1,773,616	38.08
Manitoba	705	7.99	182,869	3.93
Saskatchewan	764	8.66	173,611	3.73
Alberta	840	9.52	489,913	10.52
British Columbia	739	8.38	576,125	12.37
Total	8,823	100.00	4,658,069	100.00

Source: Statistics Canada, National Longitudinal Survey of Children and Youth.

Without the weights, the analyst would incorrectly conclude that 22.36% of children reside in the Atlantic provinces when, in fact, the true number is only 7.97%. The unweighted proportions reflect the fact that the sample has a disproportionate number of children from the smaller provinces (to ensure adequate sample size in small provinces). Without the weights, the analyst would also incorrectly conclude that there are only 8,823 children in the population when, in fact, there are over 4.6 million.

For more details on how the survey weights are calculated and what populations they refer to, see Chapter 11.0 of the Cycle 7 Microdata User Guide. For more details on analytical issues, see Chapter 15.0 of the the same guide.

Data quality

Data quality is affected by various sources of error. Efforts are made at all steps (interviewer training, collection monitoring, processing, weighting, etc.) to reduce the potential for errors. There are two main types of error: sampling error and non-sampling errors.

Sampling error

The estimates derived from this survey are based on a sample of children. If we had done a census of the target population with the same questionnaires, interviewers, supervisors, processing methods and so on, we might have obtained slightly different values. The difference between the estimates produced by a sample and the estimates obtained through complete enumeration under similar conditions is known as the sampling error of the estimates.

Sampling error can be estimated using the sampling variance. For more details on calculating the estimated sampling error, see chapter 13.0 of the Cycle 7 Microdata User Guide.

Non-sampling errors

There are many sources of non-sampling errors in any survey. Interviewers may misunderstand survey instructions, respondents may make mistakes in answering the questions, responses may be recorded in the questionnaire incorrectly and errors may be made in processing the data. These examples of non-sampling errors are difficult to quantify. Other kinds of error, especially non-response and the coverage of the intended population, are more easily quantifiable.

Non-sampling errors can cause bias, defined as a difference between the expected survey estimated value and the true population value. As the true population values are not known, it is very difficult to measure bias.

Data users are encouraged to consider how sampling and non-sampling errors may affect the variables they are attempting to analyze.

For more details on data quality, see Chapter 12.0 of the Cycle 7 Microdata User Guide. For more details on sampling error and variance estimation, see Chapter 13.0 of the same guide.

How to access the National Longitudinal Survey of Children and Youth data

Public use microdata file (PUMF)

Although there is no public use microdata file (PUMF) for Cycles 4, 5, 6 or 7 of the National Longitudinal Survey of Children and Youth (NLSCY), there is a PUMF available for Cycles 1 to 3. Each microdata file includes NLSCY public use data and accompanying documentation.

To ensure respondent confidentiality, a longitudinal file is not available to the public. In addition, certain variables are not available on the PUMF. Those wishing access to suppressed or longitudinal data can do so by either remote access or through custom tabulations.

Remote data access

Through remote access, researchers can have access to suppressed data by submitting programs to run on the NLSCY data set at Statistics Canada. A “dummy” research file will be made available to researchers to check the logic and syntax of their programs. Researchers will transmit their programs electronically to Statistics Canada, which will then be moved into the Department’s internal, secure environment. Next, the code would be processed, the results vetted for confidentiality, and sent back to the client. It should be noted that the onus is with the user to submit retrieval programs that are correct and tested. Statistics Canada will review results only for confidentiality concerns and will not make any assessment whatsoever as to whether or not the submitted program has worked properly.

Remote data access is available on a cost recovery basis. For further information on remote data access, please refer to contact information at the beginning of this document.

Custom tabulations

Statistics Canada retains a master microdata file from which specific microdata files and personalized tabulations can be requested on a cost recovery basis; please contact nlscy@statcan.gc.ca.

The Research Data Centres Program

The Research Data Centres (RDC) provide researchers with access, in a secure university setting, to microdata from population and household surveys. The centres are staffed by Statistics Canada employees. They are operated under the provisions of the *Statistics Act* in accordance with all the confidentiality rules and are accessible only to researchers with approved projects who have been sworn in under the *Statistics Act* as ‘deemed employees’.

RDCs are located throughout the country, so researchers do not need to travel to Ottawa to access Statistics Canada microdata.

Please see <http://www.statcan.ca/english/rdc/index.htm> for more information.

Table 6
Detailed Cycle 7 measures

NLSCY Cycle 7 measures – Cognitive development and language outcomes	Respondent	0-11	1	2	3	4	5	6-7	8-9	10-11***	12-13	14-15	16-17	18-19	20-21	22-23
		months	year						years							
Language Receptive skills: Peabody Picture Vocabulary Test – Revised	Child					X	X									
Communication skills: <i>Ages and Stages</i> Questionnaire	Parent	X	X	X	X											
Communication skills	Parent				X	X	X									
Literacy Emerging literacy skills: <i>Who Am I?</i> assessment	Child					X	X									
Literacy assessment	Youth													X		
Literacy and learning activities	Parent	X	X	X	X	X	X	X	X							
	Youth										X	X	X	X	X	X
Numeracy Quantitative knowledge: <i>Number Knowledge</i> assessment	Child					X	X									
Math achievement: <i>Math Computation Exercise</i> Numeracy – <i>Cognitive measure</i>	Child							X**	X		X	X	X			
Cognitive measure	Youth												X			
Numeracy assessment	Youth														X	
School performance (math)	Parent					X	X	X	X		X	X				

Table 6
Detailed Cycle 7 measures, continued

NLSCY Cycle 7 measures – Cognitive development and language outcomes continued	Respondent	0-11	1	2	3	4	5	6-7	8-9	10-11***	12-13	14-15	16-17	18-19	20-21	22-23
		months	year	years												
Abilities (e.g., counting to 5)	Parent				X	X	X									
Science School performance (science)	Parent										X	X				
Overall achievement School performance	Parent					X	X	X	X		X	X				
	Youth										X	X	X	X	X	X
Educational aspirations	Parent												X			
	Youth										X	X				
Learning processes Task persistence	Parent				X	X	X									
Analytical reasoning / problem solving Problem solving: <i>Ages and Stages</i> Questionnaire	Parent	X	X	X	X											
General knowledge Computer skills	Parent				X	X	X	X	X							
	Youth										X	X	X	X	X	X
Labour force participation	Youth										X	X	X	X	X	X
Career aspirations	Youth													X	X	

Table 6
Detailed Cycle 7 measures, continued

NLSCY Cycle 7 measures – Emotional development outcomes	Respondent	0-11	1	2	3	4	5	6-7	8-9	10-11***	12-13	14-15	16-17	18-19	20-21	22-23
		months	year	years												
Temperament																
Good-natured / difficult	Parent	X	X	X												
Adaptable	Parent	X	X	X												
Self-esteem	Youth										X	X	X	X		X
Emotional disorder / anxiety	Parent			X	X	X	X	X	X							
	Youth										X	X				
Depression	Youth												X	X	X	X
Emotional intelligence	Youth										X	X	X		X	

NLSCY Cycle 7 measures – Social development outcomes	Respondent	0-11	1	2	3	4	5	6-7	8-9	10-11***	12-13	14-15	16-17	18-19	20-21	22-23
		months	year	years												
Personal / social skills: Ages and Stages Questionnaire	Parent	X	X	X	X											
Prosocial behaviour	Parent							X	X							
	Youth										X	X				
Positive behaviour, including perseverance and independence	Parent				X	X	X									
Interpersonal relationships	Parent					X	X	X	X							
	Youth										X	X	X	X	X	X
Hyperactivity / inattention	Parent			X	X	X	X	X	X							
	Youth										X	X				
Physical aggression / opposition	Parent			X	X											

Table 6
Detailed Cycle 7 measures, continued

NLSCY Cycle 7 measures – Social development outcomes continued	Respondent	0-11	1	2	3	4	5	6-7	8-9	10-11***	12-13	14-15	16-17	18-19	20-21	22-23
		months	year	years												
Physical aggression / conduct disorder	Parent					X	X	X	X							
	Youth										X	X				
Separation anxiety	Parent			X	X											
Indirect aggression	Parent					X	X	X	X							
	Youth										X	X				
Property offence	Parent															
	Youth										X	X	X	X		
Delinquent behaviours	Parent															
	Youth										X	X	X	X		X
Non-sport activity participation	Parent				X	X	X	X	X							
	Youth										X	X	X			
Community participation Volunteering	Youth										X	X	X		X	X
Engaged citizen	Youth										X	X	X		X	X
Life-long learning	Youth												X	X	X	
Social support	Youth													X	X	X

Table 6
Detailed Cycle 7 measures, continued

NLSCY Cycle 7 measures – Physical health outcomes	Respondent	0-11	1	2	3	4	5	6-7	8-9	10-11***	12-13	14-15	16-17	18-19	20-21	22-23
		months	year	years												
Perinatal period																
Delivery details	Parent	X	X	X*	X*	X*	X*	X	X		X					
Infant's health at birth	Parent	X	X	X	X	X	X	X	X		X					
Infant's birth weight	Parent	X	X	X*	X*	X*	X*	X	X		X*	X*	X*			
General health																
Current health	Parent	X	X	X	X	X	X	X	X		X	X				
	Youth										X	X	X	X	X	X
Height / weight	Parent	X	X	X	X	X	X	X	X							
	Youth										X	X	X	X	X	X
Health Status Index	Parent					X	X									
Physical activity																
Participation in sports and other physical activities	Parent	X	X	X	X	X	X	X	X							
	Youth										X	X	X			X
Health problems																
Injuries	Parent	X	X	X	X	X	X	X	X		X	X				
	Youth												X		X	
Asthma	Parent	X	X	X	X	X	X	X	X		X	X				
	Youth												X	X		X
Chronic conditions	Parent	X	X	X	X	X	X	X	X		X	X				
	Youth												X	X		X
Activity limitations	Parent	X	X	X	X	X	X	X	X		X	X				
	Youth												X		X	
Infections	Parent	X	X	X	X											

Table 6
Detailed Cycle 7 measures, concluded

NLSCY Cycle 7 measures – Physical health outcomes continued	Respondent	0-11	1	2	3	4	5	6-7	8-9	10-11***	12-13	14-15	16-17	18-19	20-21	22-23
		months	year	years												
Development Fine and gross motor skills: <i>Ages and Stages Questionnaire</i>	Parent	X	X	X	X											
Milestones <i>Sit up, solid food, feed self, first steps</i>	Parent	X	X	X	X											
Puberty	Youth										X	X	X			
Exposure to risk Use of alcohol, drugs, tobacco	Youth										X	X	X	X	X	X
Sexual health	Youth										X	X	X	X	X	X
Healthy lifestyles Eating breakfast	Youth										X	X	X	X		
Dieting, weight gain / changes	Youth										X	X	X			X
Use of seat belts, bicycle helmets	Youth										X					

* Delivery details and birth weight are collected only in the first interview.

** Math test administered to 7-year-olds who are in Grade 2 or above.

*** The 10- to 11-year-olds were not collected in Cycle 7 as the youngest age group of the original longitudinal cohort was 12 to 13 years old.

Source: Statistics Canada, National Longitudinal Survey of Children and Youth.