
The Canadian Experience with Post Censal Surveys

by Adele D. Furrrie , Program Manger

Post-Censal Surveys Program

and Craig McKie¹ Editor

Canadian Social Trends, Statistics Canada

Abstract

The Canadian experience with post-censal survey is, at this point in time, limited to two surveys - one which used the 1971 Census returns as the sampling frame, and the 1986 survey, which used the 1986 returns as the sampling frame, utilized the Census field organization to collect the data, and used the 1986 Census data to supplement the data collected in the post-censal survey. Post-censal surveys provide efficiencies in terms of overall costs because of the accessibility of the Census data to identify relatively rare populations. The availability of a field organization to a) select the sample immediately following the collection of the Census data and b) collect the data reduces the overall cost to the post-censal program since the hiring and some of the training costs are absorbed by the Census. The availability of the Census data, not only for the population of interest, but for the data base. Respondent burden is reduced because many of the demographic and socio-economic variables are included in the Census. This is true also for family and household-related data.

Some consideration is being given to the conduct of a similar post-censal disability survey following the 1991 Census. In addition, there is the possibility for a survey on the senior population and one on aboriginal persons.

The Canadian experience with post-censal surveys is limited to two surveys - the Highly Qualified Manpower Survey (HQMS) conducted following the 1986 Census. While the methodology of the two surveys differed significantly, each provides an interesting application of post-censal methodology which could be considered by those who are planning such activities. The methodology for each survey will be described and an evaluation will be provided of the methodology.

The Highly Qualified Manpower Survey - HQMS - was conducted in the fall of 1973, just over two years after the 1971 Census was conducted. The objective of the survey was to assess past expenditures for education in relation to the utilized labour force status. The data were needed to assist in the formulation of policy relating to long-range planning in the fields of education and manpower planning.

The sample was selected from the Census database based on the individual's age-sex-labour force status and level

of post-secondary attainment. Because name and address were not part of the Census database, the original Census questionnaires had to be accessed, and information such as telephone number and the name of the head of the household as well as the name and address of the selected person was transcribed. Quality control procedures for the transcription and creation of the name and address file were employed to control for errors.

The questionnaire covered a limited range of topics such as field of study, current labour force status and current earnings, and an employment profile over time. These data were supplemented by the information collected in the 1971 Census, so that the combined database covered a wide range of topics, such as ethnicity, immigration status, marital status, etc.

The survey questionnaire was mailed to approximately 138,000 selected persons (the number of persons meeting the selection criteria were approximately 720,000); about 72,000 or almost 70% returned the completed questionnaire. A tracing operation was conducted to establish the current address for those selected persons who had moved. Follow-up of non-respondents was conducted by mail, and in some instances, by personal visit, during the period September, 1973 to March, 1974.

Because the survey was conducted over two years after the Census, there was some difficulty in locating some of the selected persons and some of the data retrieved from the Census were out-of-date. For example, the individual may have married or additional children may have been born, and these differences would not have been accounted for in the combined database.

The 1986 post-censal survey, the Health and Activity Limitation Survey (referred to in this paper as HALS) employed a different collection methodology, taking into account the experience of the HQMS. HALS was comprised of three distinct surveys - two household surveys - both of which used the disability question on the Census as the screen to identify the sample and an institutions survey which used the Census to identify the location, size and type of the institution.

The need for a comprehensive database on disabled persons was articulated in 1981 in the report entitled *Obstacles*, the report from the Special Parliamentary Committee on the Disabled and the Handicapped. It

noted that there were no national data available on disabled persons. Not only were there no national estimates on the number of disabled persons in Canada and the nature and severity of their disability, but, as important, there were no estimates on the barriers which these disabled Canadians face in the conduct of their everyday activities. Because many of the programs and services offered to disabled persons are the responsibility of provincial and local governments, it was important that these data be available for relatively small geographic areas. As programs and services differ for different age groups, the sample would also have to be large enough to be able to generate estimates within the geographic areas for each age group. The methodology of a post-censal survey was considered as the only viable alternative to obtain this level of detail. Other options such as the use of existing survey vehicles - the monthly Labour Force Survey or the annual General Social Survey - were considered but it was determined that neither would yield a sufficiently large sample of disabled persons. There were also limitations in the coverage for both of these survey vehicles. The Labour Force Survey excludes the more remote areas of Canada, residents of Indian reserves, and residents of institutions. The General Social Survey generally utilizes a random-digit dialing methodology to create a sample, therefore, households without telephones would be excluded from the survey. The General Social Survey is also household based so that residents of institutions would be excluded from the survey.

The decision to use the Census as the method to identify the samples for the household surveys necessitated the inclusion of a disability question on the Census questionnaire. It was decided that this question would be added to the "long" questionnaire - the one completed by one out of every five households. The question asked if the individual was limited in the kind or amount of activity he/she could undertake because of a health problem or condition. The second part of the question asked if the individual had any long-term disabilities or handicaps. Households were advised through the Guide that was included with their Census questionnaire that the disability question was to be used to identify a population for a more-intensive survey on the issues facing disabled persons.

It was determined through a pre-test that this question would identify most of the more-severely disabled population, but that additional questions would be required to identify all disabled persons. A copy of the Census disability question is included in Appendix A of this paper.

The content of the HALS questionnaire was determined through extensive consultation with representatives from government departments that provided programs for and services to disabled persons. Consultation with organizations of and for disabled persons was also undertaken to ensure that their needs were reflected in the content. The questions used to identify the nature and severity of the individual's disability were, for the most part, developed by the O.E.C.D. These questions are known as the

Activities of Daily Living and were developed to identify physical and sensory disabilities. Other questions were added to identify emotional, psychological and learning disabilities and persons who are developmentally delayed.

With the inclusion of the disability question on the Census, the sampling frame was in place for the post-censal survey of disabled persons. To maximize the efficiency of this sampling frame, it was decided that an operation should be integrated with Census processing to select a sample of individuals who had responded "Yes" to the Census disability question. This would allow for the conduct of the post-censal survey shortly after the Census, thus minimizing the follow-up required because of inter residence moves taking place between the time of the Census and the conduct of the post-censal survey. It would also enable the utilization of the Census field staff to conduct the face-to-face interviews.

To accommodate the selection of the sample and to ensure that the field staff would be available for further work, geographic areas were identified prior to the conduct of the Census. These areas were defined as the geographic area within which the workload for one Census Field staff (Census Representative) was located. Census staff received additional training on the concepts and definitions used in HALS and the face-to-face interviews were conducted immediately following the Census collection. The reference day for the 1986 Census was June 1. In most instances, the interviews were completed during August and September, 1986. There were an estimated 120,000 individuals selected for the follow-up interview; the overall response rate was in excess of 95%. The second household sample involved a sample of individuals who had responded "No" to the Census disability question. This sample was necessary because the pre-test had indicated that some disabled persons may not respond affirmatively to the general disability question. A sample of approximately 80,000 individuals was selected during a later stage in the Census processing, but before the Census documents were returned to Head Office in Ottawa. The same questionnaire was used and most respondents were contacted by telephone. Those who did not provide telephone numbers on their Census questionnaire were contacted in person. The survey was conducted from the Regional Offices of Statistics Canada during October and November, 1986 by interviewers who are part of the regular Regional Office staff. Approximately 90% of the sample was contacted and agreed to participate in the survey.

The data from both household surveys was integrated with the Census at the micro-record level, so that the linked database contains information from both the Census and HALS. The Census data, for the most part, is for the selected individual, but included in the base are also some variables about the family and household within which the selected person resides. Because the Census and HALS were conducted within six months of each other, the variables taken from the Census such as marital status should not have changed significantly.

Another feature which adds to the richness of this database results from the sample being selected to represent both "Yes" and "No" respondents to the Census disability question. The HALS sample can be divided into strata - those who are disabled and those who are not. For the non-disabled population, the data available on the linked database includes all of the Census variables. For the disabled population, the data includes both Census and HALS variables. This affords the user the opportunity to make comparisons of the characteristics of the disabled and the non-disabled populations.

The Census methodology did not include the use of the long questionnaire in institutions; therefore, the disability question was not asked in institutions. To obtain information for residents of institutions, the Census was used to identify the location, size and type of institution. Penal institutions and correctional facilities were excluded because of operational difficulties. From the remaining list, a sample of institutions was selected, approximately 1,100 out of a total of approximately 5,300. Each of the selected institutions provided a list of residents from which a sample was selected. Of the 18,200 residents selected from the 1,100 institutions, less than 3% refused to participate in the survey. A personal interview was conducted with slightly over 50% of the sample. For the remaining sample of respondents whom the institution administrator deemed to be too ill or too disabled, the interview was conducted with an individual who provided the day-to-day care.

Data from HALS was released in May, 1988 and has been used by both the public and private sectors. Much has been learned concerning the conduct of post-censal surveys and the integration required with the Census operations.

Planning is now underway for post-censal survey activity following the 1991 Census. Based on consultation with representatives involved in social programs, three potential topics have emerged and further consultation is now underway. The three topic areas are a survey of seniors with the focus on support networks, a repeat of the survey of disabled persons so that data are available over time, and a survey of aboriginal persons, both on- and off-reserves. The possibility of one or more of these topics going forward is contingent on obtaining funding for them. The 1986 survey cost seven million dollars. That survey proved that a post-censal survey, closely linked to the Census operation in terms of identifying the sample, utilizing the Census field staff, and the Census data is a viable option for surveys of relatively rare populations or which require significant geographic detail. □

¹ Presented at the IFDO/IASSIST 89 Conference held in Jerusalem, Israel, May 15-18, 1989.

Appendix A

20. (a) Are you limited in the kind or amount of activity that you can do because of a long-term physical condition, mental condition or health problem:

At home?

No, I am not limited

Yes, I am limited

At school or at work?

No, I am not limited

Yes, I am limited

Not applicable

In other activities, e.g. transportation to or from work, leisure time activities?

No, I am not limited

Yes, I am limited

(b) Do you have any long-term disabilities or handicaps?

No

Yes