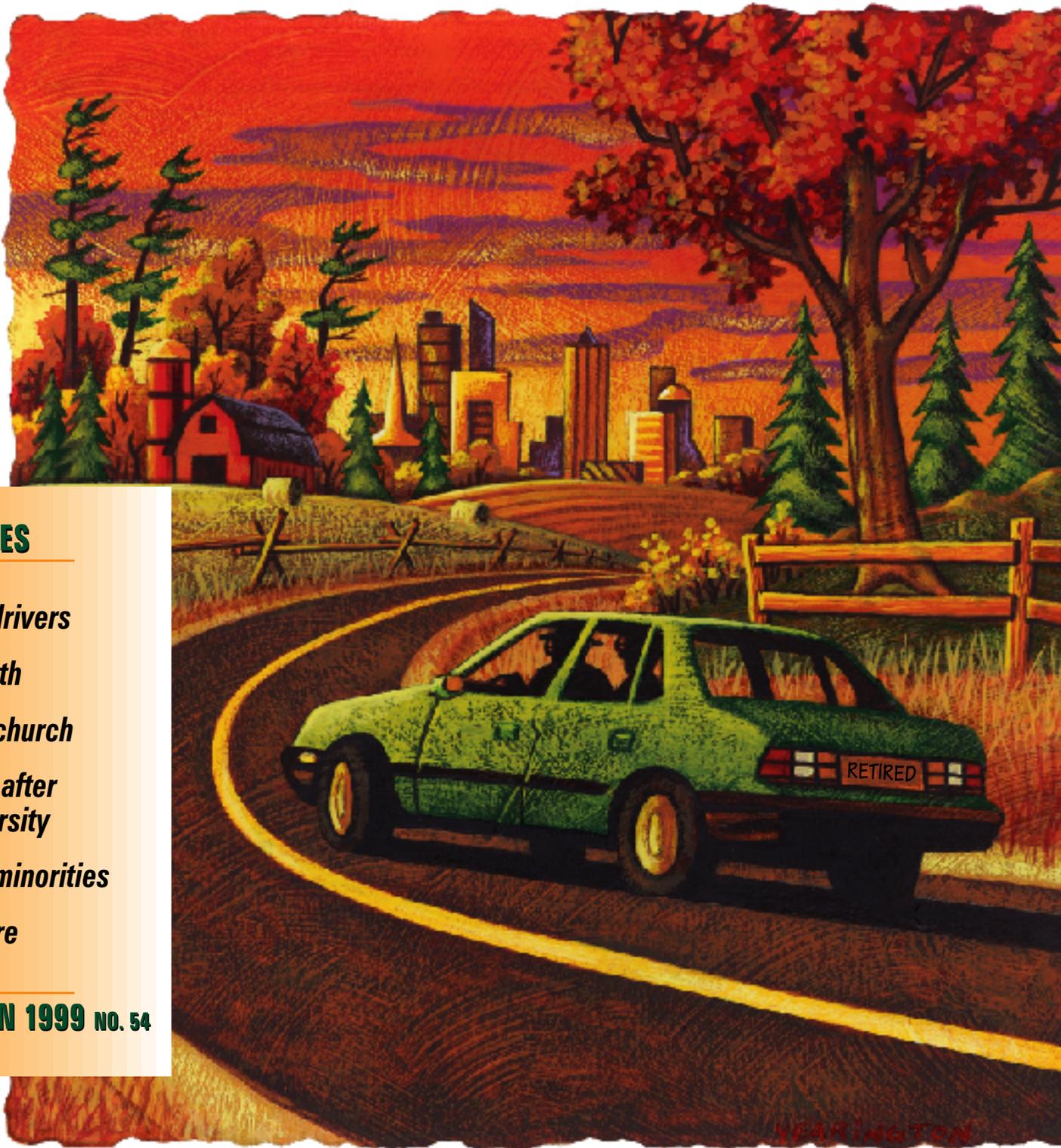




CANADIAN

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SOCIAL TRENDS



FEATURES

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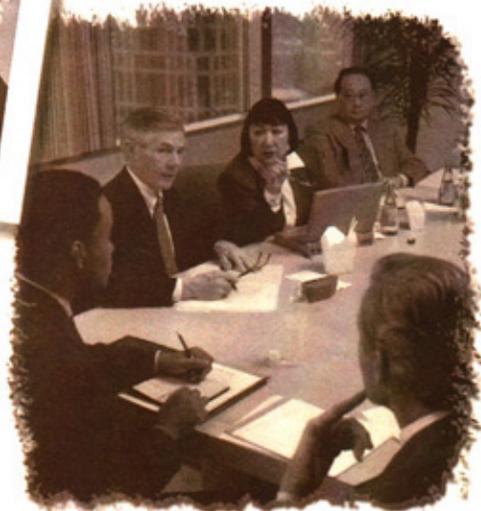
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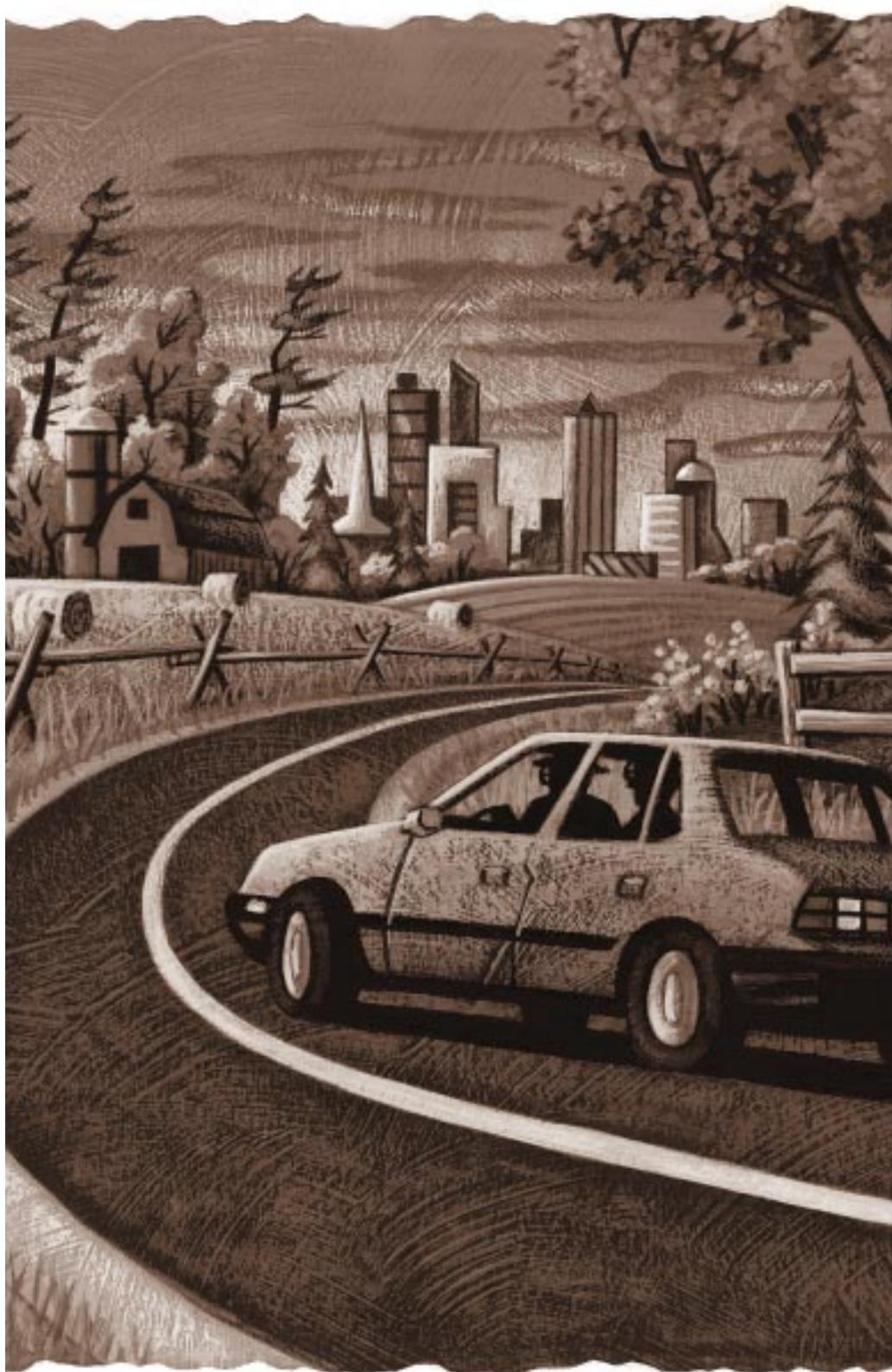
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Seniors behind the wheel

by *Irwin Bess*

Being able to live independently is important to all adults, but it is an issue of particular concern to seniors. Research has shown that the single greatest fear of most older people is that of becoming dependent. Although independence can take many different shapes and forms, for the 3.4 million Canadians aged 65 or over, it often means having a car and being able to drive. A comfortable, convenient means of transportation, driving allows seniors to visit family and friends, attend appointments, and participate in recreational and volunteer activities. This reliance on a car for an active lifestyle is particularly true for those living in small towns and rural areas, where little or no public transit or special-needs transportation may be available.

In 1996, about one-half of seniors living in private households (1.7 million) were driving a car, mini-van or light truck. And as the large baby-boom generation ages, the number of older drivers will increase over the next few decades. Using data from several Statistics Canada surveys, this article examines various facets of car use among seniors and highlights



differences between those living in urban and rural areas.

Rural and small town seniors rely more heavily on their cars

Getting around poses different challenges in small towns or the country than in large cities. First, while residents of large cities have access to different forms of public and private transportation, seniors in small towns and rural areas tend to have far fewer transit options. Second, people in small towns and rural areas generally live farther from family, friends, physicians and grocery stores than residents of large urban centres. According to the 1996 General Social Survey (GSS), nearly 20% of rural seniors lived more than a 30-minute walk from the nearest grocery or convenience store, compared with only 5% of their urban counterparts. It comes as no surprise, then, that rural seniors are more likely to drive than seniors in urban centres. In 1996, some 60% of rural and small town seniors were drivers compared with 46% of those living in large cities.

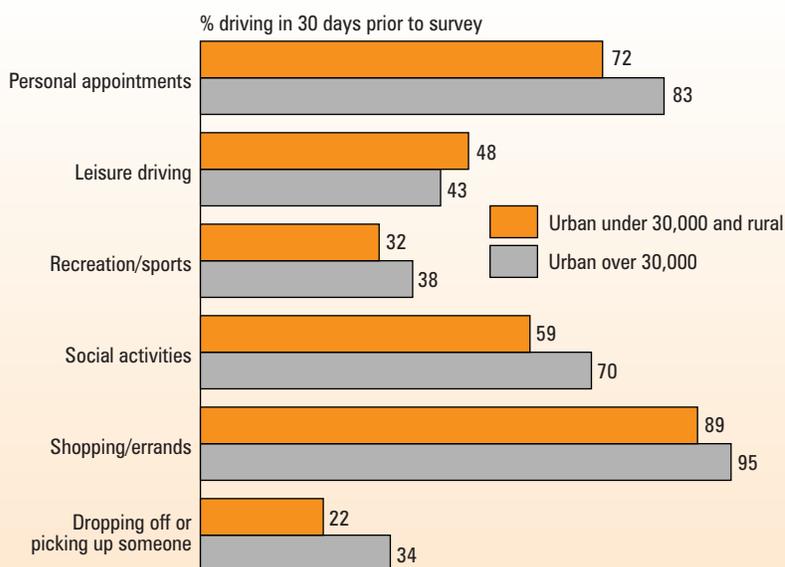
Regardless of whether they were rural or urban residents, the majority of drivers aged 65 and over drove only a few times a week. Furthermore, most of the distances travelled were comparatively short. Most often, seniors used their car for shopping, personal appointments such as visiting physicians, and family or social get-togethers. Relatively few older drivers used the car for long-distance trips or to pick up and drop off other people.

Operating a car is more expensive in rural areas

Owning and operating a private vehicle can be a costly proposition, particularly at a time in life when people tend to live on fixed incomes. In 1996, rural households headed by persons aged 65 and over spent approximately \$4,800, or 17% of their total budget, on the purchase and operation of a car or



Seniors use their car most often for shopping and personal appointments



Source: Statistics Canada, National Private Vehicle Use Survey, 1996.



What you should know about this study

Most of the data in this article come from the National Private Vehicle Use Survey. Compiled by Statistics Canada, for Natural Resources Canada, this survey was conducted between January and September 1996. The exclusion of respondents during the three months between October and December may result in slightly biased estimates of vehicle use due to the nature of winter driving patterns. The sample includes individuals 15 years or older living in 2,013 private households in Canada's 10 provinces.

Other data come from the 1996-97 National Population Health Survey (NPHS), designed to collect information on the health of Canadians. The survey sample included over 13,000 Canadians aged 65 years and over in residential households in all provinces and territories. Populations on Indian Reserves, Canadian Forces Bases and some remote areas of Quebec and Ontario were excluded. Respondents were asked about their health conditions, use of health services, risk factors and socioeconomic status.

Large towns or cities: urban areas with populations over 30,000 people.

Small towns: urban areas with populations under 30,000 people.

Rural areas: regions with populations less than 1,000 people (or less than 400 persons per square kilometre).

Valid provincial driver's license: excludes persons with a learning permit or suspended license and those who have let their license expire.

truck. In contrast, seniors in large urban areas spent a substantial \$2,000 less, about \$2,800, which amounted to only 9% of their budget. When it comes to financing a vehicle, rural seniors, with their typically lower incomes, are in a difficult situation. Yet it is this group whose need for a car — because of fewer transportation

alternatives and greater distances — is the highest.

Senior men more likely to drive than senior women

Regardless of area of residence or marital status, senior men are far more likely to drive than senior women. Results of the 1996 National Private

Vehicle Use Survey (NAPVUS) indicate that in the majority (55%) of households where the husband held a valid license, he was the exclusive driver of the family car. Whether or not the wife was licensed made little difference — the husband still did the bulk of the driving.

In small towns and rural areas, 77% of husbands had driven the household vehicle during the 30 days prior to the survey, compared with only 36% of wives; in large urban areas, 65% of husbands and 37% of wives had done so. Although the differences between the sexes were not as pronounced among unmarried seniors, their driving patterns were similar to those of their married counterparts: men were much more likely to sit behind the wheel.

When older women do drive, whether in large cities or in small towns and rural areas, it is mostly over very short distances: 65% of married senior women who drove the family car travelled an average of only 15 kilometres per day. In contrast, only 42% of older married men tended to drive such short distances. Among unmarried seniors, the differences were less pronounced, with 38% of women and 35% of men driving 15 kilometres or less per day.

Older women's lack of driving experience may have far-reaching consequences, particularly since they tend to outlive their husbands. Once alone, they may find that unless they drive, they must either significantly curtail their activities or rely on others for help with transportation. Either way, their ability to lead an independent life might be limited.

Age-related health limitations may affect driving performance

Most conditions that may eventually affect driving — for example, reduced vision, hearing problems, and impaired mobility arising from arthritis or rheumatism — begin at around age 55.¹ While at first these changes are

CST Rural and small town seniors were most likely to be drivers...

	Rural area	Urban area		
		Under 30,000	30,000 to 500,000	Over 500,000
% of seniors who hold licenses ¹	72	62	63	52
% of seniors who are drivers ²	59	60	54	46

...but the majority used their car only a few times a week

Total senior drivers ('000)	316	241	490	699
	%			
Every day	27	34	39	35
A few times a week	64	61	57	57
Less than once a week	10	5	4	7

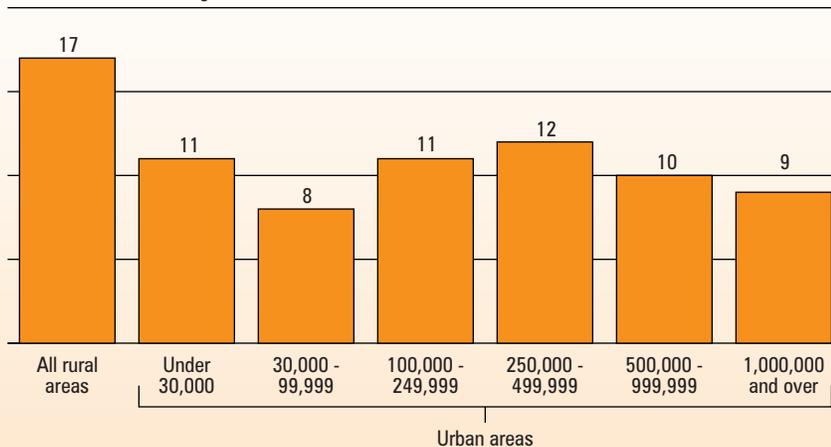
1. In households with at least one working vehicle.

2. Reported vehicle use during 30 days prior to survey.

Source: Statistics Canada, National Private Vehicle Use Survey, 1996.

CST Rural seniors spent more on their car than other seniors

% of seniors' total budget



Source: Statistics Canada, Family Expenditure Survey, 1996.

often minor, they tend to become more pronounced as people age. According to the 1996-97 National Population Health Survey (NPHS), about 16% of men and women between the ages of 65 and 69 experienced physical pain that was severe enough to restrict some of their activities and potentially affect their ability to drive safely. In addition, the prevalence of dementia (of which Alzheimer's disease is the most common) increases sharply with age, starting at around 65 years. Characterized by progressive loss of cognitive function, in particular memory, dementia has also been linked with increased risk of collisions.²

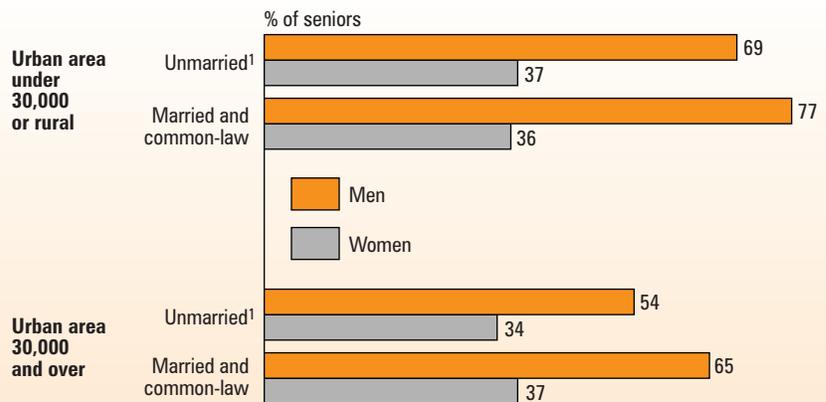
As seniors age, multiple medical conditions, along with the simultaneous use of several prescription medications, tend to become more common. These factors can also interfere with driving, perhaps resulting in slowing reaction time by that fraction of a second needed to avoid an accident. NPHS results indicate that among those licensed to drive, 48% of men and 54% of women over age 75 had taken at least three different medications in the two days prior to the survey.³ As well, 56% of women and 35% of men in this age group suffered

from chronic arthritis or rheumatism, conditions that could make maneuvers such as those required to make sharp turns or merge with heavy traffic particularly difficult.

Studies have found that older drivers tend to compensate for

age-related health limitations by driving shorter distances and avoiding night driving, busy highways and downtown areas. Taking special measures may be particularly important on inter-city and rural routes, where speed limits exceed 60km/hour and a

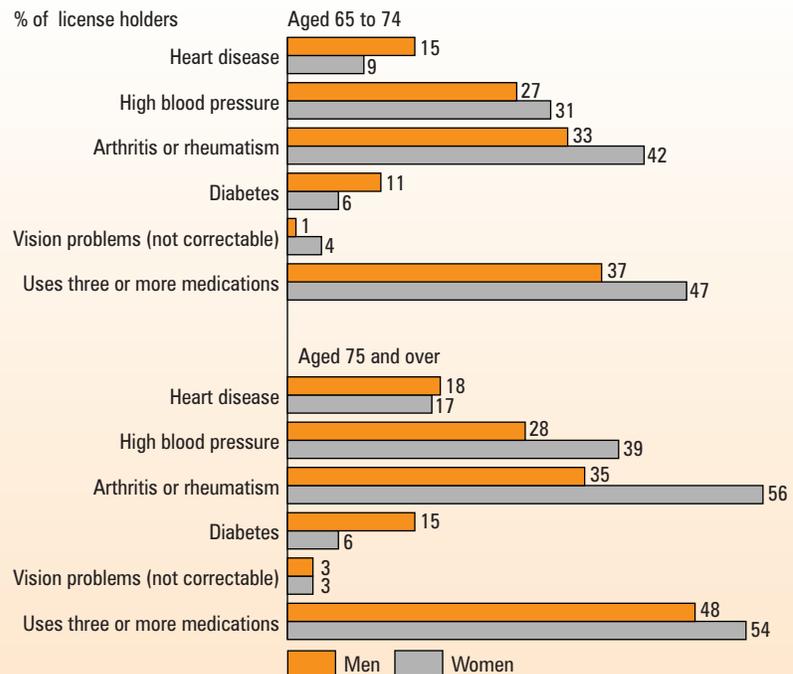
CST Senior men were more likely than senior women to drive



1. Never married, divorced or separated, and widowed.

Source: Statistics Canada, National Private Vehicle Use Survey, 1996.

CST Many seniors with driver's licenses have a health condition



Source: Statistics Canada, National Population Health Survey, 1996-97.

1. Transportation Research Board. 1988. *Transportation in an Aging Society: Improving Mobility and Safety of Older Persons*. Vol.1. Washington: National Research Council. See also Wilkins, K. and E. Park. 1996. "Chronic conditions, physical limitations and dependency among seniors living in the community," *Health Reports* (Statistics Canada Catalogue 82-003) 8, 3: 7-14.
2. Fitten, L., C. Wilkinson, R. Little, M. Burns, N. Pachana, J. Mervis, R. Malmgren, D. Siembieda and S. Ganzell. 1995. "Alzheimer and vascular dementias and driving: A prospective road and laboratory study," *The Journal of the American Medical Association* 273, 17: 1360-1365.
3. Although the NPHS does not distinguish between licensed drivers and those who are licensed but do not drive, it can offer insights into the health of seniors who have valid driver's licenses.

high-speed collision is likely to result in severe injuries or death.⁴ In addition to being faster, 60km/hour roads tend to be situated outside urban areas where poorer visibility, sparse lighting, and reduced traction during winter demand a high degree of concentration and first-rate performance.

The health and accident profile of seniors has resulted in discussion about the relationship between aging and safe driving, and the necessity of monitoring change. According to one view, seniors should drive only as long as they maintain essential driving

skills — proven through periodic testing — and meet certain medical requirements. With this in mind, a number of provinces have instituted mandatory medical examinations for senior drivers; others rely on discretionary written, road or other tests when recommended by police, physicians, families or the public.⁵

On the other hand, there is concern that such measures may discourage seniors with appropriate skills and abilities from driving, and increase their dependence on others. For experienced older drivers, who

may have safely operated a vehicle for many years, having to take a road test can be a stressful and traumatic experience. Moreover, losing their license may deprive them of the mobility necessary for living active, independent lives. Research has found that seniors who give up driving may be reluctant to ask for help with transportation; as a result, they often experience periods of inactivity, feelings of loneliness or loss of control. These negative experiences can, in turn, be detrimental to their general health and well-being.⁶

CST Older driver fatalities and injuries

Although seniors tend to drive outside rush-hour periods, during daylight hours and under conditions of clear visibility, they remain vulnerable to collisions resulting in fatalities or major injuries. While older drivers are involved in fewer collisions than drivers aged 16 to 24, this may be because seniors drive less. An Ontario study found that on the basis of kilometres driven, older drivers actually get into approximately the same number of accidents as their 16- to 24-year-old counterparts.¹ And seniors who are involved in an accident are more likely to die from their injuries or take longer to recover. Although in 1996 seniors represented 11% of the population, they accounted for 18% of all fatalities and 6% of injuries occurring on Canadian roadways (including not only drivers, but also passengers and pedestrians).

The prevalence of men among senior drivers increases their exposure to fatal collisions and injuries, particularly on high-speed roads. According to Transport Canada, senior men driving on highways or rural roads with speed limits in excess of 60 km/hr accounted for about 57% of all older driver fatalities in 1996.

Posted speed of road	Driver fatalities		Driver injuries	
	Men	Women	Men	Women
Over 60 km/hr	136	33	1,847	778
Under 60 km/hr	56	14	3,449	2,326
<i>Total</i>	<i>192</i>	<i>47</i>	<i>5,296</i>	<i>3,104</i>

Note: Table only includes drivers aged 65 and over.

Source: Transport Canada, Custom Tabulation, 1996.

1. Tasca, L. 1998. *An Overview of Senior Driver Collision Risk*. Ontario Ministry of Transportation, Road Safety Program Office: Toronto.

Summary

The car is an important part of many seniors' lives, particularly in small towns and rural areas. Driving allows seniors to engage in social, cultural and recreational activities as well as to perform routine tasks such as grocery shopping or keeping a dentist's or doctor's appointment. In the absence of a car, or the ability to drive, seniors may lose their independence and, in some cases, their identity as active members of society.

Unfortunately, some seniors may find that, as time goes by, driving becomes more difficult. This is an especially important consideration for older married women, who may rely on their husbands to do most or all of

4. In 1996, about three-quarters of fatalities involving drivers age 65 and over occurred on these types of roads. Transport Canada. 1996. Custom tabulations.

5. Seniors may also have the option of taking refresher training such as the "55 Alive Mature Driving Program," which is designed to ensure that older drivers realize their limitations and compensate for age-related changes in physical condition. Training includes road safety and collision prevention measures.

6. Yassuda, M., J. Wilson and O. Mering. 1997. "Driving cessation: The perspective of senior drivers," *Educational Gerontology: An International Journal* 23, 6: 525-538.

Province	Mandatory medical exam	Mandatory driver's test(s)	Discretionary requirements
Newfoundland	Yes – at ages 75, 80 and every 2 years thereafter.	No	Physician or police may request road test.
Prince Edward Island	No	No	Physicians, family members and general public may request medical, vision and/or road tests if senior involved in collision, multiple violations, or operating a vehicle in an unsafe manner.
Nova Scotia	No	No	Family members, police and insurance personnel may recommend medical, vision, written and/or road tests.
New Brunswick	No	No	Physicians, family members or police may recommend medical, vision and/or road test.
Quebec	Yes – at ages 75, 80 and every 2 years thereafter.	No	Same as New Brunswick.
Ontario	Yes – at age 80 and every 2 years thereafter.	Yes – knowledge test and traffic safety workshop at age 80 and every 2 years thereafter.	Road test is required for seniors over 70 years if involved in a collision in which at fault. Road test may be required after vision and knowledge tests or if recommended by physician, police or driver assessment counsellor.
Manitoba	No	No	Physicians or police may request medical, vision, written, oral and/or a reduced version of the road test. Failure to pass requires completion of a full-length road test.
Saskatchewan	No	No	Same as New Brunswick and Quebec.
Alberta	Yes – at ages 75, 80 and every 2 years thereafter.	No	Physicians or police may recommend medical, vision and/or road tests which may result in driving restrictions.
British Columbia	Yes – every 2 years if first license obtained after age 74; at age 80 for all drivers and every 2 years thereafter.	No	Family members, physicians or police may report drivers they feel warrant investigation. A driver may be asked to complete a medical, vision and/or road test.
Northwest Territories	Yes – at ages 75, 80 and every 2 years thereafter.	No	Same as British Columbia.
Yukon	Yes – at ages 70, 80 and every year thereafter.	No	Same as New Brunswick, Quebec and Saskatchewan.

Source: Provincial licensing agencies, March 1999.

the driving. Even though women are likely to outlive their husbands, men hold the only valid license in many husband-wife households. In the event of losing their partner in old age, women who have never or rarely

driven may have to begin to do so at that time or depend on others for help. However, given the increasing number of younger women driving, this situation may not persist in the future.



Irwin Bess is an analyst with Transportation Division, Statistics Canada.

North is that direction

by **Chuck McNiven**

There is no doubt that Canada has a North, but where is it? Most people probably consider the North to be “the Far North” or “north of 60° latitude” — Yukon, the Northwest Territories and Nunavut. But this definition does not capture many of the essential elements that constitute the North, and it ignores those more southerly regions of the country that share similar climate, physical attributes and settlement patterns with the Far North — the northern regions of Quebec, Ontario, the Prairie provinces, British Columbia and Labrador.

Geographers have developed some consensus on what defines the North, but no common agreement about its boundary has emerged. Now, issues such as Aboriginal land claims, the protection of the environment and the development of resources call for a definition that would serve a wide range of purposes and needs by addressing genuine characteristics of “northness.” This study amalgamates many existing methods of delineating the northern boundary to propose a new, more universal concept of Canada’s northern regions; it then demonstrates the usefulness of the concept for examining population characteristics.

Where is North?

The diversity of views about the North is reflected in the many competing concepts of the North. Perhaps the most obvious choice is the cold climate, which shapes almost all aspects of the northern environment. Not solely a reflection of latitude, temperature reflects topography, hydrological features, prevailing winds and ice pack, but most importantly soils and vegetation. Soils represent the cumulative effects of environmental, chemical and biotic processes occurring over millennia. Cold temperatures inhibit soil development, which suppresses agricultural activity, which alters settlement patterns, which dampens economic growth. Since temperature both enables and curtails human activity, it is a measure of an area’s potential usefulness.

Given the interaction and interdependence between climate, human activity and biosphere, it is clear that no single variable is sufficient to define the North. Most of the well-known definitions, however, tend to place greater emphasis on one or another facet of the northern environment. The Arctic definition, for example, focuses on the natural frontiers between the arctic and the sub-arctic, and draws the boundary at the southern limit of the boreal forest.¹ On the other hand, the “accessibility approach” emphasizes the economic character of the North, placing key importance on distance and population density in providing basic social and economic needs. This concept essentially classifies the North as a hinterland to be developed and exploited for its natural resources. In fact, the relationship between remoteness and economic well-being is the basis for federal policies concerning taxation allowances for people living in remote areas; the Income Tax Relief Zones, for example, clearly define the North by latitude.

The idea of the Aboriginal North suggests it is possible to regard the native north and resource areas as Canada’s North,² using differences in Aboriginal characteristics as the determining factor.³ A more complex variant of this approach is offered by the “nordicity concept,”⁴ which recognizes that the North has cultural as well as physical aspects. The nordicity index includes ten items, ranging

1. Bone, R. 1992. *The Geography of the Canadian North: Issues and Challenges*. Toronto: Oxford University Press.
2. Bollman, R. 1994. “A preliminary topology of rural Canada,” in *Towards Sustainable Rural Communities: The Guelph Seminar Series*, J. Bryden (ed.): 141-144. Guelph: University of Guelph.
3. Maslove, A.M. and D.C. Hawkes. 1990. *Canada’s North: A Profile*. Ottawa: Statistics Canada Catalogue 98-122.
4. Hamelin, L.E. 1972. “L’écoumène du Nord canadien,” in *Studies in Canadian Geography: The North*, W. Wonders (ed.): 25-40. Toronto: University of Toronto Press.

from natural barriers, such as annual cold and plant cover, to human variables like accessibility and economic activity.

The boundary proposed in this article incorporates elements of all these ideas. It is based on a set of 16 variables that represent a complex set of factors and incorporates such diverse elements as the southern limits to the boreal forest, heating degree-days and income tax relief zones, in addition to the northern limits of agriculture, railways and all-season roads. Taken together, these variables provide a fairly inclusive definition of Canada's North. But when they are mapped, it is clear that there is not a distinct north-south divide; rather, what emerges is a gradual transition from north to south. To acknowledge this finding, two intermediate regions — the north and the south transition zones (NTZ and STZ) — were introduced to the definition. This new boundary shows that simple two-way comparisons of north and

south mask interesting differences within the northern regions: it is evident that residents of the North are often quite different from their neighbours in the north transition zone.

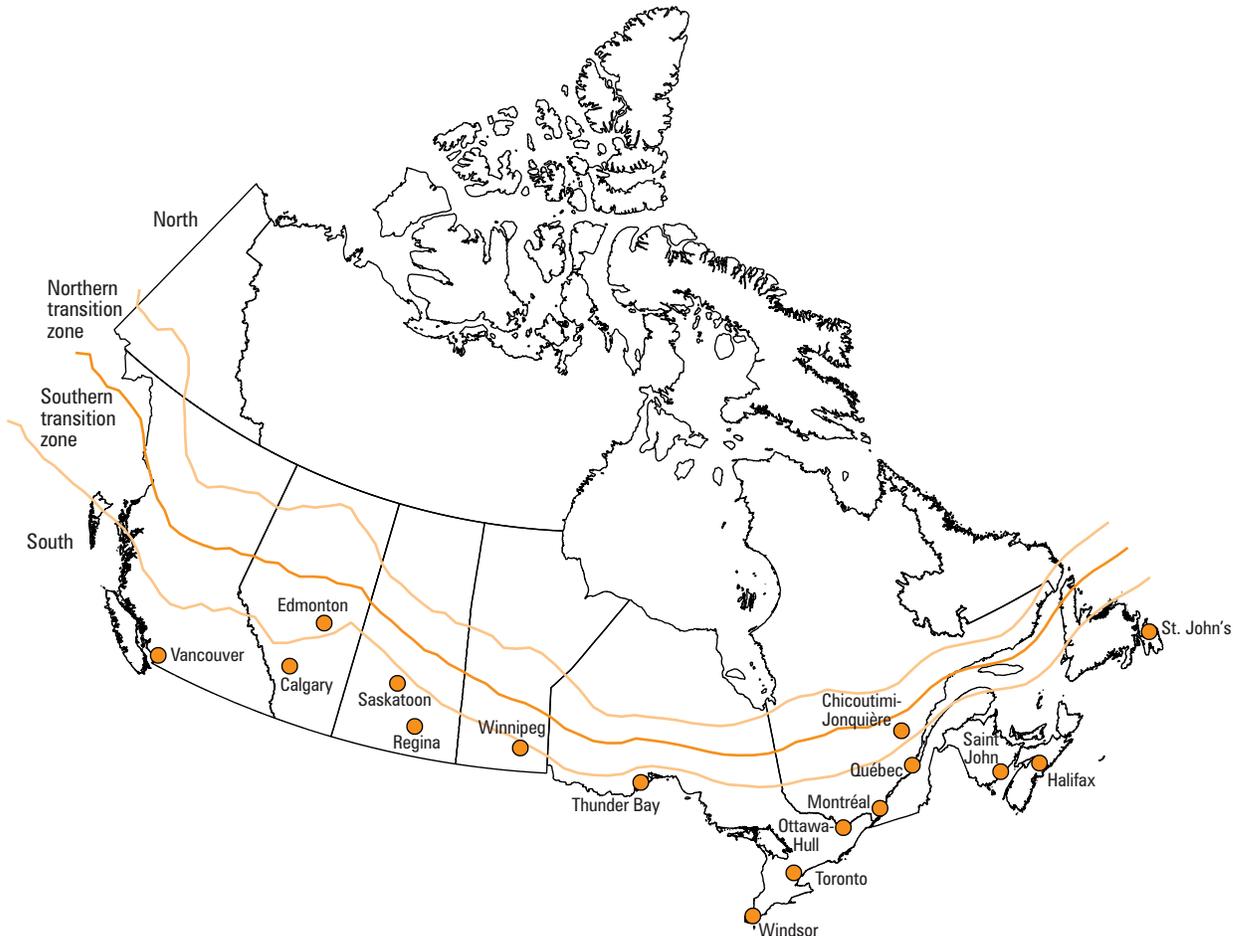
People are younger in northern Canada

All told, less than 2% of Canadians live in the country's immense northern regions. The population is only about 513,000, less than the census metropolitan area of Hamilton (624,000 in 1996). Almost one-third (186,000) live in the North and the remainder (327,000) live in the north transition zone (NTZ).

There is a slight gender imbalance in the northern regions, with men accounting for about 52% of the population in the North and for 51% in the NTZ. In fact, the proportion of women equals that of men in the northern regions only in the prime family formation (25 to 34) and

There is not a distinct north-south divide; rather, what emerges is a gradual transition from north to south

Canadian North, South and Transition Zones



Source: Statistics Canada, 1996 Census of Population.

senior age groups. In the South, women account for 51% of the population between ages 25 and 64, and for 57% in the 65 and over age group.

The most striking aspect of people in the northern regions, though, is their youth. In the South, about one-third of the population is less than 25 years old. But 50% of the residents in the North and 44% in the NTZ are under 25, with the difference in the age structures mainly the result of the higher percentage of people under age 15 in the North. The North also has proportionally fewer residents aged 45 and older than the NTZ (18% versus 24%). This difference suggests that people may work in the North but prefer to retire in southern communities.

The extreme youth of the population is partly attributable to the high concentration of Aboriginal peoples.⁵ The

CST What you should know about this study

Data for the 16 variables used to delineate the geographic boundaries were drawn from an extensive array of sources, and included the accessibility index, the agriculture ecumene, the agroclimatic resource index, the southern limit of the boreal forest, growing degree-days, heating degree-days, the isolation index, Revenue Canada's intermediate tax deduction, Revenue Canada's northern tax deduction, the Organization of Economic Cooperation and Development north delineation, the limit of discontinuous permafrost, the population ecumene, the northern limit of railways, the northern limit of all-season roads, the rurality index, and the Thornthwaite climate classification.

The boundaries were drawn using census subdivisions (CSD) from the 1996 Census of Population. CSDs that clearly fall into a given region were allocated to that region, whether the North, the transition zones or the South. Some CSDs straddled a regional boundary (especially in many of the very large CSDs in the northern areas of most provinces). In these cases, the CSD was allocated to the region in which the main centre of population is located.¹

Northern regions: the North and the north transition zone.

1. Areas with zero population were allocated to north, south or transition zones by geographic centre.

Aboriginal populations, which are very young and growing quickly, account for a high proportion of northern residents — 43% compared with less than 2% in the South. In the NTZ, where a large percentage of First Nations communities are located, 25% of the population is Aboriginal. But in the North, home to the Inuit as well as many Cree and Athapaskan reserves and settlements, 60% of the people are Aboriginal.

An educated population is crucial for economic growth and development. Yet only 43% of Canadians aged 15 and over living in the northern regions have at least some post-secondary education, compared with 52% of those in the South. The gap is even greater at the university level, at 7% versus 14%. This finding contradicts the general rule that younger populations are better educated. Part of the explanation may lie in problems of access, since many postsecondary and most degree-granting institutions are located in the South.

The greatest differences between North and NTZ are economic

The most notable differences between the residents in the North and the NTZ stem largely from the economic disparities between the two areas. The North has huge hydroelectric facilities in northern Quebec and Labrador, as well as extensive mining activities, the territorial capitals and associated government activities. The NTZ, by contrast, tends to be resource poor and most of it is located where the Canadian Shield and severe Arctic winters intersect. It has few urban centres. So although the percentage of working-age people employed was about the same in both regions (nearly 60%), the proportion of workers employed in service-producing industries, which tend to provide year-round work, are very different: 78% in the North and 66% in the NTZ. The differences are especially notable in community and government services, which employed almost 39% of workers in the North but only 25% in the NTZ.

Employment income accounts for 85% of total personal income in the North and 82% in the NTZ; in contrast, it accounts for only 75% of income in the South, where almost all the economic activity in the country is located. The North is also less reliant on government income than any other region: only 12% of total personal income comes from government sources compared with 13% in the NTZ and 14% in the South.

Summary

The North really should be envisioned as a layer of dimensions from physical characteristics to environmental attributes, and from population settlement to economic

5. All figures for Aboriginal peoples exclude incompletely enumerated Indian Reserves.

	North	North transition zone (NTZ)	Northern regions (North and NTZ) %	South	South transition zone
Male	52	51	52	49	50
Female	48	49	48	51	50
Age group					
Under 15	33	28	30	20	23
15 to 24	17	16	16	13	14
25 to 64	47	51	49	55	53
65 and over	3	6	5	12	10
Aboriginal population	60	25	43	2	7
Educational attainment					
Less than high school	47	46	47	34	39
High school	8	11	10	14	14
Trade diploma	4	4	4	4	4
Non-university postsecondary	32	32	32	34	33
University	8	7	7	14	10
Employment rate¹	58	60	59	59	60
Employment by industry sector					
Goods-producing	23	34	30	25	28
Service-producing	78	66	70	75	72
Source of income					
Employment	85	82	83	75	77
Government	12	13	13	14	14
Other	3	5	4	11	9
Population ('000)	186	327	513	25,732	2,283

1. Employed as a percentage of working-age population.

Source: Statistics Canada, 1996 Census of Population.

activity. It is difficult to define the North in a way that will satisfy all social, economic or political needs. However, it is clear that the character of the population gradually changes as one moves further north: if a single boundary divides north from south, the individual character of the North is lost. Extending the boundaries to include intermediary areas of transition enhances our understanding of the needs and aspirations of Canada's immense northern regions.

This article is adapted from a forthcoming working paper and will be available on the Statistics Canada website.



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Are children going to religious services?

by Frank Jones

One important decision that parents must make when raising their families concerns the religious or spiritual education of their children. It can also be one of the most contentious, both between parents who may not share the same faith or beliefs about child-rearing, and sometimes between parents and educational authorities.

So what do we know about children's religious observance? Is it true that few Canadian children attend church, Sunday school, or other places of worship? Are children in some faith communities more likely to attend than others? Do children have to sacrifice sports, music lessons, or club activities in order to participate in religious activities?

Using data from the National Longitudinal Survey of Children and Youth (NLSCY), conducted first in 1994-95, this article addresses some of these questions about the religious observance of children under 12 years.

One in three children attend religious services regularly

Over one-third, 36%, of Canada's children under 12 years of age attended religious services at least once a

CST What you should know about this study

This article is based on data from the 1994-95 National Longitudinal Survey of Children and Youth (NLSCY).¹ The NLSCY is conducted by Statistics Canada every two years on behalf of Human Resources Development Canada. It is designed to develop a clearer understanding of the factors that contribute to a child's development over time.

The 1994-95 NLSCY collected data on more than 22,500 children from newborn to 11 years, living in private households in the ten provinces (excluding Aboriginal children on reserves). Information was gathered about the children and their families in an interview with the "person most knowledgeable" about the child; at school, teachers and principals evaluated the child's scholastic development; and 10- to 11-year-olds were asked about their experiences with family, friends and school. Information will be collected about the same children every two years until they reach adulthood.

Child: a person under the age of 12. Not all data were collected for all children; for example, information about involvement in supervised activities was not captured for children under the age of four.

Person most knowledgeable (PMK): In 98% of cases, the PMK was the child's parent, usually the mother; therefore, this article uses "mother" or "parent" as a synonym for PMK.

Regular attendance: attendance at religious services at least once a month during the year preceding the survey.

1. The 1996-97 NLSCY does not include information about religion and religious observance.

month, and the majority were weekly participants. A further 22% attended less frequently, but did go at least once during the year. The vast majority of children were accompanied by a parent, most often the mother.

Regular attendance (weekly or monthly) varied considerably depending on the child's age, sex, region of residence and religious affiliation. It generally increased until children were eight years old, and then began to stabilize.¹ Girls were somewhat more likely to be regular attendees (38%) than boys (34%). Children living in Atlantic Canada had the highest regular attendance rate, 52%, while those in Quebec had the lowest, 19%.

Religious affiliation accounted for the largest differences in children's regular participation in religious services. The highest weekly attendance occurred among children in the Jehovah's Witness (90%), smaller Christian denominations (64%), and Baptist (60%) communities. Most people would not be surprised at these figures, since many regard these as conservative faith communities. On the other hand, children in what many observers consider the mainline faith communities, such as Anglican and United Church, reported the lowest weekly attendance rates (18%).

Non-attendance tended to be highest in the faith communities where

weekly attendance was lowest. Islam was an exception: a high proportion of Muslim children attended Islamic religious services weekly (44%), but they also recorded the highest rate of non-attendance (39%) during the year preceding the survey.

Mother and family are important factors in child attendance

Because mothers are often most responsible for their children's informal education,² it is not surprising that their education and labour force activity are associated with the child's attendance at religious services.³ What may surprise, though, is the nature of the relationships.

First, regular attendance rates for children increased with the educational attainment of the mother. The rate climbed from 30% for children whose mothers had less than high school graduation, to 40% for those whose mothers had a university degree. This finding would seem to contradict a widespread perception that less well-educated people are more likely to participate regularly in religious services. But the NLSCY results support an earlier study which found that families

	Frequency of attendance			
	Weekly	Monthly	Occasionally	Not at all
	%			
Child	23	13	22	42
Parent attends with child ²	81	77	90	100
... but their attendance varies widely with their religious affiliation				
Roman Catholic	22	18	31	29
United Church	18	18	30	34
Anglican	18	16	30	36
Presbyterian	39	10	23	29
Lutheran	29	18	29	24
Baptist	60	10	12	17
Islam	44	--	--	39
Jehovah's Witness	90	--	--	--
Other ³	64	10	--	16

Note: Sample sizes for children in the Eastern Orthodox, Jewish, Buddhist, Hindu and Sikh faith communities were too small to produce reliable estimates.
 -- Sample too small to yield reliable estimates.
 1. Attends weekly or monthly.
 2. Person most knowledgeable attends at least as often as the child.
 3. Smaller, mainly Christian faith communities.
 Source: Statistics Canada, National Longitudinal Survey of Children and Youth, 1994-95.

1. One study found that children's attitudes to religious education (e.g., Sunday school) change between the ages of 8 and 15, although attitudes to school do not. Francis, L. J. 1987. "The decline in attitudes towards religion among 8- 15-year-olds," *Educational Studies* 13, 2:125-134.
2. R. Bibby argues that the mother is most influential in the child's religious identification. "The persistence of Christian religious identification in Canada," *Canadian Social Trends*, Spring 1997.
3. A study using Australian data suggests that women's lower workforce participation is a more important explanatory factor than their traditional child-rearing role when accounting for women's greater religious observance. De Vaus, D. and I. McAllister. 1987. "Gender differences in religion: a test of the Structural Location Theory," *American Sociological Review* 52, 4: 472-581.

with higher socioeconomic status are more likely to take their children to church, although children from families with lower socioeconomic status tend to hold more positive attitudes towards Christianity.⁴

Second, one might expect that mothers working full-time are less likely to take their children to religious services because of increased time pressures. This finds some support in the data: only about one-third (35%) of children whose mothers worked full-time attended religious services regularly, compared with 43% of children whose mothers worked part-time. The attendance rate of children whose mothers had no paid work at all was almost identical to that for children of full-time working mothers (34%); however, mothers without paid work are more likely to be caring for very young children, who may not be considered old enough to benefit from going to religious services.⁵

4. Francis, L. J., Paul R. Pearson and D. W. Lankshear. 1990. "The relationship between social class and attitude towards Christianity among 10- and 11-year-old children," *Personality and Individual Differences* 11, 10: 1019-1027.

The size and structure of the family also influence the likelihood of attending religious services. Children in families with both biological parents were much more likely to attend regularly (38%) than children in lone-parent families (28%) and step-parent families (31%). The number of children also affects regular attendance, with children from larger families

being much more likely to attend services at least once a month. While

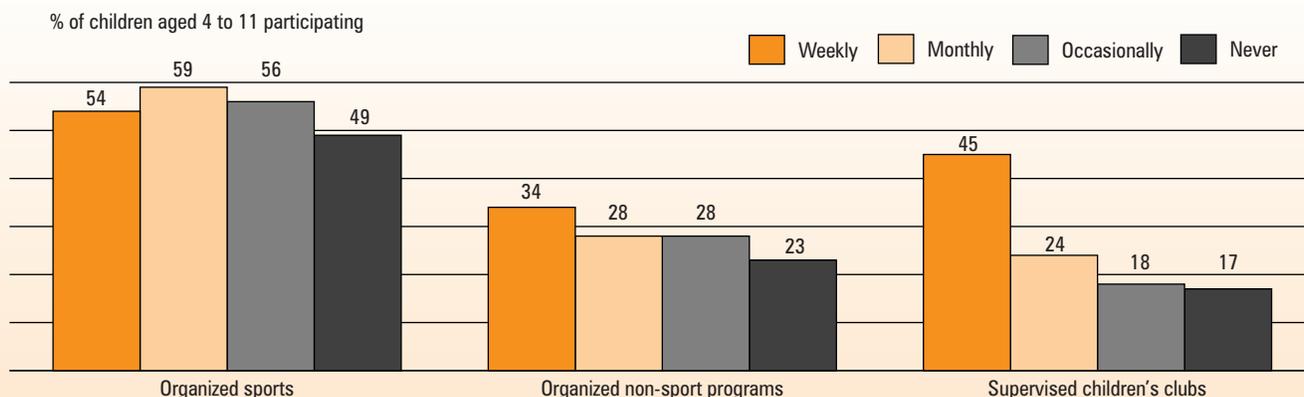
5. An American study in the 1970s found that having pre-school-aged children reduces parental attendance, while having school-aged children increases it. Azzi, C. and R. Ehrenberg. 1975. "Household allocation of time and church attendance," *Journal of Political Economy* 83, 1: 27-56.

CST Regular attendance rates among children increase with the mother's educational attainment

	Child attends religious services		
	Regularly	Occasionally	Not at all
	%		
Education			
Less than high school	30	20	50
High school	34	24	42
Some postsecondary	36	22	42
College	36	22	42
University	40	22	38
Labour force status			
Not in paid labour force	34	20	46
Works part-time	43	20	37
Works full-time	35	24	41

Source: Statistics Canada, National Longitudinal Survey of Children and Youth, 1994-95.

CST Children who attend services regularly are more likely to participate in other supervised activities



Source: Statistics Canada, National Longitudinal Survey of Children and Youth, 1994-95.

24% of children in one-child families attended services, 52% of children in families with four or more children did so. This may simply reflect the fact that large families are more likely to have older children, and that parents who want to take one child to religious services will probably take the whole family.

Does religious attendance reduce children's other activities?

Frequent attendance at religious services does not reduce the likelihood that children aged 4 to 11 will also participate in organized sports, in non-sport programs such as music lessons, or in clubs such as brownies or cubs. In fact the opposite is true: regular attendees were most likely to engage in each of these three types of activities. For example, 54% of children who attended services weekly, and 59% who attended monthly, were enrolled in weekly sports programs, compared with 49% of 4- to 11-year-olds who did not attend religious services at all. The differences are even greater for participation in supervised boys and girls clubs — 45% of weekly attendees and 17% of non-attendees. This finding is not unexpected, since

many parents probably view their children's participation in organized activities as an informal education that teaches values complementary to those learned at home and reiterated in religious services.

Summary

Well over one-third of Canada's children under 12 attend religious services at least once a month. Participation increases with age and the educational attainment of the child's mother. Mothers working in the paid labour force are more likely to bring their children to a place of worship than are mothers who do not work outside the home, and single mothers are less likely to do so than married mothers. And rather than reducing involvement in sports, music lessons, or supervised clubs, attendance at religious services increases the likelihood of being involved in these other activities.



Frank Jones is a senior analyst with Labour and Household Surveys Analysis Division, Statistics Canada.

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New immigrants most likely to live in low income for consecutive years

Twenty-one percent of people who immigrated to Canada after 1986 lived in a low-income situation for the four-year period from 1993 to 1996. In contrast, only 4% of Canadian-born residents experienced such an extended period of low income. Members of visible minority groups, many of whom are recent immigrants, also reported high rates of continuous low income: 17% lived in a low income situation for four consecutive years, a rate four times higher than that for people who were not visible minorities (4%). The higher risk for both recent immigrants and visible minorities still existed even after taking into account their age and level of education. Other factors, such as language skills and relevant work experience, have yet to be assessed.

To what extent are Canadians exposed to low income: 1993 to 1996

Statistics Canada
Internet product 75F0002MIE, 99001
www.statcan.ca/english/research/75F0002MIE/99001.pdf



Educational profile of farmers rising

Farmers on the whole are better educated than they were 15 years ago. About 40% of farm operators had some postsecondary education in 1996, with non-university diplomas (24%) being more common than university degrees (15%). This represents a substantial increase over 1981, when 16% of farmers had college or trade/vocational training and 11% had university. Women were more likely to have a postsecondary

education – 30% had college or trade/vocational and 19% had university, compared with 23% and 14% of men, respectively. The preference for non-university schooling may result from several factors, including the time a university education requires away from the farm and the generally more practical approach of college courses. Incidentally, only 19% of farmers with postsecondary education had studied agricultural and biological sciences and technologies. The most popular field of study (23%) was engineering and applied science technologies and trades.

1996 Census of Agriculture-Population linkage database

www.statcan.ca/Daily/english/990426/d990426.htm



Cannabis offences most common drug offence

In 1997, police forces in Canada reported 66,500 drug offences, a rate of 222 offences for every 100,000 population. Among the provinces, British Columbia has consistently reported the highest rate of drug crime since 1982. In 1997, it recorded 426 drug offences per 100,000, while Newfoundland recorded the lowest rate, at 132. In recent years, Newfoundland and Alberta have shown the largest declines in the rate of drug offences, while Nova Scotia, Saskatchewan and Manitoba have shown the largest increases.

Cannabis offences accounted for 72% of all drug crime in 1997, up from 58% in 1991. In contrast, cocaine represented 17% of all cases in 1997, down from 28%, and heroin for about 2% of all cases, down marginally from 1991. Overall, 40,800 people, both adults and youths, were charged with a drug offence in 1997. Nine in ten were male. People charged in cocaine and heroin incidents averaged 30 years of age, while those charged with cannabis offences averaged 25 years. Also,

older offenders are more likely to be involved with supply offences.

Juristat: Illicit drugs and crime

Vol 19, no. 1, Statistics Canada
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Hospital discharge rates at historic low

Hospitals discharged 3.2 million overnight patients in 1996-97, down from 3.3 million in 1995-96. This represents a 6% drop in the discharge rate (including deaths) to 10,523 discharges for every 100,000 people from 11,165 per 100,000 the previous year. The rate has now reached its lowest level since 1961, when such data were first collected. Declines in discharge rates are due to many factors. More frequent use of ambulatory care and day surgery, the shift from hospital to community-based services, increased emphasis on health promotion and disease prevention, improved medical technologies and treatments, as well as new pharmaceuticals may have reduced the need for hospitalization or surgical intervention.

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Attendance drops for performing arts companies

In 1996-97, attendance at performing arts shows fell almost 13% from 1994-95. Declines were due to losses in three of the four disciplines: audience size was down in opera (-22%), theatre (-17%) and music (-6%), but dance attendance increased 6% to about 1.3 million spectators. Nevertheless, companies declared total revenues up 2% in 1996-97, compared with two

years earlier. Almost half (48%) of total revenues came from ticket sales, subscriptions, licensing and other sources. Another important source of income was revenue from foreign tours, which rose almost 10% from 1994-95, and accounted for almost 7% of earned revenues. However, only theatre companies reported an operating surplus (collectively, \$3.3 million). A deficit was reported by the other three disciplines, with the music companies having the highest operating deficit (collectively, \$1.6 million).

Performing Arts Survey

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lavamar@statcan.ca



Big business ready for the Y2K bug

Almost 100% of Canadian businesses with more than 250 employees say their computer systems will be ready to handle the date change to 2000. A substantial proportion of firms continued preparations throughout the summer; about 67% of all large firms expected to have all critical operational systems ready before September and fully 92% will be prepared by the end of October. Companies in air transportation, finance and insurance, oil and gas producers, manufacturers and distributors, electricity, manufacturing and communications planned to be ready before September, but 57% of large hospitals said they did not expect to finish until September or October. Police and ambulance services in almost all municipalities have taken action, and steps have been taken to prepare water and sewage services in municipalities where computerized systems are essential to service delivery.

National Survey on Preparedness for the Year 2000

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University graduates at college

by Warren Clark

Though most university graduates with bachelor's degrees go from school to work, those who continue their studies usually enroll in a master's or a professional program soon after graduation. Others, however, pursue studies at community colleges or technical institutes. During the 1990s, full-time postsecondary enrolment at Canada's publicly-funded colleges grew. Part of this growth was the result of young people with bachelor's degrees hoping to improve their career prospects by learning more job-specific skills at the college level.

According to the 1997 National Survey of 1995 Graduates, about 46% of people who had earned a bachelor's degree in 1995 had gone back to school within two years of graduating.¹ About 5% of bachelor's graduates entered a college program.² The evidence suggests that in subsequent years, even more members of the class of 1995 will pursue a college education. In an earlier group of university graduates, the class of 1990, the percentage who had enrolled in college programs after graduation doubled from 6% in 1992 (two years after graduation) to 13% in 1995 (five years after).

That university graduates may wait several years before enrolling in a college course is also suggested by data from other sources. The 1998 Adult Education and Training Survey shows that university attendance drops off quickly after age 24. In 1997, 41% of young bachelor's degree-holders under age 25 were still enrolled at university; the proportion fell to 14% of those aged 25 to 34, and stood at 6% for those aged 35 to 44. In contrast, the attendance rates of bachelor's

graduates enrolled in college programs, although small (3%), remained steady from age 25 to age 44.

College attendance of bachelor's graduates on the rise

In recent years, the percentage of university graduates who subsequently obtain a college diploma (within five years of university graduation) has doubled, from 3% of the Class of 1982 to 7% of the Class of 1990. This growth suggests that more young university graduates are supplementing their education with additional, and perhaps more marketable, skills obtained at college.

CST What you should know about this study

It is often difficult to assess the school-to-work transition of graduates who pursued additional studies within two years of graduation. At that time, many have had only a brief opportunity to find a full-time, high-paying, high-level job. For this reason, the 1995 Follow-up of 1990 Graduates Survey (FOG) was used to compare the labour market experience of two groups of graduates five years after graduation: the 2% of bachelor's graduates who obtained a college diploma within two years of getting their bachelor's¹ and the 36% of bachelor's graduates who did not pursue further studies after graduation. Statistics Canada conducted this survey of nearly 31,000 university, college and trade/vocational graduates during 1995, on behalf of Human Resources Development Canada.

1. Bachelor's graduates who obtained a college diploma within two years of obtaining their bachelor's degree would have had nearly three years to find a good job by the time they were interviewed for the FOG survey.

1. Includes graduates who have taken at least 20 hours of instruction between graduation and survey interview in 1997.

2. College programs include postsecondary level programs at community colleges, Colleges of Applied Arts and Technology (CAATs), CEGEPs, technical institutes, non-degree granting colleges of art, hospital schools of nursing or radiology, and private business schools.

1990 bachelor's graduates from the social sciences (16%), health professions, sciences and technologies (15%) and agriculture and biological sciences (14%) were the most likely to pursue further studies at college. Even 10% of engineering graduates pursued a college education, usually taking business, computer science or engineering technology courses. Of 1990 university graduates continuing to college, most chose programs in commerce, management or business administration (22%), data processing or computer science (14%), nursing (9%) or medical lab technologies (8%).

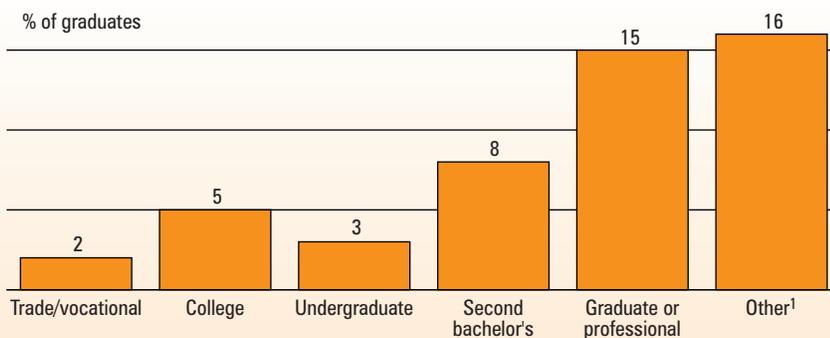
The reasons cited by those who continue their education at the college level are usually labour market-related: to find a job, to get a better one or to improve their performance in their current job.

Does a college diploma help university graduates?

Many factors influence a young university graduate's success in the labour market: field of study, previous work experience, the demand for labour and job search skills. After accounting for differences in age, sex, field of study and previous education, 1990 bachelor's graduates who had obtained a college diploma by mid-1992 were just as likely to have a high income (top quartile) and a high-level job by 1995 as graduates who did not pursue further studies.³ Also, the odds of working full-time were about 1.4 times higher for bachelor's graduates who had received a college diploma than for those who did not pursue any studies after graduation.

Although these results indicate that a college education may be helpful to some university graduates, there is no doubt that a university degree is much more valuable to college graduates. College graduates who subsequently obtained a bachelor's degree were much better off in the labour market than their college-educated colleagues who did not pursue further education. After accounting for several socio-demographic and education factors,⁴ the odds of being in the top income quartile were about 1.6 times higher, of being in a high-level job about 2.1 times higher and of working full time about 1.9 times higher than those of college graduates who did not pursue further studies.

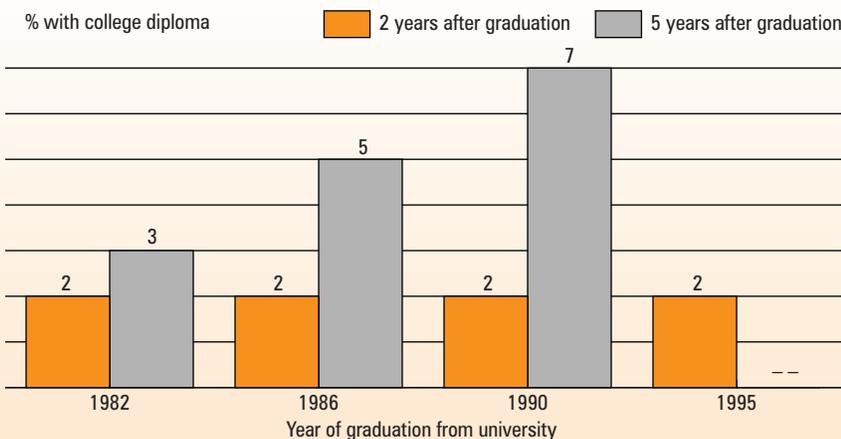
CST 1995 bachelor's graduates who continued their studies usually returned to university



Note: 55% of bachelor's graduates did not pursue further studies.

1. Includes certification with a professional association (e.g., accounting, banking, insurance) and other training such as continuing education courses, first aid, fitness training, sign language and CPR.
Source: Statistics Canada, National Survey of 1995 Graduates, 1997.

CST A growing proportion of bachelor's graduates is obtaining a college diploma



-- Not available.

Source: Statistics Canada, National Graduates Surveys and Follow-up of Graduates Surveys.

3. High-level job refers to the six highest categories of the Pineo-Carroll-Moore socioeconomic classification of occupations including self-employed and employed professionals, semi-professionals, technicians, and senior and middle managers.

4. Age, sex, marital status, presence of children under age 5, field of study and education before entering the program.



Warren Clark is an analyst with Housing, Family and Social Statistics Division, Statistics Canada.

Visible minorities in Toronto, Vancouver and Montréal

by Jennifer Chard and Viviane Renaud

In the past few decades, the visible minority population in Canada has grown considerably. In 1996, 3.2 million people identified themselves as members of a visible minority group. They represented 11.2% of Canada's population, up from 9.4% in 1991, with Chinese, South Asians and Blacks comprising the largest groups. Growth in the size of the visible minority population is due mainly to changes in immigration patterns: about seven in ten visible minorities are immigrants, with almost half having arrived in the country since 1981 and one quarter between 1991 and 1996.¹

The increase in the number of visible minorities is particularly noticeable in larger metropolitan areas. Canada's major urban centres act as

1. Immigration has been the biggest contributor to the rapid growth of the visible minority population, but it is important to remember that some visible minority groups have long histories in this country. According to the 1996 Census, about two in three Japanese (65% or 44,000) and two in five Blacks (42% or 241,000) were born in Canada. As well, large numbers of Chinese (207,000) and South Asians (192,000) are Canadian-born.

CST

Visible minorities represented 11% of the total population in 1996, with Chinese, South Asians and Blacks the largest groups

	Canada	Census Metropolitan Area		
		Toronto	Vancouver	Montréal
		%		
Total population ('000)	28,528	4,233	1,814	3,288
Visible minority population	11.2	31.6	31.1	12.2
Black	2.0	6.5	0.9	3.7
South Asian	2.4	7.8	6.6	1.4
Chinese	3.0	7.9	15.4	1.4
Korean	0.2	0.7	0.9	0.1
Japanese	0.2	0.4	1.2	0.1
Southeast Asian	0.6	1.1	1.1	1.1
Filipino	0.8	2.3	2.2	0.4
Arab and West Asian	0.9	1.7	1.0	2.2
Latin American	0.6	1.5	0.8	1.4
Visible minority, n.i.e. ¹	0.2	1.1	0.4	0.1
Multiple visible minority ²	0.2	0.6	0.6	0.1

1. Not included elsewhere. Includes Pacific Islanders and other respondents likely to be in a visible minority group.

2. Includes respondents who reported more than one visible minority group.

Source: Statistics Canada, 1996 Census of Population.

important gateways for immigrants, who are drawn to these cities by family and community ties as well as by economic opportunities. In 1996, almost three-quarters of Canada's visible minority population lived in either Toronto (42%), Vancouver (18%) or Montréal (13%). These cities have been quickly transformed into increasingly vital components of Canada's cultural mosaic, each with its own distinctive composition: while Toronto has the greatest diversity of visible minority groups, Vancouver is known for its prominent Asian community and Montréal has attracted the largest number of French-speaking visible minorities.

One in three Toronto residents are visible minorities

Toronto has both the highest concentration of immigrants and the highest concentration of visible minorities in Canada, making it the nation's most diverse Census Metropolitan Area

(CMA). Toronto was home to 1.3 million visible minorities in 1996. They represented 32% of the total population, with Chinese (335,200) and South Asians (329,800) the two biggest groups — each comprising 8% of the total population — followed by Blacks at 6% (274,900). In fact, the CMA of Toronto was home to the largest number of each of Canada's visible minority groups, except for Arabs and West Asians, and Japanese.

Recent immigrants in particular have shaped the cultural landscape in Toronto, since almost 80% are members of a visible minority group. Of the 441,000 immigrants living in the CMA who arrived between 1991 and 1996, three in five were born in Asia or the Middle East. The top five places of birth were Hong Kong, Sri Lanka, the People's Republic of China, the Philippines and India.

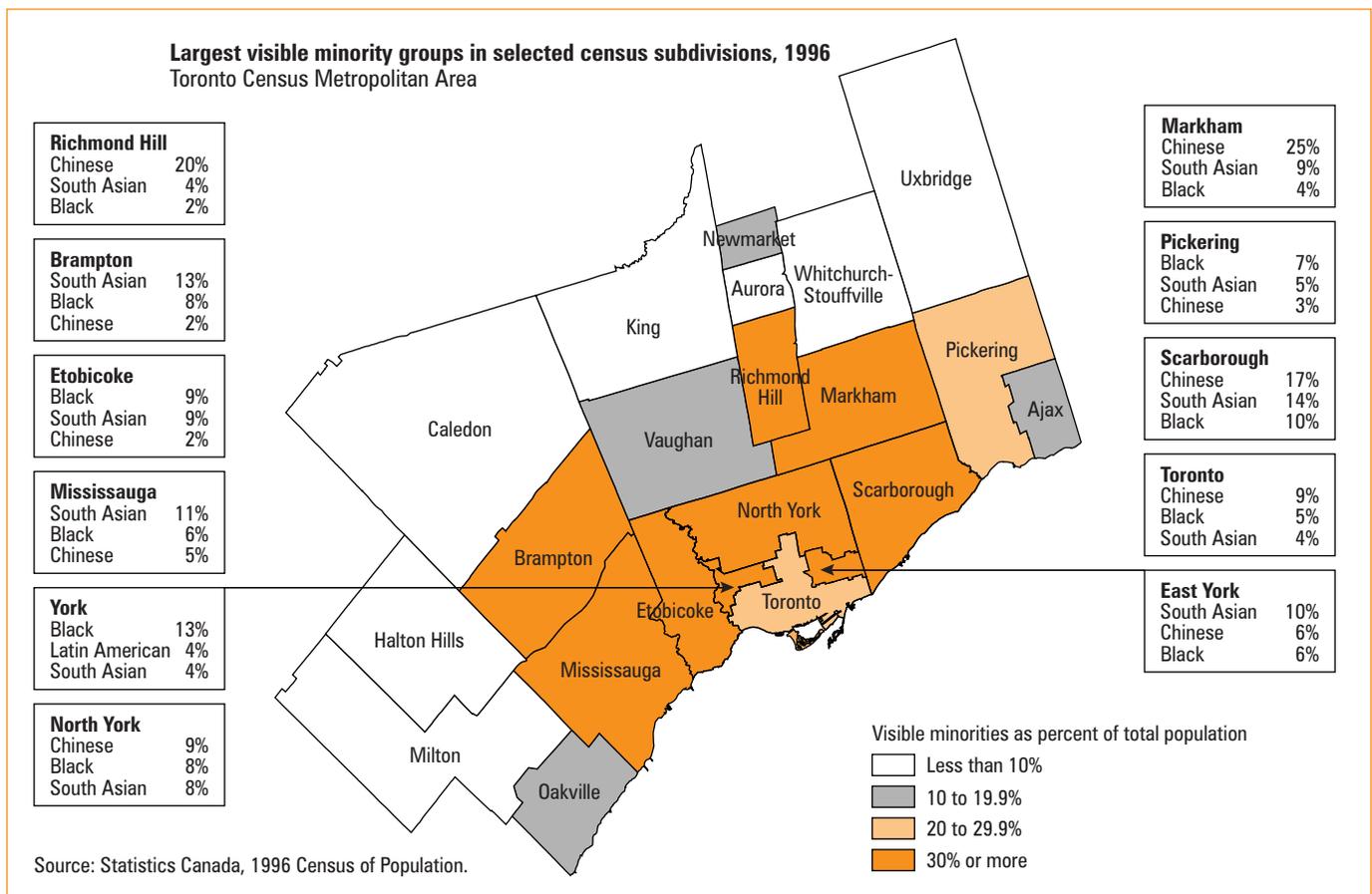
Among Toronto's visible minorities, there are considerable differences

in immigrant status and age. Nearly seven in ten Japanese and four in ten Blacks were born in Canada, compared with less than 25% of all other visible minority groups. More than four in ten Blacks, Southeast Asians, Latin Americans and South Asians were under the age of 25, while about three in ten Chinese and Japanese were in this age group — similar to the total population of Toronto (33%).

Scarborough has highest proportion of visible minorities in the nation

Within the Toronto CMA, some municipalities stand out as having particularly large visible minority populations.² Scarborough had the highest concentration in Canada, with over half (52%) of the population belonging

2. Since most census subdivisions follow the boundaries of municipalities or townships, this article uses "municipalities" as a synonym.



	Total population	Visible minority population %
Scarborough, On.	554,525	52
Richmond, B.C.	148,150	49
Markham, On.	172,735	46
City of Vancouver, B.C.	507,930	45
North York, On.	584,675	40
Burnaby, B.C.	176,825	39
Saint-Laurent, Qc.	73,760	36
York, On.	145,785	34
Mississauga, On.	542,450	34
Richmond Hill, On.	101,480	33

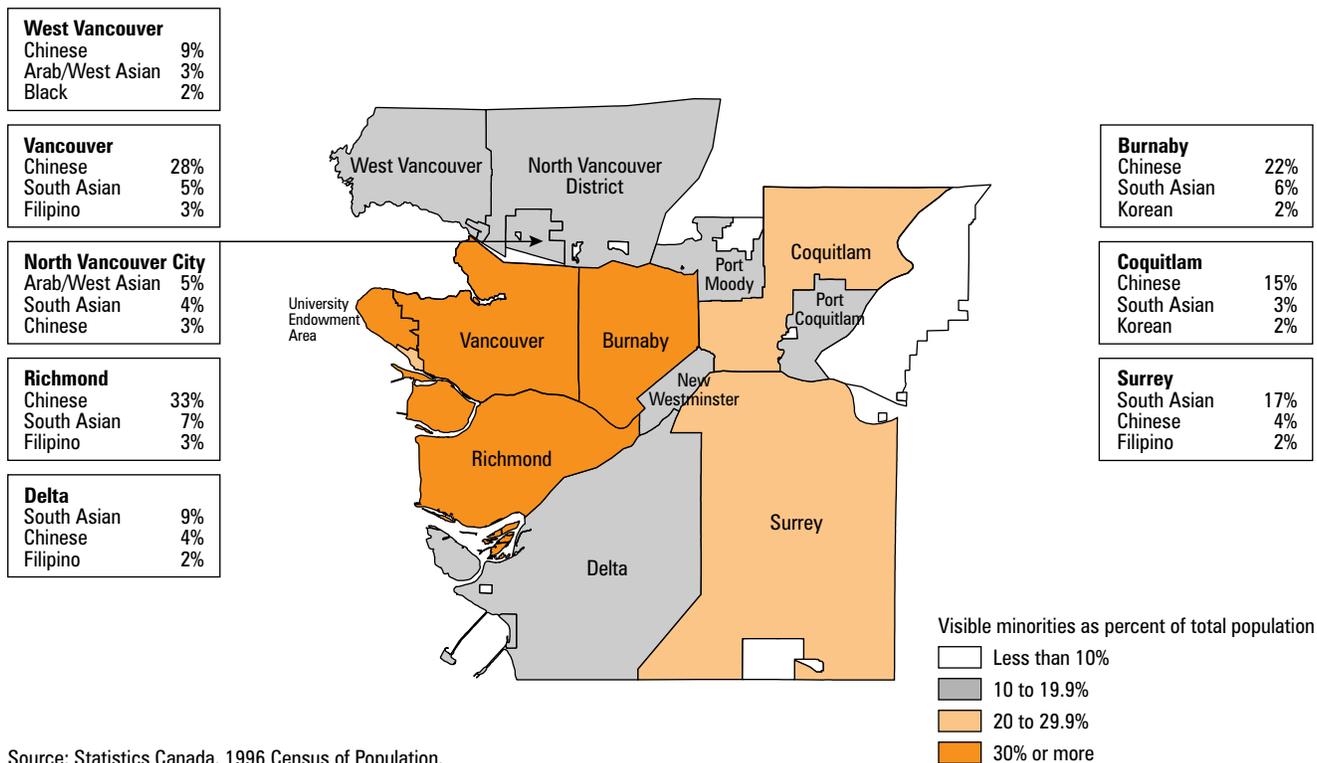
Note: Excludes the University Endowment Area, British Columbia, which is also a census subdivision. The total population was 6,680, and it had a visible minority population of 35%.

Source: Statistics Canada, 1996 Census of Population.

to a visible minority group, followed by Markham (46%), North York (40%), York (34%), Mississauga (34%) and Richmond Hill (33%). As well, about three in ten residents in East York (31%), Brampton (30%), Etobicoke (30%) and the city of Toronto (28%) were members of a visible minority group. Still, in some areas of Toronto, visible minorities comprised a very small proportion of the population, accounting for less than 5% of residents in several municipalities, including Caledon, Halton Hills and Georgina.

Chinese, South Asians and Blacks are the largest visible minority groups in almost all Toronto municipalities, though some areas have more diverse visible minority populations than others. In 1996, Scarborough and North York were among the most varied, with large proportions of Chinese, South Asian and Black residents. In comparison, Chinese were the predominant visible minority group in Markham and

Largest visible minority groups in selected census subdivisions, 1996
Vancouver Census Metropolitan Area



Source: Statistics Canada, 1996 Census of Population.

Richmond Hill, Blacks were the most numerous group in York and South Asians the largest in Mississauga.

The CMA of Vancouver is Canada's most Asian metropolitan area

Vancouver is home to several large Asian communities. A total of 565,000 residents, or 31% of the total population of the CMA, belonged to a visible minority group in 1996, with the Chinese accounting for about half. Vancouver's 279,000 Chinese represented 15% of all residents, while its 120,100 South Asians comprised the second largest group at 7%. Notably, Vancouver was home to the largest number of Japanese in Canada, as well as to the second largest numbers of Chinese, South Asians, Filipinos and Koreans.

The high level of Asian representation in Vancouver is not surprising, given patterns of immigration to the CMA. Four in five of Vancouver's 190,000 recent immigrants were from Asia, with Hong Kong, China, Taiwan, India, the Philippines, South Korea, and Viet Nam among the top ten birthplaces. About three-quarters of Chinese, Southeast Asians, Koreans and Filipinos living in Vancouver in 1996 were immigrants. In contrast, over half of Japanese (54%) and one-third of South Asians (34%) had been born in Canada.

Although visible minorities tended to be slightly older in Vancouver than in Toronto or Montréal, they were still young relative to the total population. About 30% of the CMA's population was under age 25 in 1996, compared with over 40% of South Asians, Southeast Asians, Koreans, Blacks and Latin Americans.

Richmond, City of Vancouver and Burnaby home to largest visible minority populations

Most municipalities in the Vancouver CMA have substantial visible minority populations. In particular, almost half the residents of Richmond (49%)

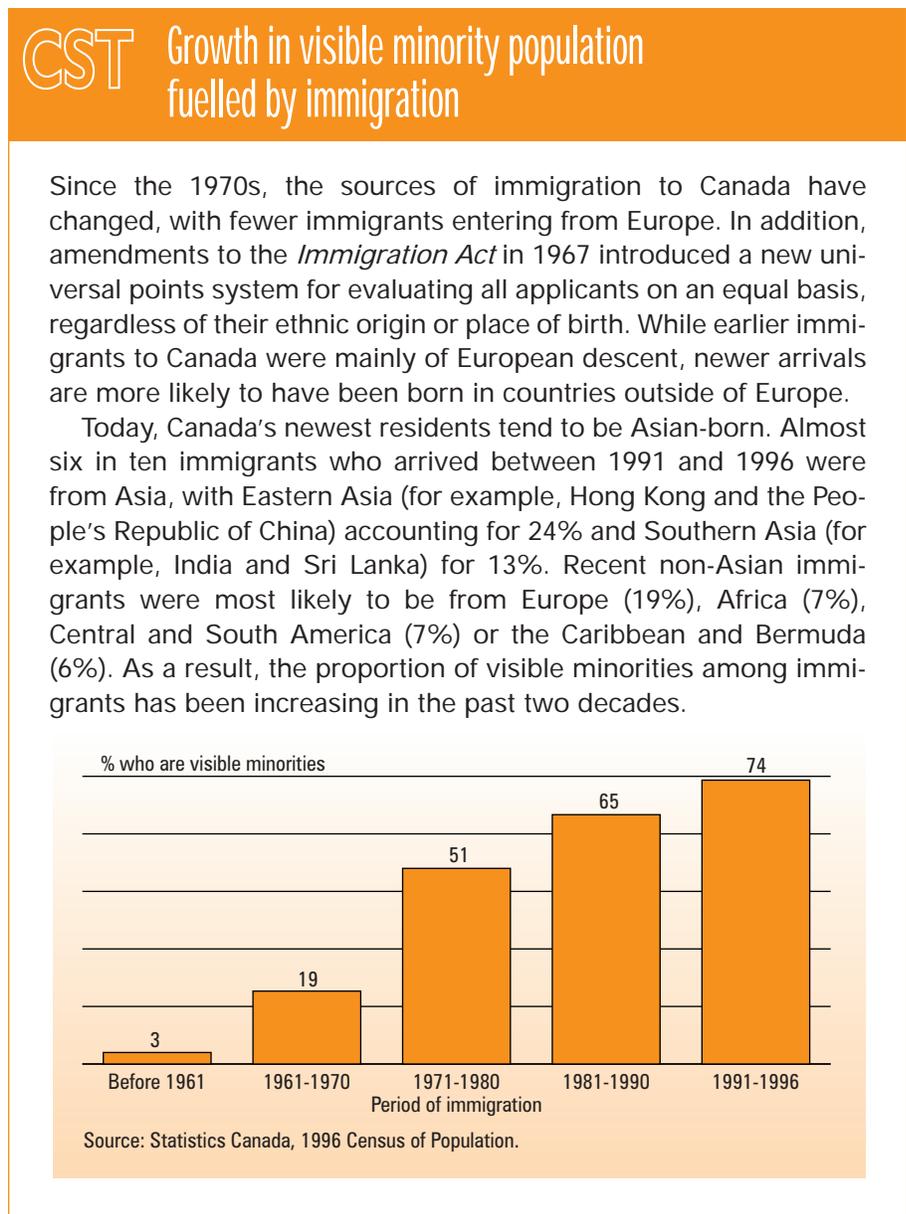
belonged to a visible minority group, as did 45% in the City of Vancouver, 39% in Burnaby, 29% in Surrey and 28% in Coquitlam. Unlike Montréal and Toronto, very few municipalities in Vancouver had visible minority populations of less than 5%.

In most municipalities, Chinese and South Asians were the largest visible minority group, followed by Filipinos or Koreans. The Chinese accounted for a very significant proportion of the population in Richmond, the City of Vancouver and Burnaby, while South Asians were the largest group in Surrey, Delta and New Westminster. Interest-

ingly though, Arabs and West Asians were the most numerous visible minority population in the City of North Vancouver.

Blacks are Montréal's largest visible minority group

Montréal's visible minority population has its own distinctive composition. In 1996, 401,000 people, or 12% of the total CMA population, were visible minorities. Blacks were the largest group, numbering 122,300 and representing 4% of all residents, while Arabs and West Asians, with nearly 74,000 people, made up 2%. Montréal is home



to the largest Arab and West Asian population in the country and the second largest Black, Latin American and Southeast Asian communities.

As in the other large metropolitan areas, immigrants have contributed to the growth of the visible minority population in Montréal; seven in ten recent

immigrants in the CMA were members of a visible minority group. Montréal has attracted a relatively large number of immigrants from countries where French is spoken. Between 1991 and 1996, almost 135,000 people immigrated to Montréal, with the most common places of birth being Haiti and Lebanon. Compared with Canada as a whole, Montréal has almost doubled its share of recent immigrants from West Central Asia and the Middle East, Africa and the Caribbean.

Among Montréal's largest visible minority groups, Blacks were most likely to be Canadian-born: nearly four in ten compared with fewer than two in ten Arabs and West Asians or Latin Americans. In fact, about 30% of Arabs and West Asians and Latin Americans arrived in Canada between 1991 and 1996.

Visible minorities in Montréal are younger than those in other CMAs, and are also younger than Montréal's

CST What you should know about this study

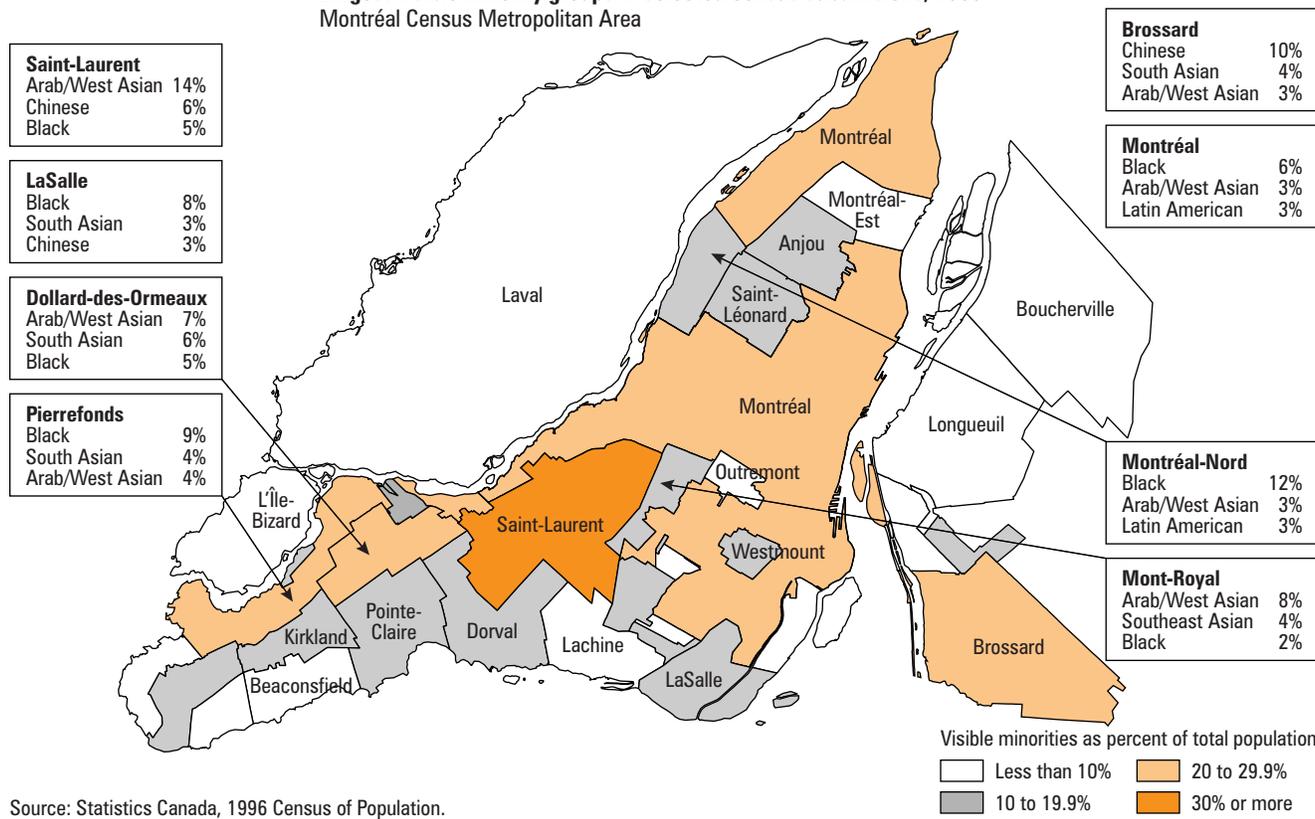
This article uses data from the Census of Population, last conducted in May 1996.

Visible minority population: the *Employment Equity Act* defines visible minorities as "persons, other than Aboriginal peoples, who are non-Caucasian in race or non-white in colour." In Canada, the visible minority population includes the following groups: Blacks, South Asians, Chinese, Koreans, Japanese, Southeast Asians, Filipinos, Arabs and West Asians, Latin Americans and Pacific Islanders.

Immigrants: people who are, or have been at one time, landed immigrants in Canada. A landed immigrant is a person who has been granted the right to live in Canada permanently by immigration authorities. Some are recent arrivals, while others have resided in Canada for a number of years.

Recent immigrants: people who immigrated to Canada between 1991 and 1996.

Largest visible minority groups in selected census subdivisions, 1996
Montréal Census Metropolitan Area



Source: Statistics Canada, 1996 Census of Population.

total population. While 32% of all Montréal residents were under age 25 in 1996, 42% of visible minorities were in this age group. Blacks and Latin Americans were the youngest — nearly half the members of each group were not yet 25 years old.

Visible minorities centered in municipalities on the island of Montréal

In Montréal, the visible minority population is more geographically centralized than in Toronto or Vancouver. For the most part, visible minorities are concentrated on the island of Montréal where they comprised 36% of residents in Saint-Laurent, 26% in Dollard-des-Ormeaux, 22% in Pierrefonds and 20% in the City of Montréal. In only one other municipality, the south shore community of Brossard, did visible minorities account for more than one-fifth of the population (26%).

Blacks and Arabs and West Asians were prominent in most municipalities. Both were among the largest visible minority populations in the city of Montréal, Saint-Laurent, Dollard-des-Ormeaux, Pierrefonds, Montréal Nord, Mont-Royal, Saint-Léonard and Roxboro. The Chinese, South Asian, Latin American and Southeast Asian groups were also a significant presence in many parts of the CMA, with the Chinese the largest group in Brossard.

The future

The visible minority population is expected to grow rapidly over the next few decades, the result of continuing high levels of immigration from non-European countries and a relatively youthful visible minority population. It is projected that by the year 2016, visible minorities will account for one-fifth of the Canadian population.³

The majority of this visible minority population is expected to continue to live in Ontario in 2016 (56%), with most of the remainder in British Columbia (18%) and Quebec (14%). Thus, Toronto, Vancouver and Montréal will likely become increasingly differentiated from other regions of Canada in terms of cultural diversity and the presence of visible minorities.

3. Statistics Canada. 1995. *Projections of Visible Minority Population Groups, Canada, Provinces and Regions, 1991-2016*. Product No. 91-541-XPE.



Jennifer Chard and Viviane Renaud are senior analysts with Housing, Family and Social Statistics Division, Statistics Canada.

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Eldercare in Canada: Who does how much?

by *Judith A. Frederick and Janet E. Fast*

Canada's aging population has raised concerns about our ability to care for ailing seniors. At the same time that demand for caregiving is increasing, the supply of informal caregivers is diminishing. Most women, who have traditionally performed these roles, are now in the paid workforce, dealing with the joint demands of job and family. In addition, later marriage and childbearing, declining fertility, and high divorce and remarriage rates are resulting in fewer adult children who are able to care for elderly parents in ill health. More frequent moves may also mean that many miles separate potential caregivers from family and friends in need.

These conditions have been accompanied by fiscal and economic restructuring of health and social services, as well as a change in philosophy about how best to meet seniors' needs. In particular, emphasis has shifted from the institutional care of chronic and long-term patients to community-based care, which depends heavily on caregiving assistance from family and friends. Using data from the 1996 General Social Survey (GSS), this article looks at the people who are providing care to seniors with a long-term health problem, the factors that influence the amount of time they devote to eldercare, and the types of hardships they experience as a result of helping.

Women do the bulk of eldercare

In 1996, about 2.1 million Canadians looked after older family members or friends with a long-term health problem. More than two-thirds of informal caregivers were between the ages of 30 and 59; the average age was 46 years for women and 44 years for men. Not surprisingly, given their age, over two-thirds of caregivers were in the paid workforce, although women were considerably less likely to

CST What you should know about this study

This article uses data from the 1996 General Social Survey (GSS) on social and community support. The GSS interviewed nearly 13,000 Canadians aged 15 and over living in private dwellings in the ten provinces. Data were collected on the amount of time men and women spent caring for a relative or friend aged 65 and over with a long-term physical or health limitation. As well, respondents were asked how these caregiving responsibilities had affected their lives. This study is based on 1,366 caregiver/care receiver dyads.

The regression analyses were modelled on the findings published in the relevant literature. Earlier researchers have suggested that the amount of time people spend helping seniors is determined by three sets of factors: the characteristics of the caregiver; those of the care receiver; and the nature of the relationship between the two people, such as physical proximity and emotional closeness. The variables used in the regression analysis are: gender and age (as a proxy for illness) of care receiver; age, marital status, place of residence, education and employment status of caregiver, presence of children under 15, number of people being cared for, length of time providing care, primary caregiver status, relationship to care receiver, physical proximity and emotional closeness.

be employed outside the home. More than two-thirds were married and over one-quarter were also taking care of children under 15 years. Six in ten caregivers had been providing eldercare for more than two years, but only one-third were the primary caregiver; that is, someone who had the main responsibility for ensuring that the senior's needs were met.

Despite the influx of women into the paid workforce, in 1996 women still dominated the field of senior care. Not only did they represent the majority of informal caregivers (61% or 1.3 million), but they also spent much more time than men on care-related tasks (5 hours per week compared with 3). The reasons for these longer hours are fairly straightforward; many women were caring for more than two seniors (42% versus 34% of men) and women were considerably more likely to be the primary caregiver (39% versus 27% of men). Women were also more likely to be caring for a senior who was very ill.

The majority of caregivers looked after a parent or parents: 55% were caring for an elderly parent and 39% for a friend, sibling or other family member. It is surprising that only 1 in 20 were caring for a spouse.¹ Although the large majority of caregivers were looking after a senior living in the same neighbourhood or surrounding area, very few were caring for someone who actually lived with them: 16% of women and 11% of men.

Caregiving hours vary widely

The time spent on eldercare depends on many social and economic influences that determine caregivers' sense of duty and responsibility; in practical terms, it depends on their capacity to help. Although caregivers in general devoted an average of 4.2 hours per week to caring for seniors, the amount of time any individual spent varied enormously. With less free time, it is no surprise that caregivers employed full-time spent less than 3.5 hours per week on eldercare, while those who were not in the paid workforce spent almost 6 hours. On the other hand, most people providing care to more than one person devoted less time to eldercare than those who were responsible for only one person. And caregivers who had been providing care for more than two years dedicated fewer hours per week than those who had spent less than six months looking after a senior.

1. The literature indicates that a much larger proportion of people are providing care to spouses. Spousal care may have been undercounted by the GSS because respondents considered it to be part of their regular duties as a wife or husband, not a separate responsibility.

The characteristics of the senior receiving care also played a role in time spent on eldercare. Although all care receivers had a health problem, those who were so ill they had died in the 12 months preceding the survey required almost 10 hours of care per week; in contrast, less than 4 hours were needed by younger care receivers aged 65 to 74. And although very few caregivers were providing eldercare to a husband or wife, the amount given (16 hours a week) was three to five times greater than that dedicated to other family members, including a parent.

Significant predictors of caregiving hours differ for women and men

To identify the factors with a statistically significant effect on hours of caregiving, a stepwise regression was performed. This technique calculates the effect of a change in one variable, while holding the effect of all other variables constant. Since the characteristics of women and men caregivers are quite different, two separate models were run, with results showing that significant predictors of caregiving hours are not the same for women as for men.

For women, four characteristics affect hours of eldercare. Assuming all other factors remain constant, women who were primary caregivers spent an additional 3.6 hours per week on eldercare than those who were not. On the other hand, women providing care to a senior who lived outside the household devoted 8 to 10 hours less than those who looked after a senior in the home. Presumably, caring for someone with whom they are not living severely constrains the amount of time women are able to devote to the task.

The health of the care receiver also affects the time allocated to care, when all other factors are controlled for. Women helping seniors who had recently died had dedicated 4 more hours than those who were looking after someone younger and healthier. This is to be expected, since very ill seniors probably needed time-consuming palliative care.

The emotional quality of the relationship was also significant; women helping seniors they felt close to devoted nearly 3 hours more per week to the task, perhaps because emotional closeness instils a greater sense of obligation.

As was the case with women, primary caregiver status and the frailty of the senior are significant predictors of the hours that men spend on eldercare. Men who were primary caregivers spent an additional 2.5 hours per week on eldercare, while caring for a senior who was very ill demanded 5 more hours. However, most significant factors were different than those for women. The relationship to the care receiver was key for men: men who were looking

Six in ten caregivers have been providing eldercare for more than two years

	% of caregivers			Average hours per week		
	Total	Women	Men	Total	Women	Men
TOTAL	100	100	100	4.2	5.0	3.0
Caregiver is employed full-time	56	47	71	3.4	4.2	2.6
... employed part-time	12	15	7	4.0	4.6	2.3
... not in labour force	32	38	22	5.8	6.2	5.0
Caregiver is a primary caregiver	34	39	27	8.0	8.8	6.2
... not a primary caregiver	66	61	73	2.3	2.6	1.9
Caregiver is caring for spouse or partner	5	5	4	16.0	15.8	16.3
... for parent	55	57	54	4.5	5.2	3.4
... for sibling	4	4	3	4.4	5.4	2.5
... for other family member	16	16	17	3.0	4.1	1.3
... for friend	19	18	21	2.3	2.8	1.6
... for other	1	1	--	1.3	1.5	0.6
Caregiver feels very close to care receiver	52	55	47	5.7	6.4	4.5
... close	30	31	30	3.3	4.2	1.9
... does not feel close	18	15	23	1.7	1.8	1.6
Caregiver provides care for less than 6 months	13	14	13	5.3	7.1	2.4
... for 6 to 12 months	11	10	12	3.8	4.6	2.8
... for 1 to 2 years	16	16	15	4.7	4.2	5.5
... for more than 2 years	60	60	61	4.0	4.8	2.6
Caregiver is caring for one person	30	28	33	5.0	6.2	3.3
... for two people	32	31	33	4.0	5.4	1.9
... for three	19	21	15	3.4	2.9	4.5
... for four	12	12	13	5.1	6.2	3.5
... for five or more	8	9	6	3.2	3.2	3.3
Care receiver is aged 65 to 74	29	28	31	3.6	4.8	2.0
... aged 75 to 84	41	42	41	3.8	4.2	3.2
... aged 85 and over	18	18	19	3.4	4.4	2.0
... deceased in previous year	11	12	9	9.6	9.8	9.1
Care receiver lives in same household	14	16	11	12.3	13.7	9.3
... in same neighbourhood	50	50	51	3.3	3.8	2.5
... in surrounding area	22	22	23	2.8	3.4	1.9
... less than half a day away	10	9	12	2.6	2.1	3.3
... more than half a day away	4	4	4	2.5	4.0	0.5

-- Sample too small to provide reliable estimate.

Source: Statistics Canada, 1996 General Social Survey.

after their wives spent 11 to 13 hours more per week on eldercare than those providing care to anyone else. This probably reflects the affection and obligation men feel towards their wives, as well as the stark reality that no one else is as readily available to help.

The effect of months already spent providing care is quite pronounced. After controlling for other factors, men with one to two years' caregiving experience allocated 2 hours more per week than men who had been caregiving for less than 6 months, perhaps because they were helping someone whose needs had escalated over time. Marital status also proved to be important, since widowers spent 4 hours more per week on eldercare. And as the number of persons being cared for increased, so did the amount of time men devoted to the task: 36 minutes per week for each additional person.

Although the findings of the regression analysis are useful and interesting, they explain only part of the variation in the time spent caregiving by women (25%) and by men (35%). These results are typical of social science research, and suggest that not all the best predictors of caregiving are demographic or socioeconomic. Rather, they are more complex interpersonal elements that may be impossible to capture in a quantitative survey.

The more help caregivers provide, the more stressed their lives become

Although helping an elderly parent, other family member or friend is generally an act of love, it can be stressful and time consuming. Often it conflicts with the caregiver's other obligations or with activities that she or he would like to pursue. From questions that caregivers were asked about the effect of eldercare on their own lives, a set of "consequences indices" was constructed.² Then, a number of regressions were run to determine whether the number of hours devoted to care had a significant effect on those four key areas of the caregiver's life.

Not surprisingly, the highest level of psychological and emotional burden was experienced by those caregivers who spent the most time providing care. Difficulty balancing work and family, lack of free time, wishing that someone else would take over, and anger with the person they were looking after were some of the concerns expressed by caregivers. Most women (83%) and men (89%) who spent 7.5 hours or more per week helping seniors reported some level of burden. And with every extra hour of care, the level of

stress climbed: women's score on the burden index increased by 0.4% and men's by 0.6%.

Providing care often imposes substantial restrictions on social activities, holiday plans, finances and sleep patterns. Some 45% of women and 54% of men who provided at least 7.5 hours of care a week reported that at least three of these four elements had changed as a result of their eldercare responsibilities. For every additional hour of care provided, both women's and men's scores on the social consequences index increased by 0.8%.

The economic consequences of caregiving — putting off plans to enrol in education or training, declining a job offer, turning down a job transfer or promotion — were significant for men but not for women. The percentage of men reporting that their obligations had delayed their plans escalated from 5% to 34% as care demands rose from less than 2

to over 7.5 hours per week. In fact, every additional hour of care provided to a senior raised men's score on the postpone index by 1.2%. Such lost opportunities can result in lifelong disadvantages in terms of employment, income and pension contributions.

It seems reasonable to assume that caregivers who do more would feel less guilty about not doing enough. Interestingly, this was not true of women, but it was the case for men. The more time men spent caregiving, the less likely they were to feel that they should be doing more or that they could do a better job. For example, 65% of men who spent less than two hours a week providing care experienced high levels of guilt, but just 52% of those who spent over 7.5 hours felt this way. For every additional hour of eldercare, men's score on the guilt index declined by nearly 1%. In contrast, additional hours of caregiving did not have a significant effect on women's score on the guilt index.

Summary

Although this article does not examine all factors associated with the time people spend on eldercare, it is possible to draw some conclusions about Canada's caregivers. In general, committed caregivers devote more time when a greater need exists. Women who spent the most time helping seniors were primary caregivers who cared for dying relatives, lived with them, and were emotionally close to them. Similarly, the men who devoted most time to these tasks also were primary caregivers looking after their wives.

For both men and women, longer hours of care resulted in greater emotional and psychological burden and greater personal consequences. But only men reported feeling less guilt the more time they spent caregiving. And men were

Men looking after their wives spend 11 to 13 hours more per week on eldercare

2. The consequences indices include the emotional and psychological burden index, the social index, the postpone index and the guilt index.

much more likely to postpone educational and job opportunities to fulfil their caregiving obligations — something that may profoundly affect their current and future financial situation.

It is fair to say that all stakeholders — caregivers, seniors, and government — prefer community care to institutional care for seniors. However, the current trend to community-based care, combined with the diminishing availability of informal caregivers, increases the risk of burnout for caregivers. Paradoxically, caregiver burnout may lead to the very outcome that everyone is trying to avoid: a greater need for institutionalization.

Programs and policies that assist with eldercare may help those caregivers most at risk of burnout. Similarly, home-care training and more readily available family-related leave from work may increase caregivers' competency and time, thereby reducing some of the stress associated with eldercare.

This article is adapted from *Eldercare in Canada: Context, Content and Consequences*, Statistics Canada, Catalogue no. 89-570-XPE.

CST

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S O C I A L I N D I C A T O R S

	1990	1991	1992	1993	1994	1995	1996	1997	1998
ECONOMY									
<i>Annual % change</i>									
Gross Domestic Product	3.3	0.8	2.2	3.8	5.9	5.2	3.3	4.8	2.5
Total personal income	7.3	3.3	2.6	2.0	2.0	4.0	2.2	3.7	4.0
Expenditures on goods and services ¹	1.3	-1.4	1.8	1.8	3.1	2.1	2.5	4.2	2.8
Consumer Price Index ²	4.8	5.6	1.5	1.9	0.2	2.2	1.6	1.6	1.0
Saving rate (%)	9.5	9.5	10.2	9.5	7.6	7.4	5.4	2.1	1.2
Prime lending rate	14.06	9.94	7.48	5.94	6.88	8.65	6.06	4.96	6.60
5-year mortgage rate	13.35	11.13	9.51	8.78	9.53	9.16	7.93	7.07	6.93
Exchange rate (with U.S. dollar)	1.167	1.146	1.209	1.290	1.366	1.372	1.364	1.385	1.484
ENVIRONMENT									
Number of days with airborne particles exceeding objectives (Canada average)	4.7	8.2	6.6	6.1	–	–	–	–	–
Number of hours ground-level ozone exceeded objectives (Canada average)	8.8	14.8	4.9	3.1	6.5	–	–	–	–
Number of days per year air quality rated as poor									
CMA of Toronto	16	29	9	12	14	14	–	–	–
CMA of Montréal	3	4	6	3	3	5	–	–	–
CMA of Vancouver	2	7	–	–	1	–	–	–	–
Billions of public transit passengers	1.48	1.43	1.41	1.38	1.35	1.37	1.35	1.38	–
% of class 1 farmland used by urban areas	–	9.9	–	–	–	–	11.2	–	–
JUSTICE									
Rate per 100,000 population									
Total Criminal Code offences	9,454	10,313	9,982	9,467	9,042	8,913	8,828	8,355	–
Property offences	5,593	6,143	5,870	5,534	5,209	5,236	5,213	4,817	–
Violent offences	970	1,056	1,078	1,074	1,038	998	990	980	–
Other Criminal Code offences	2,891	3,114	3,034	2,860	2,795	2,678	2,625	2,558	–
Average days to process case through courts									
Adults	–	–	–	–	135	141	148	157	–
Youths ³	–	–	101	112	111	118	117	105	–
Average length of sentence per case									
Adults (days in prison)	–	–	–	–	125	132	137	142	–
Youths (days of open and secure custody)	–	–	92	92	88	82	79	74	–
CIVIC SOCIETY									
Voter turnout in federal elections	–	–	–	69.6	–	–	–	67.0	–
% of eligible foreign-born holding citizenship	–	81.0	–	–	–	–	83.0	–	–
Attendance at heritage institutions ('000) ⁴	–	113,785	108,836	108,194	111,236	–	–	–	–
Government expenditures on culture and heritage (millions\$) ⁵	–	–	4.631	4.606	4.532	4.520	–	–	–
% attending religious services at least several times a year	54	54	56	52	54	51	50	–	–
% of taxfilers making charitable donations	30	30	29	28	27	27	27	26	–
Average amount of charitable donations (current dollars)	545	567	586	610	634	647	728	808	–

– Data not available.

1. Data in 1992 dollars.

2. 1992 = 100.

3. Excludes Alberta.

4. Includes only not-for-profit institutions that have an educational and/or interpretive component: nature parks, historic sites, museums, archives and other institutions.

5. Excludes intergovernmental transfers. Data in 1986 dollars.

EDUCATORS' NOTEBOOK

Suggestions for using Canadian Social Trends in the classroom

Lesson plan for “Seniors behind the wheel”

Objectives

- To explore the importance of driving for seniors
- To consider Canadians' dependence on the car

Method

1. Read the article, “Seniors behind the wheel,” and list at least four transportation issues that differentiate the situation of rural or small town and urban seniors.
2. A neighbour is recently widowed. Since her husband used to do all the driving and she doesn't feel comfortable sitting behind the wheel, she has chosen to sell the family car. Can you suggest some transportation options for her? She will regularly need to go to the grocery store, seniors' club and doctor. She will also want to visit her grandchildren and friends.
3. Why do you think senior men are more likely than senior women to drive? Predict if this situation will continue in the future. Explain your answer.
4. Do you agree with mandatory medical examinations for senior drivers? What should they be tested for? The requirements for medical and other tests vary from province to province. Why is that so?
5. Do you think seniors are safer drivers than 16- to 24-year-olds? How would you measure “safe driving”? What are some of the differences and similarities between the driving habits of individuals in these age groups?
6. Take a quick poll of students in the class to find out how many have a car in their family. Some teenagers are allowed use of the family car. How should they share the responsibility of paying for insurance, gas and maintenance?

Using other resources

- Canada's Changing Retirement Patterns: Findings from the General Social Survey*. 1996. Statistics Canada, Catalogue no. 89-546-XPE.
- A Portrait of Seniors in Canada*. 1997. Statistics Canada, Catalogue no. 89-519-XPE.
- “Seniors 75+: Living arrangements and lifestyle.” *Canadian Social Trends*, Autumn 1993.
- “Behind the wheel: Canadians and their cars.” *Canadian Social Trends*, Autumn 1994.

Share your ideas!

Do you have lessons using **CST** that you would like to share with other educators? Send us your ideas and we will ship you lessons using **CST** received from other educators. For further information, contact Joel Yan, Dissemination Division, Statistics Canada, Ottawa K1A 0T6, 1 800 465-1222; fax: (613) 951-4513 or Internet e-mail: yanjoel@statcan.ca.

EDUCATORS

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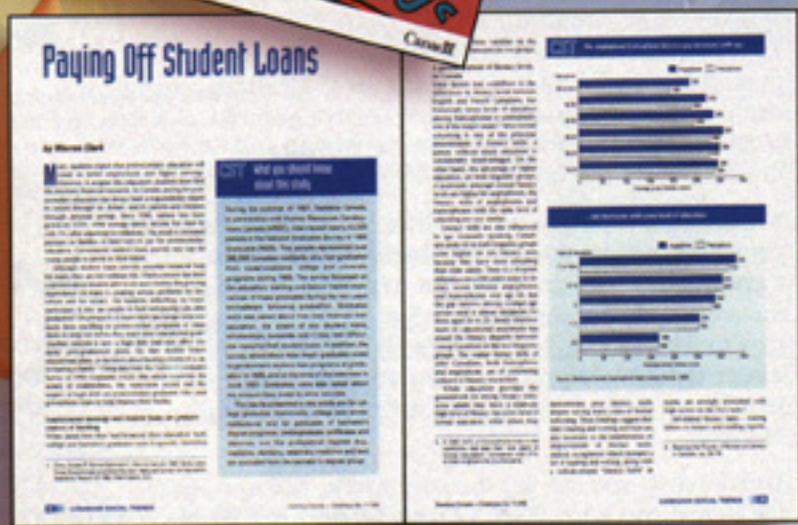
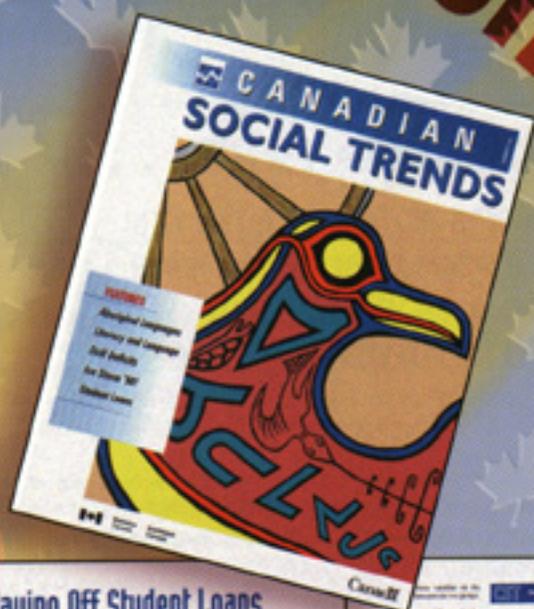
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