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Canadians' Use of Crime Prevention Measures 2004

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Canadians' Use of Crime Prevention Measures

2004

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Note of appreciation

Canada owes the success of its statistical system to a long-standing partnership between Statistics Canada, the citizens of Canada, its businesses, governments and other institutions. Accurate and timely statistical information could not be produced without their continued cooperation and goodwill.

Preface

This series of profiles provides analysis on a variety of topics and issues concerning victimization, offending and public perceptions of crime and the justice system. The profiles primarily draw on results from the General Social Survey on victimization. Where applicable, they also incorporate information from other data sources, such as the Census of the Population and the Incident-based Uniform Crime Reporting Survey.

Examples of the topics explored through this series include: Victimization and offending in Canada's territories, Canadians' use of crime prevention measures and victimization of older Canadians. This is a unique periodical, of great interest to those who have to plan, establish, administer and evaluate justice programs and projects, or anyone who has an interest in Canada's justice system.

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Highlights

- According to the 2004 GSS, many Canadians employ routine precautionary measures to protect themselves and their property from crime. Nearly six in ten Canadians regularly locked car doors for safety when alone in the car; and four in ten routinely planned their route with safety in mind or checked the back seat for intruders when returning to the car alone.
- Throughout their lifetime, a sizeable number of Canadians will also take protective measures to guard themselves and their property from crime. About one third of Canadians reported that at some point during their lifetime they have changed their routine or avoided certain places (35%); installed burglar alarms or motion detectors (34%); and installed new locks or security bars (31%) as a means of crime prevention.
- Women were more likely than men to report employing protective measures during their lifetime and, in particular, were more likely than men to routinely take precautionary measures against criminal victimization. For example, women were five times more likely than men to stay home at night for fear of going out alone and were about twice as likely to check for intruders when returning to their car alone.
- In general, individuals who had been the victims of crime in the 12 months preceding the 2004 GSS were more likely than those not so victimized to have employed crime prevention measures. Furthermore, the use of crime prevention techniques increased with the number of victimizations.
- Higher levels of education and personal income were also among the personal characteristics associated with the use of crime prevention measures.
- Usage of crime prevention strategies was generally, more common among urban-dwellers than among those living in rural areas. However, rural residents were more likely to have ever obtained a dog or a gun to protect themselves or their property from crime.
- Individuals who believed that crime in their neighbourhood had increased in the past five years; those who felt crime in their neighbourhood was higher relative to other areas in Canada; and those who indicated that socially disruptive conditions were characteristic of their neighbourhood were more likely to employ crime prevention measures compared to those who did not report these perceptions.

Introduction

Note: Throughout this paper, the term 'crime prevention measures' is used generally, to refer to lifetime protective measures and routine precautionary measures.

Individuals' exposure to crime, directly as victims or indirectly through media accounts and experiences of family, friends, and acquaintances, can vary considerably. Similarly, the way in which people respond to crime, fear crime and perceive their risk of victimization will depend on their own personal experiences and characteristics, household characteristics, and the neighbourhoods in which they live. Using the 2004 General Social Survey (GSS) on victimization, it is possible to examine the various crime prevention measures employed by Canadians to protect themselves and their property from crime.

Approaches to preventing criminal victimization may be grouped into two broad categories: crime prevention through social development, and situational crime prevention strategies. Strategies for crime prevention through social development consider the contextual factors (e.g., social, economic, cultural) related to crime and victimization and look to avert crime by eliminating its root causes (National Crime Prevention Strategy, 2002). Situational crime prevention measures include a wide range of practises and activities aimed primarily at reducing criminal victimization by limiting the opportunities for and attractiveness of criminal endeavors, and by increasing the risk of apprehension for offenders (National Crime Prevention Centre, 2000). It is the use of these situational crime prevention measures on which the GSS focuses.

In addition to looking at the types of strategies employed, the GSS is also sheds light on who is most likely to employ crime prevention measures to increase their personal safety. Results show that personal characteristics, such as sex and personal income, along with household characteristics, such as the type of dwelling, can play a critical role in determining the crime prevention strategies that people employ. However, perceived characteristics of the neighbourhood, namely perceptions of crime, have the greatest, consistent impact on overall use of prevention techniques. Those who felt crime had increased in their neighbourhood and those who believed crime was higher in their neighbourhood compared to other areas in Canada were most likely to employ crime prevention measures. Overall, these findings on Canadians' use of prevention measures were similar to those from the previous survey conducted five years prior, in 1999.

Text box 1

Types of crime prevention measures

Respondents to the GSS were asked about the measures they employed in order to protect themselves from crime. These were separated into two types: measures ever used during one's lifetime or 'lifetime protective measures'; and measures employed regularly or 'routine precautionary measures'.

Lifetime protective measures:

The GSS asked respondents if they had ever, in their lifetime, done any of the following things to protect themselves or their property from crime: changed their routine, activities or avoided certain places; installed new locks or security bars; installed burglar alarms or motion detector lights; taken a self-defence course; changed their phone number; obtained a dog; obtained a gun; or changed residence or moved.

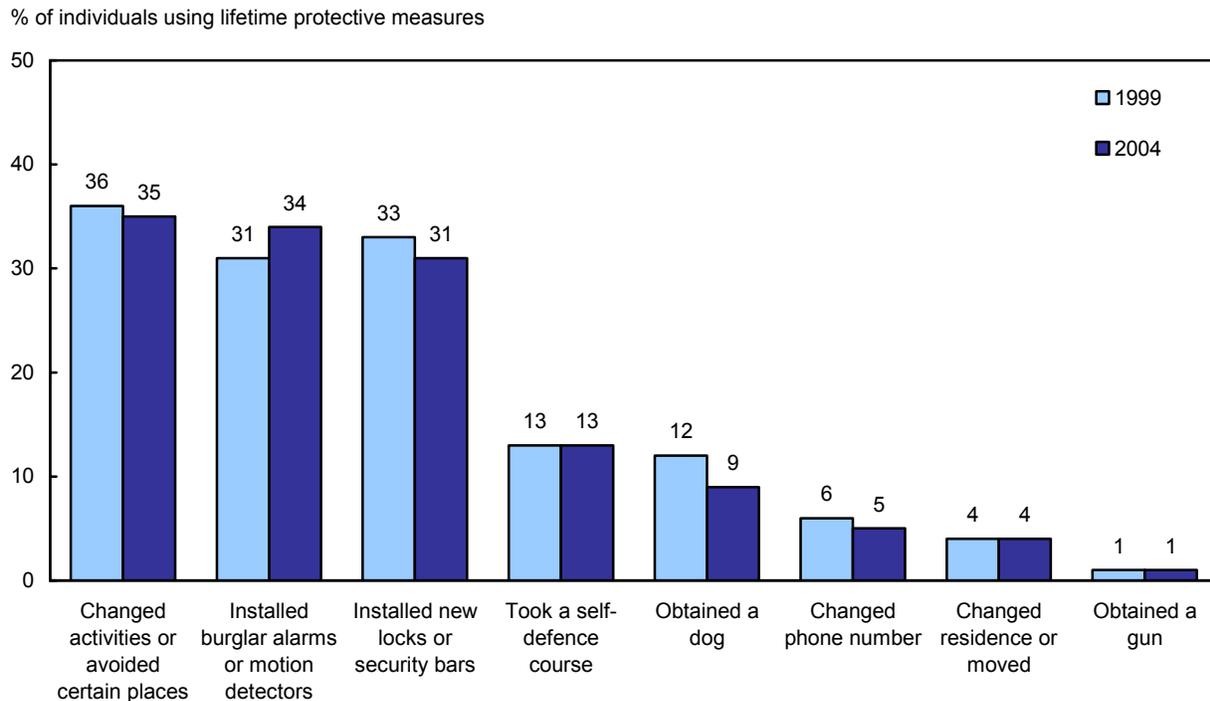
Routine precautionary measures:

The survey also asked respondents if they routinely did any of the following things to make themselves safer from crime: carry something to defend themselves or to alert other people; lock the car doors for their personal safety when alone in the car; when alone and returning to a parked car, check the back seat for intruders before getting into the car; plan their route with safety in mind; or stay at home at night because they are afraid to go out alone.

Canadians' use of protective and precautionary measures

Findings from the 2004 General Social Survey (GSS) show that among all lifetime protective measures, Canadians were most likely to have changed their routine or avoided certain places (35%), installed burglar alarms or motion detectors (34%) and installed new locks or security bars (31%) (Figure 1). They were least likely to have employed more extreme measures, namely changing phone numbers (5%), moving residences (4%), and obtaining a gun (1%). These findings were comparable to those from the last GSS on victimization conducted in 1999.

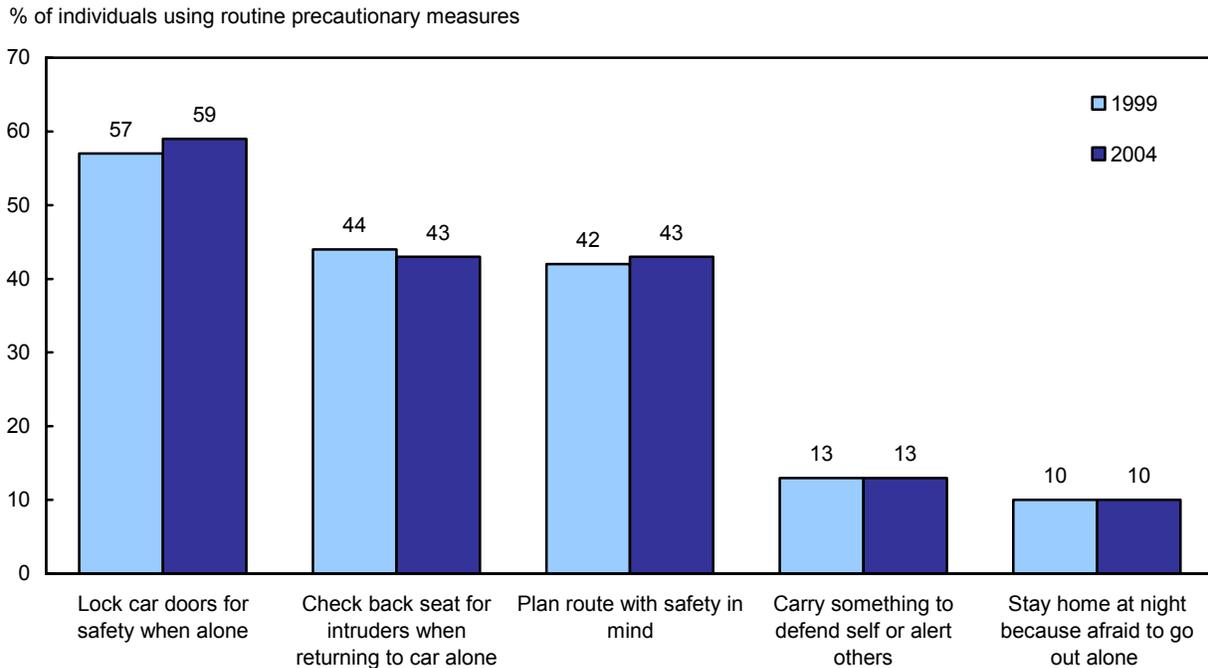
Figure 1
Changing activities or avoiding certain places among most common lifetime protective measures employed, 1999 and 2004



Note: Figures do not add to 100% due to multiple responses.
Source: Statistics Canada, General Social Survey, 1999 and 2004.

The use of routine precautionary measures was more common than the use of lifetime protective measures. Nearly six in ten Canadians routinely locked car doors for safety when alone in the car, while an equal proportion of individuals (43% each) regularly planned their route with safety in mind or checked the back seat for intruders when returning to the car alone (Figure 2). As with measures that have ever been taken over the person's lifetime, efforts that were more extreme were less frequently employed. Specifically, only one in ten people stated that they stayed home at night because they were afraid to go out alone.

Figure 2
About six in 10 people routinely lock car doors for safety when alone, 1999 and 2004



Note: Figures do not add to 100% due to multiple responses.
Source: Statistics Canada, General Social Survey, 1999 and 2004.

Moreover, Canadians who expressed greater concerns about their personal safety were more likely than those who did not share such concerns to seek protection from victimization by employing prevention strategies. Specifically, about nine out of ten individuals who expressed at least a moderate level of dissatisfaction with their personal safety had ever used a protective measure during their lifetime, compared to two-thirds of those who were at least somewhat satisfied with their safety. Similarly with regards to routine precautionary measures, usage was also higher among those who reported dissatisfaction with their personal safety from crime relative to individuals who were generally satisfied with their wellbeing (92% versus 76%, respectively).

The impact of personal and household characteristics on the use of crime prevention measures

Personal characteristics

The likelihood that a person will take preventive actions or modify their behaviours and lifestyles to prevent criminal victimization will often depend on their demographic and personal characteristics. Activities and behaviours intended to reduce the risk of victimization were most common among women, recent victims of crime¹, and the well-educated (Table 1).

Table 1
Crime prevention measures taken to protect self or property by personal characteristics, 2004

	Protective measures ¹	Precautionary measures ²
	Percent population aged 15 and over	
Total	66	76
Sex		
Females	68	88
Males	64	65
Age		
15 to 24	63	74
25 to 34	66	75
35 to 44	70	75
45 to 54	69	75
55 to 64	68	80
65 and over	60	81
Marital status		
Common-law	67	69
Married	68	78
Separated/divorced	68	79
Single	64	74
Widow	55	81
Education		
Less than high school	56	74
High school diploma	64	78
Some post-secondary/college diploma	70	77
University degree	71	78
Personal income		
Less than \$15,000	62	79
\$15,000 to \$29,999	65	79
\$30,000 to \$39,999	68	76
\$40,000 to \$59,999	71	74
\$60,000 or more	73	70
Immigrant status		
Immigrant	62	80
Non-immigrant	67	75
Aboriginal status		
Aboriginal	69	78
Non-aboriginal	66	76
Visible minority		
Visible minority	61	82
Non-visible minority	67	75
Number of evening activities		
Less than 10	60	78
10 to 19	68	78
20 to 29	69	76
30 and more	68	74
Victimization in the previous 12 months		
Not victimized	61	75
Total victimized	79	80
One time	74	79
Two times	84	82
Three or more times	87	83

1. Protective measures or measures ever taken in one's lifetime to prevent crime include: changing one's routine, activities or avoided certain places; installing new locks or security bars; installing burglar alarms or motion detector lights; taking a self-defense course; changing one's phone number; obtaining a dog; obtaining a gun; or changing one's residence or moving.

2. Precautionary measures or measures routinely taken to make oneself safer from crime include: carrying something to defend oneself or to alert other people; locking the car doors for personal safety when alone in the car; when alone and returning to a parked car, checking the back seat for intruders before getting into the car; planning one's route with safety in mind; or staying at home at night because one is afraid to go out alone.

Source: Statistics Canada, General Social Survey, 2004.

Crime prevention measures used more often by women

When examining measures ever taken over a lifetime, women were more likely than their male counterparts to have employed measures to protect themselves from crime. Specifically, they were more likely to have changed their phone number at some point in time (7%, versus 3% of men), obtained a dog (11% versus 8%) and changed residences (5% versus 3%). In addition, a greater proportion of women physically withdrew from risky situations by changing activities or avoiding certain places (40%, compared to 31% of men). There were no gender differences in activities related to protecting the home from intruders, such as installing new locks and burglar alarms (32% of women and 31% of men).

When asked about five types of routine measures, women were also much more likely than men to have used all five measures. For example, about three-quarters (74%) of women stated that they locked their car doors for safety when alone, compared to less than half of men (44%). Similarly, over half of women (57%) checked for intruders when returning to their vehicles alone, while only 29% of men did so. Women were also five times more likely than men to stay home at night because they were fearful to go out alone (16% versus 3%). Again, these findings are similar to results from the 1999 GSS.

One explanation for the greater use of prevention measures among women may be related to their higher levels of fear relative to men. In 2004, women were over twice as likely as men to indicate that they felt fearful when walking alone in their neighbourhood after dark.² They were also more likely than men to express fear of crime when using public transit alone at night³ (58% versus 29%) and staying home alone at night (27% versus 12%).

Older Canadians no more likely to use routine prevention measures

Despite the inherently longer period of time to have ever engaged in crime prevention measures, people aged 65 years of age and older were no more likely to have used protective measures compared to younger adults. In fact, older Canadians were nearly half as likely as those aged 25 to 44 years to have ever changed their activities or avoided certain places to reduce their risk of victimization (23% versus 40%). They were also three times less likely to have taken a self-defence course compared to 15 to 24 year olds, the age group most likely to have taken such a course (6% versus 19%).

Routinely staying home at night for fear of going out alone was the only precautionary measure more commonly employed by older adults (15% compared to 11% of those aged 55 to 64 years, and 9% of those aged 35 to 54). This is consistent with results from the 1999 GSS.

Those who had been the victim of a crime in the last 12 months were more likely to use crime prevention measures

In general, individuals who had been the victims of crime in the 12 months preceding the 2004 GSS were more likely than those not so victimized to have employed protective measures during their lifetime. This was particularly evident for changing activities or avoiding certain places, as well as installing new locks or security bars. More than half of victims (52%) indicated that they modified their activities at some point in their lives to prevent victimization, compared to 29% of non-victims. Installing new locks or security bars was employed at least once by 42% of victims and only 27% of non-victims. It is not possible to determine from the survey whether these measures were undertaken prior to respondents' experiences of victimization or as a consequence of their victimization.

Victims also reported greater use of routine measures, with the exception of staying home at night to avoid victimization. In this case, victims and non-victims were equally as likely to employ the measure (10% each).

The use of prevention strategies steadily increased with the number of victimizations. For example, 45% of those who had been victimized once in the year prior to the 2004 GSS reported that during the course of their lifetime they had modified their activities as a protective measure. This proportion increased to 65% among those who had experienced three or more victimizations over the same 12-month period.

There was, however, no difference among single and multiple victims in their likelihood of ever installing burglar alarms or motion detectors and routinely locking car doors for safety when alone.

Socio-economic status linked to use of precautionary measures

Indicators of socio-economic status, such as education and personal income, have also been found to be related to the use of protective and precautionary measures. Consistent with findings from the previous GSS on victimization (Ogg, 2001), higher levels of education generally increased the likelihood of using crime prevention measures. In particular, university-educated individuals were most likely to have ever physically withdrawn from places to elevate their personal safety. Four in ten people with a university degree changed activities or avoided certain places, compared to 26% of people with less than a high school education. Installing security features on homes, such as locks, security bars, burglar alarms or motion detectors was also more common among the well-educated.

Staying at home at night was the one precautionary measure that was more frequently employed by those with less than a high school education (13% compared to 8% of university educated).

When asked about the protective strategies ever employed in their lifetime, individuals with higher personal incomes were most likely to state that they had changed activities, installed new locks or burglar alarms, and taken a self-defence course. In particular, the likelihood of installing burglar alarms or motion detectors consistently increased with personal income. Just over one-quarter of individuals with incomes less than \$15,000 installed burglar alarms, compared to 34% of people with an income between \$30,000 and \$39,000, 39% with an income between \$40,000 and \$59,999, and 45% with an income of \$60,000 or more.

Despite the fact that individuals with higher incomes were most likely to have ever used protective strategies, they were less likely to make use of routine measures to protect themselves or their property. People with incomes of less than \$30,000 were most likely to routinely lock car doors for safety when alone, check the back seat when returning to their car alone, and remain at home at night.

Differences in the usage of lifetime and routine measures by personal income level may be partially explained by the availability of financial resources. In some cases, implementing lifetime protective measures necessitates financial resources, such as the purchase of an alarm system or installing security bars. In contrast, routine precautionary measures are often behavioural patterns that entail little or no financial cost, such as staying home at night because of fear of going out alone. Moreover, the installation of security bars, burglar alarms or motion detectors is likely linked to homeownership which, in turn, may be associated with greater financial resources.

Currently married and separated or divorced persons more likely than others to protect home

Making crime prevention modifications to the home or 'target hardening' was more frequently used by currently- or ever-married persons. Specifically, installing burglar alarms or motion detectors was most common among married persons (40%), while installing new locks or security bars was most prevalent among married persons and those legally separated and divorced (35% each).

Single persons were more likely to have ever taken a self-defence course, while widowed persons, who often tend to be older, were more likely to routinely stay home at night because of fear of going out alone. There were few other notable differences by marital status in the use of additional prevention measures.

Aboriginal people more likely than non-Aboriginal people to use crime prevention measures

According to the 2004 GSS, Aboriginal people were more likely than non-Aboriginal people to have been the victims of crime (40% versus 28%), and were 3 times more likely than non-Aboriginal people to have experienced violent victimization (Brzozowski, Taylor-Butts and Johnson, 2006). Similarly, Aboriginal status is also closely related to using protective and precautionary strategies. Most significantly, the proportion of Aboriginal people who had ever changed their phone number was more than double the

proportion for non-Aboriginal people (13% versus 5%). Routine measures were also more common among the Aboriginal population, with the greatest difference occurring in the proportion planning their route with safety in mind (49% versus 43%).

Target hardening, however, was less common among the Aboriginal population. In fact, installing burglar alarms or motion detectors was more often employed by non-Aboriginal people (34% versus 22%). This finding may be related to the fact that non-Aboriginal people, on average, have higher incomes and may be more likely to own homes than the Aboriginal population (Statistics Canada, 2001).

Visible minorities and immigrants were more likely to routinely employ some precautionary measures⁴

There were very few differences between visible minorities and non-visible minorities in the likelihood of utilising lifetime protective measures to prevent crime. However, visible minorities were much more likely to routinely employ precautionary measures. Specifically, they were twice as likely to stay home at night, 1.7 times as likely to carry something to defend themselves and 1.4 times more likely to plan their route with safety in mind. This may be due in part to their higher levels of fear compared to the non-visible minority population. According to the GSS, visible minorities were less likely than others to report feeling safe walking alone in their neighbourhood at night (84% compared to 90%).

While there were few differences in crime prevention measures between immigrant and Canadian-born individuals, immigrants were less likely to change activities or avoid certain places compared to their Canadian-born counterparts (32% versus 36%). On the other hand, immigrants were more likely than Canadian-born persons to routinely plan their route with safety in mind (50% versus 41%) and regularly stay at home at night because of fear of going out alone (15% versus 8%).

Household characteristics

While the decision to take protective strategies is often related to personal characteristics, there are also significant differences in the use of crime prevention strategies by characteristics of the household, such as the location of the home, whether the home is owned or rented, and the type of dwelling (Table 2). The most consistent household factor was the location of the home, namely whether or not it was located in an urban setting.

Table 2
Crime prevention measures taken to protect self or property by household characteristics, 2004

	Protective measures ¹	Precautionary measures ²
	Percent population aged 15 and over	
Total	66	76
Location		
Urban	68	79
Rural	58	68
Type of dwelling		
Apartment	58	79
Other	63	73
Semi-detached, row house, duplex	66	80
Single detached	68	75
Household size		
1 person	62	77
2 persons	68	78
3 persons	66	75
4 or more persons	67	75
Ownership of home		
Owned	69	76
Rented	59	77
Length of residence		
Under one year	65	76
1 to under 3 years	66	77
3 to under 5 years	68	76
5 to under 10 years	68	77
10 years or more	66	76

1. Protective measures or measures ever taken in one's lifetime to prevent crime include: changing one's routine, activities or avoided certain places; installing new locks or security bars; installing burglar alarms or motion detector lights; taking a self-defense course; changing one's phone number; obtaining a dog; obtaining a gun; or changing one's residence or moving.
2. Precautionary measures or measures routinely taken to make oneself safer from crime include: carrying something to defend oneself or to alert other people; locking the car doors for personal safety when alone in the car; when alone and returning to a parked car, checking the back seat for intruders before getting into the car; planning one's route with safety in mind; or staying at home at night because one is afraid to go out alone.

Source: Statistics Canada, General Social Survey, 2004.

Urbanization associated with the use of crime prevention strategies

Compared to people living in rural areas, urban-dwellers generally have higher levels of violent and household victimization and, as might be expected, are more fearful of crime. Therefore, it is not surprising that those living in an urban area were more likely to rely on crime prevention measures than persons living in a rural setting. For example, in 2004, 62% of urban residents reported routinely locking car doors for safety when alone in the vehicle, compared to 48% of rural residents. Other considerable differences between urban and rural residents related to avoidance behaviours, namely having ever changed activities or avoided certain places (37% versus 27%) and routinely staying home at night because of fear of going out alone (11% versus 5%). Installing new locks or security bars was also a considerably more common practice among urban residents (34% versus 23% of rural residents).

While preventive measures were almost consistently more common in urban areas, there were two exceptions. Rural residents were more likely to have ever obtained a dog or a gun to protect themselves or their property from crime. These findings may reflect urban-rural cultural differences, stemming from the traditional use of guns and dogs by farmers to protect livestock from other animals.

Owning a home, living in a single detached home and residing in the same home for a long period increase security-related modifications to the home

Over one-third (34%) of home owners installed new locks or security bars, compared to 26% of renters. The difference was even more pronounced for obtaining alarm systems or motion detectors, where home owners were over 2.5 times as likely to have engaged in this target hardening measure. Renters may be less likely than homeowners to target harden for a number of reasons, such as a reduced need to do so, limitations on their ability to modify the rental property and fewer financial resources.

Specifically, landlords or property owners are typically responsible for installing and maintaining security measures. As such, many apartment buildings have controlled entries. Renters who might consider installing their own security measures, however, may be deterred from doing so by the need to obtain permission prior to making any such modifications to the home. In addition, the average personal income of homeowners is higher than that of renters, meaning that renters may have fewer financial resources available to spend on security measures, compared to homeowners.

Given that homeownership is greatest for single detached homes (91%) and lowest for apartments (19%), it is not surprising that residents of single detached homes were over twice as likely to have installed burglar alarms or motion detectors (40%, versus 14% of apartment dwellers). Persons in single detached homes were also more likely than other residents to have ever installed new locks or security bars to prevent crime.

Greater residential stability also increased the likelihood of target hardening. That is, as the length of residency increased, so did the percentage of people who obtained new locks, security bars, burglar alarms and motion detectors on their home. For instance, 24% of people residing in their home for less than one year obtained a burglar alarm system, compared to 34% of people residing in their home between 3 and 5 years, and 37% of people residing in their home for 10 years or more.

Size of household has little impact on use of prevention measures

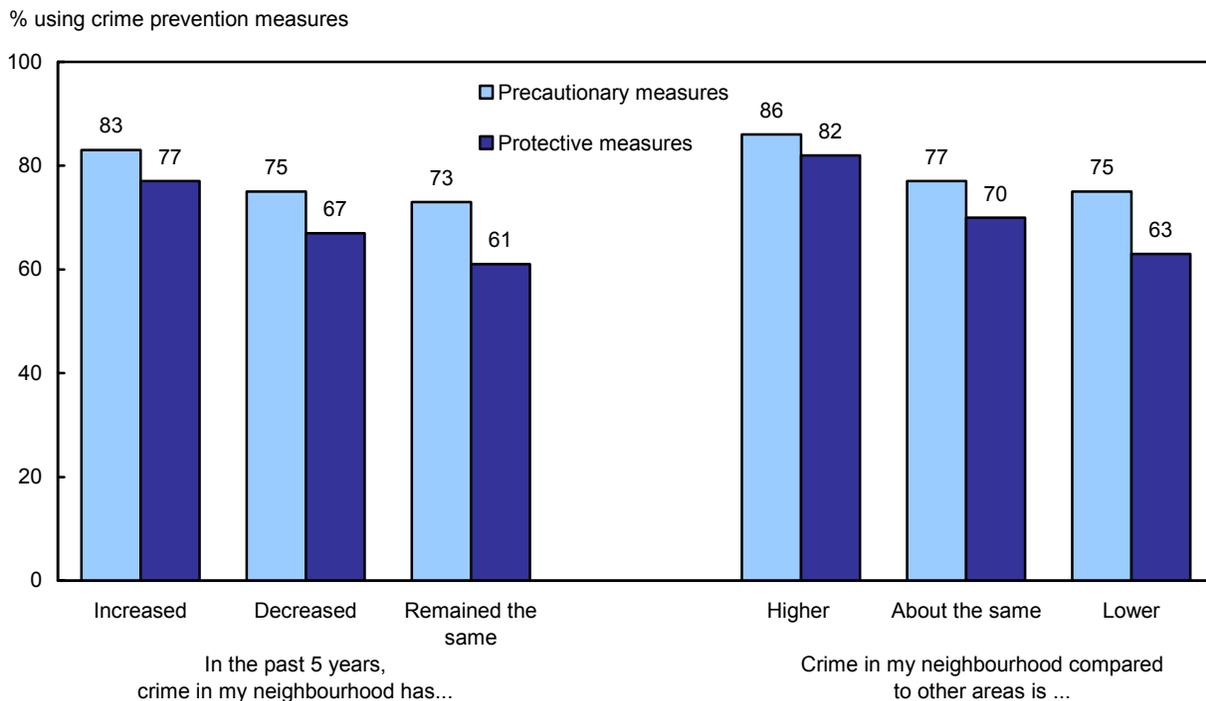
Among all the household characteristics, household size had the weakest impact on a person's use of preventive actions. The only discernible pattern occurred for routinely staying home at night because of fear of going out alone. In this case, persons living alone were most likely to stay home, while households with four or more members were least likely to employ this routine avoidance technique (15% versus 8%).

Usage of crime prevention measures and perceptions of neighbourhood crime and social disorder

Research has shown that perceptions of neighbourhood crime and social disorder can have an impact on individuals' perceived risk of criminal victimization, their fear of crime, and their subsequent use of crime prevention measures (Miethe, 1995).

The GSS asked respondents about whether they believed crime in their neighbourhood had increased in the past five years. Among all personal, household and neighbourhood characteristics, perception of neighbourhood crime had the most consistent impact on use of crime prevention strategies (Figure 3). Individuals who believed that crime had increased in the past five years were most likely to have employed protective and precautionary measures to increase their personal safety. As in 1999, the most significant difference was noted for changing activities or avoiding certain places. Nearly half (48%) of individuals who believed crime had increased engaged in this protective measure, compared to 29% of those who thought crime had remained unchanged in the past five years. Similarly, those who felt crime was higher in their neighbourhood compared to other areas in Canada were most likely to avoid places, as well as routinely stay home at night.

Figure 3
Use of prevention measures greater among those with negative perceptions of neighbourhood safety, 2004



Source: Statistics Canada, General Social Survey, 2004.

Respondents to the GSS were also asked to indicate how problematic socially disruptive conditions were in their neighbourhood. These included noisy neighbours or loud parties, people loitering in the street, people sleeping on the streets, garbage, vandalism, harassment or attacks motivated by racial, ethnic or religious intolerance, drugs, public drunkenness and prostitution.

People who identified socially disruptive conditions as problems characteristic of their neighbourhoods employed prevention measures more frequently than those who did not view these conditions as problematic. For example, 87% of those who believed that vandalism is a problem in their neighbourhood employed some form of routine precautionary measure, compared to 75% of those who did not identify vandalism as a problem in their neighbourhood.

Multivariate analysis⁵: Identifying independent factors that predict the use of prevention measures

While the analysis provides a profile of the characteristics that are associated with the use of crime prevention measures, it does not take into account that certain personal, household, and neighbourhood factors can be correlated with one another. For instance, personal income may be linked to educational attainment. However, the finding that personal income has an impact on crime prevention measures does not consider that educational attainment may play an intervening role in the relationship between income and the use of crime prevention measures. Therefore, in order to assess the independent effect of certain factors in predicting the use of protective strategies, a multivariate analysis was undertaken.

Specifically, logistic regression models were used to isolate the impact of a number of personal, household and neighbourhood factors on the most common lifetime protective measure – changing activities or avoiding certain places. These factors⁶ include: sex; age; marital status; education; income; immigrant status; Aboriginal status; victimization; number of evening activities; location of home; dwelling type; ownership of home; the perception of change in crime levels in neighbourhood over time; and the belief that one's neighbourhood had a higher amount of crime than other areas.

When the effects of all other factors were controlled⁷, the strongest independent predictors of the likelihood of ever having changed activities or avoided certain places were the following: the belief that one's neighbourhood had a higher amount of crime than other areas; being female; and the belief that neighbourhood crime levels had increased over time. Specifically, those who believed that their neighbourhood had a higher crime rate compared to other areas had two times the odds of changing their activities or avoiding certain places compared to those who felt crime levels in their neighbourhood were lower than other areas; females had odds that were 1.85 times greater than males; and those who believed that crime had increased in their neighbourhood, had odds that were 1.6 times greater than those who did not (Table 3).

In addition, factors such as being an Aboriginal person, being young, having high educational attainment, living in an urban area, and engaging in less than 10 evening activities per month were all found to elevate the odds of ever having changed activities or avoided certain places to protect oneself from crime.

Results from the model also revealed that after controlling for all other factors, being an immigrant or having a lower income decreased the odds of ever having changed activities or avoided certain places to protect oneself from crime.

Text box 2
Interpreting odds ratios

An odds ratio, a statistic generated by a logistic regression, can be used to assess whether, other things being equal, people with specific characteristics are more or less likely to use protective measures (i.e., of changing activities or avoiding certain places) than those in another group, referred to as the reference category.

Using the example of employing protective measures such as changing activities or avoiding certain places, the odds ratio is interpreted as:

Odds ratio near 1.0: The sub-group's odds of employing the protective measure (i.e., changing activities or avoiding certain places) are no more or less than those of the reference category.

Odds ratio greater than 1.0: The sub-group's odds of employing the protective measure (i.e., changing activities or avoiding certain places) are higher than those of the reference category.

Odds ratio less than 1.0: The sub-group's odds of employing the protective measure (i.e., changing activities or avoiding certain places) are lower than those of the reference category.

Table 3
Factors related to changing activities or avoiding certain places as a crime prevention measure, multivariate analysis, 2004¹

Factor	Odds ratio ²
Sex	
Female	1.85***
Male	reference
Age	
15 to 34	1.25***
35 to 54	1.28***
55 and over	reference
Marital status	
Single	0.88**
Other ³	0.92
Married/common-law	reference
Education	
Post secondary degree, diploma or certificate	1.21***
Other ⁴	reference
Income in dollars	
0 to 14,999	0.76***
15,000 to 29,000	0.78***
30,000 to 59,000	0.84**
60,000 and over	reference
Aboriginal status	
Aboriginal	1.42**
Non-Aboriginal	reference
Immigrant status	
Immigrant	0.83**
Canadian-born	reference
Number of evening activities	
Less than ten	0.87**
Ten or more	reference
Residency	
Urban	1.52***
Rural	reference
Perception of change in neighbourhood crime level in last 5 years	
Increased	1.628***
Unchanged	0.937
Decreased	reference
Perception of crime levels in one's neighbourhood compared to other areas	
Higher	2.06***
Same	1.18***
Lower	reference
Victimization	
Not victimized	0.48***
Victimized	reference

* 0.01 < p ≤ 0.05
 ** 0.001 < p ≤ 0.01
 *** p ≤ 0.001

1. Using the technique of logistic regression, the relationship of each factor to the odds of having changed activities or avoided certain places to protect oneself from crime, is examined while controlling for possible effects of other factors in the model.
 2. Indicates the odds of changing one's activities or avoiding certain places in comparison to that for the reference category, when all other factors in the model are held constant.
 3. Includes those who are widowed, divorced or separated.
 4. Includes those who have some post secondary education, a high school diploma, some secondary education, some elementary education or no schooling.

Note: p is the significance level. For example, a significance level of .05 indicates that there is a 5% probability that the survey (sample) data will suggest that there is a relationship between the variables, when no relationship actually exists in the population.

Source: Statistics Canada, General Social Survey, 2004.

Summary

People may employ a variety of strategies to manage their risk of criminal victimization. According to the 2004 GSS, Canadians most often employed crime prevention techniques that entail modifications of behavioural patterns, such as changing their routine or avoiding certain places; regularly locking car doors when alone in the car; planning their route with safety in mind; and checking the back seat for intruders when returning to the car alone. Also, the installation of alarm systems, locks and security bars was not uncommon. Less common, however, were more invasive measures such as obtaining a gun or changing residences. Moreover, results from the 2004 GSS also show that a number of personal characteristics, as well as household characteristics, and perceived neighbourhood characteristics were associated with Canadians' use of crime prevention measures.

Methodology

General Social Survey on Victimization

In 2004, Statistics Canada conducted the victimization cycle of the General Social Survey for the fourth time. Previous cycles were conducted in 1988, 1993 and 1999. The objectives of the survey are to provide estimates of the extent to which people experience incidences of eight offence types, examining risk factors associated with victimization, reporting rates to police, and measures fear of crime and public perceptions of crime and the criminal justice system.

Sampling

The 2004 GSS on victimization had a sample size of 24,000 households in the provinces that were selected using Random Digit Dialling (RDD). Once a household was chosen an individual 15 years or older was selected randomly to respond to the survey. The use of telephones for sample selection and data collection means that the 2004 GSS sample in the provinces only covers the 96% of the population that had telephone service. Households without telephones, households with only cellular phone service, and individuals living in institutions were excluded. These groups combined represented 4% of the target population. This figure is not large enough to significantly change the estimates. The response rate for the GSS Cycle 18 sample was 75%.

Data limitations

As with any household survey, there are some data limitations. The results are based on a sample and are therefore subject to sampling error. Somewhat different results might have been obtained if the entire population had been surveyed. The difference between the estimate obtained from the sample and the one resulting from a complete count is called the sampling error of the estimate. This profile uses the coefficient of variation (CV) as a measure of the sampling error. Any estimate that has a high CV (over 33.3%) has not been published because the estimate is too unreliable. An estimate that has a CV between 16.6 and 33.3 should be used with caution and the symbol 'E' is used.

When comparing estimates for significant differences, we test the hypothesis that the difference between two estimates is zero. We construct a 95% confidence interval around this difference and if this interval contains zero, then we conclude that the difference is not significant. If, however, this confidence interval does not contain zero, then we conclude that there is a significant difference between the two estimates.

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Endnotes

1. Victims of crime who indicated that they had experienced a crime in the 12 months prior to the 2004 GSS.
2. Includes only responses of those who walk alone at night in their neighbourhood.
3. Includes only responses of those who use public transportation alone at night.
4. Readers should note the significant overlap between visible minority status and immigrant status. A sizeable proportion of Canada's visible minority population also forms part of its immigrant population and vice versa. On the 2004 GSS, 79% of visible minority individuals are also immigrants and 44% of immigrants are also part of a visible minority.
5. A multivariate, logistic regression analysis tests for the relationships between variables controlling for the effects of other variables. A significant association in a multivariate, logistic regression analysis means that a particular independent variable is still significantly associated with a dependent variable when the effects of many other independent variables (such as age and income) are controlled for in a statistical test or model involving one dependent variable and more than one independent variable.
6. There are other possible factors that could increase or decrease the odds of employing crime prevention measures that were not included as variables in the GSS.
7. In a series of steps, the independent variables of home ownership, dwelling type and household income were removed because they had no significant impact on the likelihood of changing activities or avoiding certain places. All variables that were identified as having a significant impact on the likelihood of using this particular protective measure were included in a final, single model.

Canadian Centre for Justice Statistics Profile Series Cumulative Index

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