CANADIAN VICTIMIZATION SURVEYS: A REPORT ON PRETESTS IN EDMONTON AND HAMILTON

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This article presents the methodology and analysis of two major pretests undertaken in order to compare the effectiveness of different interviewing methods and to assess the feasibility of collecting information which would meet Victimization Survey information requirements.

1. INTRODUCTION

The Department of the Solicitor General of Canada contracted with Statistics Canada to develop a methodology for conducting Victimization Surveys in Canada. The Research Division of the Solicitor General and the Special Surveys staff of Statistics Canada jointly participated in this research program. A Victimization Survey methodology is designed to produce data related to four main objectives:

1. the extent and distribution of selected crimes;
2. the impact of selected crimes;
3. the risk of criminal victimization;
4. indicators of criminal justice system functioning.

These data will be useful to those directly involved in efforts to contain or reduce criminal activity. More generally, victimization data will also be useful to policy makers and evaluators who are concerned with crime and its efforts upon society, and to social scientists interested in advancing the state of knowledge about crime and the criminal justice system.

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The crimes for which data are collected are break and enter, theft, robbery, assault, rape, motor vehicle theft and vandalism. Much of the data available concerning crime and the criminal justice system has been based on official police statistics (Uniform Crime Reporting or U.C.R. statistics). However, victimization surveys are capable of providing data on crimes not reported to the police as well as collecting more information than is presently available on those crimes reported to the police.

As a consequence of the statistical rarity of criminal victimization, it is necessary for victimization surveys to question a large number of persons in order to obtain sufficient information to allow for meaningful analyses. Given the necessity for large sample sizes, cost effectiveness, while maintaining data quality, was the primary concern of the methodological studies reported here.

These studies addressed cost effectiveness in two ways:

1. they assessed the feasibility of collecting information related to the four major objectives; and
2. they compared the effectiveness of personal and telephone interviewing methods.

The initial pretest was conducted in Edmonton in May 1977 and had, as its primary purpose, a comparison of personal and telephone interviewing techniques. The second pretest was conducted in Hamilton during February 1978 to test the ability of the revised questionnaire to generate reports of crime and to refine the interviewing procedures. This report presents the findings of these studies. The Edmonton pretest is presented in detail and a summary of the Hamilton pretest is included.

2. EDMONTON REVERSE RECORD CHECK: OBJECTIVES

2.1 Data Collection Methodologies

The primary objective of the Edmonton Reverse Record Check was to assess the feasibility of telephone interviewing. The following criteria were used to compare telephone and personal interviewing:

(a) Response Rate

The rate and type of non-interview is essential in evaluating the telephone and personal interview methods. It may also be important to discover what specific items of information are refused or considered sensitive by the respondent.

(b) Hit Rate

The hit rate refers to the proportion of incidents selected from the police files which were subsequently reported by the respondent during the survey interview. The accuracy of the information reported will also affect the evaluation of the two interviewing methods.

(c) Cost

The impetus for investigating the feasibility of telephone interviewing is an expected savings of approximately 70%. Therefore, if the telephone and personal interviewing methods are comparable, based on all other criteria, the more cost efficient method would be employed.

(d) Telescoping

It is also important to measure the extent of telescoping, that is, the respondents' misplacing of events in time.

(e) Unfounded Crimes

An unfounded crime is an incident which has been reported to the police but which the police have determined, due to subsequent events, does not constitute a crime. A sample of such incidents was selected to discover whether these events would be reported and, if reported, how the survey document would classify them.

2.2 Evaluation of Questionnaire Design

The second broad objective of the Edmonton Reverse Record Check was to evaluate the ability of the questionnaire to supply the necessary information required in a victimization survey. Identical questionnaires were employed for both the personal and telephone methodologies. Two separate forms were utilized. The first, the screen questionnaire, was administered to all respondents and consists of items on selected attitudes, behaviour and demographic characteristics. As well, it includes a series of questions designed to elicit incidents of crime which had been committed against the respondent or, for certain crimes, his/her household. These questions serve to facilitate the recall and reporting by the respondent of crimes that occurred within the reference period. The second, the crime incident report,was then filled out for each incident reported in the screen question section of the questionnaire after the entire screen questionnaire had been completed. The crime incident report includes questions to determine the social and physical context of the incident and its impact on the respondent as well as the information required to classify the incident into crime categories.

Primarily, it was necessary for the questionnaire to elicit reports of incidents of crime. Specifically, it was important to know which probes were most effective. The interviewing also quickly illuminated problems or difficulties which were caused by the design of the questionnaire.

The objectives of a victimization survey require that some interviews of long duration be conducted. The minimum length of an interview was approximately ten minutes. Given that conventional wisdom stipulates that it is inadvisable to conduct long interviews by telephone, it was necessary to determine if the length of interview caused some respondents to terminate prior to completing the interview.

An eventual survey, designed to measure among other things the incidence of crime, must elicit sufficient information to categorize reported victimizations according to approximate U.C.R. and Criminal Code definitions. Of course, precise conformity is not possible. Further, classifying by U.C.R. definitions is not the primary objective with regard to coding the victimizations, but merely the minimal information that should be available. Two victimizations that U.C.R. may code as 'robbery' could be classified more meaningfully as 'a personal attack with theft' or 'personal attack, involving a weapon, with theft'. The additional information collected will allow the analyst to define victimizations in ways that may be much more meaningful for planning and evaluating purposes.

The objective of the reverse record check, in terms of classification, was to determine the comparability between the classification of the crime by the survey instrument and the classification of the incident according to the police.

3. STUDY DESIGN

3.1 Police File Sample

The reverse record check technique involves selecting samples of known victims from police files. These people are then interviewed to determine the degree to which they report the criterion event (i.e., the incident on the basis of which the respondent was selected) and its associated characteristics to the interviewer. Thus by assigning a sample of cases selected from police files to both interviewing methods, it is possible to assess the relative success of each data collection method.

With the cooperation of the Edmonton City Police Department, a sample of victims of crimes was selected from the offence reports in the police files. Each individual chosen was listed as a complainant or victim of one of the crimes included in the victimization survey, even though in some cases the incident was not reported to the police by that person. There were three distinct subsamples chosen from the files - the reference sample, the telescope sample and the unfounded sample.

Police files do not provide a perfect criterion measure since, of course, they include only crimes reported to the police. Such crimes may be more salient to respondents when interviewed later and may be more easily remembered than the types of incidents not reported. In addition, the errors and omissions which occur in police recording practices make the use of police files less than perfect. On the other hand, police occurrence reports contain a number of items which can be checked against the information provided by survey respondents. These include the nature of the loss suffered, the nature of any injury, and other items which provide something of the incident's context.

Two factors affect the number of police files initially selected. An allowance was made for non-interviews based on the fact that some individuals were listed in the police files 22 months prior to interviewing. As well, it was known that a portion of the initial selection of police files would be incidents that were out-of-scope for this survey. Excluded as being out-of-scope were cases where the victim was under 18 years of age or where the victim lived outside the city limits of Edmonton at the time the event was reported to the police. Also excluded were incidents involving commercial establishments as the victims.

Details were sent to the Edmonton City Policy Department specifying the number of police files to be selected for each of the subsamples. This sample was stratified by U.C.R. classification and month of occurrence. For each month, the sample of each of the crime classifications was manually selected by the project team and split between the telephone and personal interviewing methods.

The reference sample consisted of victims of the selected crimes which occurred during the period January 1, 1976 to February 28, 1977. This time frame corresponded approximately to the reference period of the study (the reference period was January 1, 1976 to April 30, 1977). A sample of victims of break and enter, robbery, assault, motor vehicle theft, theft and vandalism was selected. In the case of the crime of rape, all eligible cases were included.

Table A: Reference Subsample: Type of Crime by Interviewing Method

Type of Crime	Sample Size Personal	Telephone	Total
Break and Enter	87	88	175
Robbery	100	99	199
Assault	126	124	250
Theft-Motor Vehicle	86	85	171
Theft	84	84	168
Vandalism	88	85	173
Rape	23	23	46
Total	594	588	1182

The telescope sample was chosen from incidents occurring during the period July 1, 1975 to December 31, 1975. This subsample was selected in order to determine the extent to which individuals telescope incidents into the reference period. That this was not the primary concern of the pretest is reflected in the smaller sample size.

Table B: Telescope Subsample: Type of Crime by Interviewing Method

Type of Crime	Sample Size Personal	Telephone	Total
Break and Enter	38	37	75
Robbery	45	45	90
Assault (including rape)	47	46	93
Theft	35	36	71
Total	165	164	329

The unfounded sample was a small group of individuals who reported incidents to the police between January 1, 1976 and February 28, 1977. An incident is called unfounded by the police if it is determined that a crime did not occur. Unfounded crimes range from incidents where an individual reports an automobile stolen and later discovers that it was taken by his son without permission, to a reported rape where, during further investigation, the police determine that no rape actually occurred. These incidents were chosen in order to discover if unfounded incidents would be reported in a victimization survey. The total sample of unfounded incidents was 17 personal and 20 telephone interview cases.

In total, 1,525 individuals were selected from the Edmonton City Police offence records. In the telephone interview sample, 761 individuals were selected, including 11 individuals who were selected for two different incidents. 764 victims were included in the personal interview sample; 12 of these individuals had been selected for two different incidents.

3.2 City Directory Sample

Also incorporated into the design of the Edmonton Reverse Record Check was a sample selected from the 1975 Edmonton City Directory. This city directory sample was included in order to provide a camouflage group for the reverse record check individuals. This approach was based on experience in the U.S. Crime Survey Reverse Record Checks which suggested that a bias may exist if interviewers are aware that each individual in the sample has been the victim of a crime. As well, it ensured that the questionnaire was tested on non-victims.

The shortcomings of a city directory as a sampling frame are well known. However, given the purposes of the city directory sample, a complete and up-to-date frame was not necessary. At the time of interviewing, it appeared that the city directory was approximately 18 months out-of-date.

An advantage of the city directory was that, in conjunction with a telephone book, it provided the same information that was given to the interviewers for the reverse record check individuals. Another advantage was that it listed all individuals in a household 18 years of age and over. In order to achieve as much similarity as possible, an identical age limit was placed on the police sample.

A systematic sample of 1500 individuals was selected from the city directory and assigned to the telephone and personal interview methods. The directory and police samples were chosen several months apart, with the city directory sample being chosen first. Some duplication occurred in the two selection procedures and, since the city directory sample was used primarily as a camouflage group, any individual appearing in both samples was dropped from the directory sample. This resulted in an actual sample size of 1,481 from the city directory - 745 in the telephone interview sample and 736 in the personal interview sample. The sample selection was completed during March 1977 and interviewing was scheduled for the period May 2 to May 20, 1977.

3.3 Operational Procedures

Interviews were conducted both over the telephone and in person. There were 30 interviewers and 3 interviewer supervisors involved in the pretest. The personal interviews were conducted by 20 interviewers with 2 supervisors. Approximately half of each interviewer's assignment consisted of individuals selected from the police records. The remainder was made up of those individuals selected from the city directory.

All telephone interviews were conducted from the Statistics Canada Regional Office in Edmonton. Telephones with headsets were installed to facilitate the interviewing and all interviewers were located in one room separated into cubicles by sound barriers. The interviewer supervisor was located in the same room on a full-time basis throughout the interviewing period.

As some individuals chosen from the police records had been victims as much as 22 months prior to the interview period, a tracing operation was initiated for the police file sample. Since the primary purpose of the city directory sample was to serve as a camouflage for the reverse record check individuals, only the usual interviewer tracing was employed for this sample.

Due to the nature of the survey, it was anticipated that formal channels should be set up for the verification of its authenticity. It was expected that questions concerning the authenticity of the survey would be particularly frequent for the telephone interviewers. Two mechanisms were set up to handle this problem. If respondents became suspicious of the survey, interviewers were instructed to provide them with the telephone numbers of the Edmonton Regional Office and the Complaints Department of the Edmonton City Police. At the Regional Office, all calls were directed to the Regional Office Supervisor for the project. At the police complaints number, all officers likely to be answering telephones were provided with a list of interviewers and a survey summary sheet which provided them with sufficient information to answer common inquiries. As the interviewers were unaware that half of the sample had been selected from police records, all respondents who questioned the source of the sample were referred to the Regional Office where the appropriate information was available.

4. RESULTS

The results are presented under the two broad objectives of the reverse record check study: first, the comparison of telephone and personal interviewing methods, and second, the evaluation of the questionnaire design. The discussion that follows is organized similarly to the statement of objectives in section 2 of this report.

4.1 Response Rate

Due to the sampling procedures employed for the Edmonton pretest, response rates were not expected to compare favourably with conventional Statistics Canada surveys. This was primarily because some individuals were selected for crimes that occurred 22 months prior to interviewing and victims of crime are reported to have high mobility. As well, although the most recent issue of the city directory was employed, it was known to be at least 18 months out of date. The sample size was adjusted to allow for this non-response but, in fact, the actual non-interview rate was higher than expected.

The overall response rates were 57.9% for the personal interviewing method and, for the telephone, 58.8%. The response rate for the sample chosen from the city directory was 64.4% for the personal interview and 65.9% for the telephone. In the police file sample, the response rates were 51.4% and 51.7% for the personal and telephone interviewing methods respectively. These response rates would seem to indicate that there is no crucial difference between the two interviewing methods in this respect.

The following table summarizes the interview status of individuals in the Police File and City Directory samples.

Table C: Final Status by Interviewing Method

	Police File Sample				City Directory Sample			
	Personal		Telephone		Personal		Telephone	
	Number	%	Number	%	Number	%	Number	%
Total Listed	764		761		736		745	
Refusals	10	1.3	39	5.1	13	1.8	40	5.4
Interview prevented by death, sickness, language problem	12	1.6	27	3.5	14	1.9	42	5.6
Temporarily absent, no one home	62	8.1	30	3.9	38	5.2	22	2.9
Moved, abandoned, converted to business	272	35.6	248	32.6	197	26.8	150	20.1
Traced to wrong individual	13	1.7	24	3.1	---		---	
Questionnaire lost in transmission	---		2	0.3	---		---	
Completed	395	51.7	391	51.4	474	64.4	491	65.9

The most interesting comparison in Table C is the refusal rate. The greater number over the telephone may partially be the result of the fact that it is much easier to refuse when the interview is not a face-to-face situation. However, it is felt that this number of refusals does not pose an insurmountable obstacle. The refusal rate is not large enough to warrant the conclusion that telephone interviewing is not feasible. As well, it may be possible to reduce the number of refusals by improving operational procedures.

For the police file sample, the response rate can be calculated by type of crime. For those selected during the reference period, the response rate ranged from 39.7% for assault to 72.7% for vandalism in the personal interviewing method. For the telephone interview, the response rate ranged from 34.2% for robbery to 67.1% for motor vehicle theft. The response rates by type of crime are provided in the table below.

Table D: Response Rate by Type of Crime: Reference Subsample

Type of Crime	Personal		Telephone	
	Number Responding	%	Number Responding	%
Robbery	41	41.0	34	34.3
Assault	50	39.7	50	50.0
Rape	9	39.1	11	47.8
Theft	52	61.9	55	65.5
Theft - Motor Vehicle	55	64.0	57	67.1
Break and Enter	56	64.4	46	52.3
Vandalism	64	72.7	49	57.7

For the individuals selected from the Edmonton City Police files, age and sex were recorded when available. It is therefore possible to determine if the distribution of respondents over these variables is different from the age and sex distributions of the sample for each interviewing method. If respondents are not significantly different from non-respondents, one would expect that the distributions of age and sex for respondents would be similar to those distributions calculated for the entire sample. The χ^2 Goodness of Fit Test indicated that for both interviewing methods, respondents were not significantly different from non-respondents with respect to age or sex. This was true both for the total of all crimes and by crime.

Most surveys encounter the problem of individuals refusing specific questions. As expected, income, age, industry and occupation were the questions most often refused by respondents. As well, the section of the questionnaire on measures used as protection against crime proved particularly sensitive. Some respondents refused to answer questions in this section. It was at this point that many telephone respondents questioned the authenticity of the survey and telephoned either the police or the Regional Office. However, after verifying the survey, most of the respondents continued with the remainder of the interview. The mechanism of survey verification was essential to minimize the problem of respondents refusing to answer the sensitive questions concerning precautions against crime. The verification procedure made completing an interview no more of a problem over the telephone than for personal interviews. Interrupting the continuity of the interview for verification was not sufficiently disruptive to consider dropping these questions due to their importance to the survey objectives.

It should also be noted that for both interviewing methods, refusals between the completion of the screen questionnaire and any crime incident reports required were very infrequent. As well, there were very few refusals to particular questions within the crime incident report. As expected, for both interviewing methods, the problem is not gathering specific details of an incident once it has been reported but eliciting the initial mention of the incident. Once respondents report an incident, they are eager to talk about the details of the crime. This was true even for those reporting multiple incidents.

4.2 Hit Rate

The most important criterion for determining the feasibility of conducting a victimization survey was whether the incidents selected from the police file were reported during the subsequent interview. This was determined by 'matching' details recorded from the victim's police file with the information obtained in the interview. Based on the

experience and recommendations of those involved in the U.S. reverse record checks, the match status was decided on a consensus basis by members of the project team. This process could not be prescribed by a series of rules but was a subjective process with each document being judged independently based on the total information included in the survey document. The summary of each incident, recorded at the end of each interview, was especially helpful in this procedure. It should be noted that the forms were blinded to ensure that the project team was unaware of whether the report was from the personal or telephone interview survey.

The hit rate represents the proportion of individuals interviewed who reported the crime for which they were selected. The overall hit rate was 64.3% for the personal interview sample and 62.7% for the telephone sample. This comparison supports the possibility of conducting a victimization survey by telephone.

Table E: Hit Rate by Interviewing Method

	Personal		Telephone	
Type of Crime	Number Reporting	%	Number Reporting	%
All Crime	207	64.3	195	62.7
Robbery	26	65.0	24	72.7
Assault	33	67.4	32	51.6
Rape	6	66.7	6	60.0
Theft	34	65.4	37	67.3
Theft - Motor Vehicle	38	69.1	43	75.4
Break and Enter	39	70.9	33	73.3
Vandalism	31	50.0	20	40.8

Of the seven crimes under study in the Edmonton Reverse Record Check, rape and vandalism were considered to be the most problematic. Rape represents a distinct problem due to the sensitivity of the subject. It is unrealistic to abruptly ask a respondent "Were you raped during 1977?". However, because of its seriousness and the fact that it is often unreported to the police, it is very important to include the crime of rape in the survey. The approach of this survey is to define an attack, for the respondent, as including 'anything from being hit, slapped or pushed to being shot, raped or beaten up'. It was hoped that the screening items which followed, one of which included the phrase 'attack or molest', might elicit a report of rape, if one had occurred. This approach was a compromise between the importance of including the crime and the possible sensitivity to the respondent of questions relating to it. It should be noted that the hit rates for rape are based on a very small number of incidents. This was a function of both the mobility of the victims as well as the small sample size resulting from the number of such crimes reported to the police.

Table E indicates that the other forms of assaults were also a problem. It was hypothesized that a factor contributing to this might be the relationship between the victim and the offender. The comparison indicated that respondents were more likely to report incidents involving strangers than non-strangers.

Table E also shows that vandalism represents the lowest hit rate for both interviewing methods. Prior to the survey, there was no evidence indicating whether such incidents might be too trivial for respondents to recall since most other victimization surveys have not included the crime of vandalism. However, it was considered important to include it in the survey since it was felt that being a victim of vandalism might affect an individual's attitudes or behaviour. It was hypothesized that the low hit rate for vandalism might be explained by the value of the damage which occurred. This seems to have been borne out in the personal

sample; however, it is difficult to draw conclusions concerning the effect of the value of damage on the hit rate due to the small number of cases reported in the survey.

If the overall hit rate is calculated excluding vandalism, it is 67.8% for personal interviews and 66.5% for telephone interviews. The results of the reverse record checks conducted in the U.S. were 81% in Washington, D.C., 67% in Baltimore, and 74% in San Jose. The results of the Edmonton Reverse Record Check compare with the American results when it is considered that the U.S. studies involved reference periods which were significantly shorter. Their reference periods ranged from 3 to 12 months whereas the Edmonton reference period was 16 months.

As stated earlier, for all individuals selected from the police files, age and sex were recorded when available. This made it possible to determine if the distribution of those reporting the crime selected from the police files differed from the age and sex distribution for all respondents. If respondents who reported the incident for which they were selected are not significantly different from those not reporting, one would expect that the distribution of age and sex for those reporting would be similar to the distribution for all respondents. The χ^2 Goodness of Fit Test indicated that, for both interviewing methods, those reporting incidents for which they were selected were not significantly different from those not reporting with respect to age and sex. This was true both for the total of all crimes and by crime.

4.3 Cost

As stated earlier, an important advantage of telephone interviewing is a considerable savings in cost. Included in the cost comparison are the salaries and associated expenses for the interviewers and Regional Office staff for field work in the Edmonton pretest.

It is evident from the following table that the cost per interview for the telephone method was approximately 1/3 as much as that for the personal interviewing method. It is probable that in a large survey the cost per interview would be less than the figures below due to fixed costs being distributed over a larger number of interviews. As stated previously, experience has indicated that, in general, telephone interviewing should be as much as 70% less expensive than personal interviews.

Table F: Cost by Interviewing Method

Expenditures	Personal	Telephone	Total
Interviewer Fees	$ 13,477	$ 5,047	$ 18,524
Interviewer Expenses	2,150	-	2,150
Associated R.O. Costs[1]	3,337	1,668	5,005
Total	18,964	6,715	25,679
Cost per Interview	$ 12.64	$ 4.46	

[1] The Regional Office Costs are split 2/3 for personal interviewing and 1/3 for the telephone interviewing based on the number of interviewers employed in each method.

Due to inexperience with telephone interviewing, the interviewing schedule was not as productive as possible. Future surveys would benefit from the knowledge gained in this pretest and the resulting change in the time schedule may also reduce the cost.

4.4 Telescoping

This section will first examine the effects of internal telescoping, the misplacing of the incident in time within the reference period. Tables G and H provide a comparison of the date as reported during the interview with the date of occurrence as recorded in the police files.

Table G: Internal Telescoping - Telephone Interviewing Method - All Crimes

Reported to Police	Reported in Interview																	Not Reported in Interview
	Total	JAN '76	FEB '76	MAR '76	APR '76	MAY '76	JUNE '76	JULY '76	AUG '76	SEPT '76	OCT '76	NOV '76	DEC '76	JAN '77	FEB '77	MAR '77	APR '77	MONTH N.A.	
TOTAL	195																		117
JAN '76	13	6	2	1										1				3	11
FEB '76	8		5		1				1									1	9
MAR '76	12		1	5	1	2				3									9
APR '76	13			2	3	4	2			1								1	7
MAY '76	14				2	7	2	3											9
JUNE '76	12					2	8			2									14
JULY '76	11						2	5	1	1	2								9
AUG '76	14							4	6		2	1						1	9
SEPT '76	16							1	2	8	2	2	1						5
OCT '76	17								1	5	9		1					1	8
NOV '76	13							4			2	8	2						10
DEC '76	16					1							12	1				2	7
JAN '77	14												1	10	1	2			7
FEB '77	22											1		3	15		1	1	3

Table H: Internal Telescoping - Personal Interviewing Method - All Crimes

Reported to Police	Reported in Interview																	Not Reported in Interview
	Total	JAN '76	FEB '76	MAR '76	APR '76	MAY '76	JUNE '76	JULY '76	AUG '76	SEPT '76	OCT '76	NOV '76	DEC '76	JAN '77	FEB '77	MAR '77	APR '77	MONTH N.A.	
TOTAL	207																		116
JAN '76	12	7	1	2							1			1					14
FEB '76	13		8	1	2						1							1	11
MAR '76	13		2	6	1							2						2	10
APR '76	15			2	5	4	2				1							1	7
MAY '76	14				1	8	2		1		1							1	15
JUNE '76	12		1			3	5	2	1										6
JULY '76	15			1			1	8	4									1	6
AUG '76	15							2	9	2	2								7
SEPT '76	16							2	2	4	5	1						2	9
OCT '76	9							2	1	1	3							2	11
NOV '76	17									1	3	6	3		1			3	5
DEC '76	21										1	2	18						4
JAN '77	18												1	13	4				7
FEB '77	17		1										1		12	2	1		4

From these tables, it is evident that, for the total of all the crimes selected, respondents reported the month of occurrence in a range often centered about the actual date of occurrence as given in the police files. This trend is also apparent when comparing the dates of occurrence by type of crime for each interviewing method. It is interesting to note that crimes which were reported to the police as occurring in September produced the widest range of occurrence dates in the survey for both interviewing methods. Although a 12 month reference period of September to September was considered at one time to be a salient period because of the school year beginning, this in fact may not be true.

Of the incidents in the personal interview sample, 54% of those reported in the survey were reported in the correct month. In the telephone interviewing method, 55% were reported in the correct month. The accuracy of reporting varied by type of crime. For the personal interview, it ranged from 39% for vandalism to 65% for robbery. The telephone reporting ranged from 45% for vandalism to 71% for assault (including rape). Another indication of the accuracy of reporting is the number of individuals who reported the incident within one month of the actual month of occurrence, that is, plus or minus one month of the month of occurrence. For the personal visit sample, this ranged from 58% for vandalism to 90% for break and enter, for an overall rate of 79%. For the telephone method, the range was from 65% for vandalism to 84% for motor vehicle theft, with an overall rate of 76%.

It is apparent from the tables that the shorter the time interval between the incident and the interview, the better is the accuracy of reporting the date of occurrence. It should also be noted that for both interviewing methods, there was a slight net forward telescoping effect. That is, respondents were more likely to telescope an incident forward within the reference period than to report it as occurring prior to the date reported in the police files.

The second type of telescoping investigated in this pretest is forward telescoping, that is, the reporting of an incident which occurred prior to the reference period as occurring within the reference period. The following table provides both the number and percentage of those incidents incorrectly reported as occurring within the reference period when they had in fact occurred in 1975. It should be noted that if there was no forward telescoping, the hit rate for these cases would be zero.

Table I: Hit Rate by Type of Crime: Telescope Subsample

	Personal		Telephone	
Type of Crime	Number	%	Number	%
All Crime	13	19.1	17	24.6
Theft	4	23.5	7	31.2
Assault (including rape)	1	6.3	1	7.7
Break and Enter	5	21.7	4	21.1
Robbery	3	25.0	5	33.3

Of those persons selected from the police files for a crime occurring during 1975, 19% of those interviewed reported the incident in the survey during the personal interview whereas over the telephone, 25% reported the incident as occurring within the reference period. However, this represents a difference of only 4 cases between the two methods. For the personal interview, those reporting the incident ranged from 6% for assault to 25% for robbery. Over the telephone the range was from 8% for assault to 33% for robbery. It would also appear that individuals are more likely to report the incident in the interview if the incident occurred close to the beginning of the reference period.

It should also be noted that of the 30 incidents in either interviewing method, 10 were reported in the correct month but a year later than the actual year of occurrence. It may be possible to reduce this type of forward telescoping by emphasizing the reference period during the interview.

4.5 Unfounded Crimes

An unfounded crime is an incident which is reported to the police but which the police subsequently decide did not, in fact, involve a crime. The purpose of selecting unfounded cases was to investigate their effect on future surveys. However, the completed interviews for the unfounded sample were very few (only 10 cases). No conclusions could be drawn about the effect of unfounded crimes from this small number of cases.

4.6 Evaluation of Questionnaire Design

The information used to evaluate the effectiveness of the questionnaire was obtained during a thorough debriefing of the interviewers and Regional Office staff as well as from a number of interviews conducted by members of the project team. The discussion which follows outlines only the problems encountered concerning the format and concepts of the questionnaire. It should be noted that none of the problems were of a magnitude which interfered with the ability of the interviewer to complete an interview. The questionnaire and the basic concepts underlying its design proved to be very successful. Most of the problems encountered may be rectified without much difficulty.

The questions in the screen questionniare which probe for incidents of crime are perhaps the most crucial in the two documents. We hoped to discover in the pretest which of the probes were effective in eliciting reports of incidents. Those that did not elicit reports could perhaps be dropped to relieve some respondent burden or else be replaced by probes that might be more effective. It became evident during the debriefing, however, that the interviewers had edited their document in such a way that there was no reliable information concerning the productivity of specific items. The interviewers stated that in many cases they had recorded the report of a crime in the screening question which they thought should have elicited a response.

The debriefing did, however, reveal some important problems concerning the probes. Both personal and telephone interviewers found certain sections repetitive due to their order and to the variations in meaning of the questions which were not always communicated to the respondents. However, this did not seem to prompt refusals by the respondents. An effort was made to rectify this by dropping some questions and re-ordering and rewording some others.

The section of the questionnaire that presented the most problem for interviewers was the questions concerning precautionary measures such as using burglar alarms, locking doors, or keeping lights on. It appeared that it was at this point during an interview that many respondents questioned the authenticity of the survey and sought some verification that, in fact, the interviewer was from Statistics Canada. This was also the most likely place in the document for respondents to refuse individual questions. This seemed to be a problem almost exclusively for the telephone interviewers. The personal interviewers were equipped with identification cards which were shown to respondents prior to conducting the interview.

The only other section of the questionnaire which seemed to present problems was that concerning the demographic characteristics of respondents. Income, age, and labour force status were problematic for both telephone and personal interviewers. Again, there was a greater problem over the telephone. A contributing factor to the greater sensitivity of particular questions over the telephone was that there seemed to be a tendency for telephone interviewers to be affected more by an individual respondent's bad reaction. The interviewers then had, for subsequent interviews, a preconceived notion that particular questions would engender a bad reaction and therefore, through their own phrasing of the question, contributed to it.

Respondents who have been the victim of a crime a number of times during the reference period pose a particular problem for victimization surveys. The individuals fall into two broad categories. For some, the incidents occur with such frequency that they characterize their lifestyle rather than being salient events, for example, a security guard in a shopping plaza who is threatened daily or a person who is beaten by his or her spouse frequently. In the other category are individuals who have been the victims of many very minor incidents and who may be unable to distinguish among them.

Both these types of incidents present a similar problem since an individual may not be able to distinguish the details of all the incidents well enough to report them separately. Therefore, a definition must be developed for the interviewers to enable them to gather information concerning the group of incidents. This situation is referred to as a 'series'.

In the Edmonton pretest, a group of incidents was defined as a series if it fulfilled the following requirements:

1. the details of the incidents must be similar;
2. there must be at least three incidents in a series;
3. the respondent must be unable to recall details of the individual incidents well enough to report them separately.

It is apparent that some judgement is required of the interviewer in order to determine if a group of incidents should be defined as a series or if separate incident reports can be completed.

It appeared that the interviewer training did not emphasize this definition as strictly as was necessary. Each interviewer interpreted the definition differently and most of them misinterpreted its intent. For example,

some interviewers defined any three crimes reported by an individual respondent as a series although they may have been very different events.

It should be noted that the problem of series also has implications concerning the analysis of the data, particularly on the estimates of the frequency of crimes. There will be further discussion of the problem of series in the following section.

As previously mentioned, there were very few refusals to continue with a crime incident report once the screen questionnaire had been completed. Lengthy interviews were conducted as a matter of course both over the telephone and in the personal interview situation. Interviews generally lasted 15-20 minutes for the screen questionnaire and 5-10 minutes for each crime incident report completed. Interviews of up to 1 1/2 hours duration involving as many as 10 crime incident reports were conducted with relative ease in both interviewing methods. This was certainly due, in part, to the subject matter of the survey. It was also particularly important for telephone interviewers to be flexible in completing the interviews.

4.7 Classification

One of the advantages of a victimization survey is the flexibility for classifying and describing incidents. It is possible to approximate the U.C.R. classification by counting the most serious crime within the incident and assigning a single crime code or to describe the various elements which constitute the incident. The strength of the survey lies in the more complete description.

A single crime code can be assigned based on the answers to the items in the crime incident report. For example, to be classified as a robbery certain conditions must be present during the incident. First, there must have been something taken or an attempt made to take something and

second, there must have been a weapon present or an attack or threat of attack on the respondent. The classification is hierarchical with each incident being assigned a code based on criteria similar to the U.C.R. classification.

The results of the Edmonton pretest were encouraging in that the information for classification was relatively simple to collect. There are some weaknesses to consider, however. For the crime of rape, and to a lesser degree the other crimes, the sensitivity of the information makes it necessary to wait for the respondent to volunteer information and it is impossible to collect the detailed information which is available to the police for such incidents.

A comparison of the police and survey classification illustrates some of the difficulties of a hierarchical classification of incidents. The survey classified a number of each of the other types of crime as break and enters. This does not necessarily mean that the incident reports did not contain the information necessary to be classified, for example, as a robbery or rape, but rather as a consequence of break and enters being classified before most other crimes, any incident which involved a break and enter would not be available for secondary classification.

Of particular concern were the large number of motor vehicle thefts which are classified as simple thefts. The main reason for this appears to have been that the answer categories for coding the items stolen were insufficiently clear for interviewers. The category 'other motor vehicles' was intended for the coding of trucks, vans, motorcycles, etc. However, it appears that in many cases the interviewers specified the vehicle in the 'other (specify)' category. This was quite simply rectified by listing the categories on the questionnaire.

Those incidents which, due to insufficient information, cannot be classified are also problematic. Each of these was reported to the police and during the survey as an incident but, due to errors or misinterpretation, key variables necessary for classification were not available.

The comparison of survey and police classifications of incidents illustrates some of the problems inherent in assigning a single crime code to each incident and emphasizes the advantages of event analysis.

5. SUMMARY

The Edmonton Reverse Record Check was the first stage in the development of a Canadian Victimization Survey. Due to the necessity of developing a cost-efficient methodology, the crucial concern was the comparison of personal and telephone interviewing techniques. As well, the pretest provided information relevant to the questionnaire design and operational procedures. The following discussion will deal with the major decisions made as a result of the pretest.

Conventional wisdom with regard to telephone interviewing has been that long interviews are not possible. If this were true in all cases, it would preclude the possibility of conducting victimization surveys by telephone due to the necessity of collecting information on multiple victimizations. However, it was discovered during the Edmonton pretest that interviews of an hour or more were conducted with relative ease. Victimization surveys would appear to be more conducive to telephone interviewing than some other subject matters due to the interest of respondents in co-operating in a survey which may contribute to reducing crime rates. It is fortunate that those individuals who are subjected to the longest interviews are often the very respondents most interested in completing the survey because they have been victimized the greatest number of times.

The hit rate and response rate were other indicators which contributed to the final decision on telephone interviewing. The results show that for both these factors there were not significant differences between the telephone and personal interview techniques. Given these findings, it would appear that telephone interviewing is the preferable data collection method considering the savings in cost.

The question of the effect of telescoping on a victimization survey has not been fully clarified. The degree of accuracy of reporting the date of occurrence within the reference period is acceptable based on the objectives. However, due to the underestimating of the mobility of the victims selected, the problem of forward telescoping remains unanswered. It would not be warranted to base any conclusion on the small number of cases that constituted this sample. The sample of unfounded incidents was also very small and it was difficult to assess their impact on a survey. A victimization survey asks the respondents to report any incident which they feel has involved a crime of the type being surveyed. If, at the time of the interview, the respondent considers that he/she has been a victim and reports it with sufficient detail to classify it, then it would be included in the survey. The interviewer does not investigate the event in the manner of the police but only records the details of the incident. The concept of unfounded crimes, although relevant, may not have a significant impact on a survey due to the infrequency of such events.

During the course of the field work of the Edmonton Reverse Record Check, a considerable amount was learned about the operational problems involved in collecting victimization data. The importance of interviewer training to the outcome of the survey can not be stressed too much. Two full days of training were used and this proved to be insufficient for conveying all the procedures and concepts involved in such a complex survey. Improvements in training should have a positive effect on all aspects of the survey collection.

One of the most perplexing problems in collecting victimization data is the question of series victimizations. The operational aspect of the problem is to reduce the frequency of series reports. The fact that the concept exists is a temptation for interviewers to record any group of incidents which remotely fits the definition into this category in order to reduce the number of incident reports necessary. Making the definition too restrictive risks increasing the respondent burden. It remains to improve the training of interviewers and supervisors in the concept in order to minimize the misuse of the classification. Some change in the definition may make it possible to avoid misuse while reducing the frequency of series reports in some significant way.

The problem of how to count series victimizations when they are reported is the other aspect of the problem. The fact that the respondent cannot remember details of the incidents in sufficient detail to report them separately indicates that the number of incidents may not be accurate. For example, an individual who reports that her husband beats her almost every day and estimates the total as 250 is obviously not giving an exact number. But excluding incidents of this type from the final estimates risks underestimating the number of incidents by a considerable degree. There seems to be no completely satisfactory method of dealing with this problem.

The Edmonton Reverse Record Check answered the most important question by showing that it was feasible to conduct a victimization survey using telephone interviewing. However, inadequacies in the questionnaire showed the need for a number of alterations and, as well, the problem of telescoping was inadequately studied. It was, therefore, decided that a second pretest was necessary. An abbreviated discussion of the second reverse record check conducted in Hamilton is contained in the following sections.

6. HAMILTON REVERSE RECORD CHECK

The second pretest was conducted in Hamilton during February 1978 using only telephone interviewing. Once again, a reverse record check technique was employed to ensure that a sufficient number of victims was surveyed for each type of crime. The crimes sampled were assault, sexual assault, robbery, motor vehicle theft, break and enter, theft and vandalism. The objectives of the Hamilton survey were to test the ability of the questionnaire to elicit incidents, to investigate the effects of telescoping, and to test the revised field procedures.

The results of the Edmonton survey indicated that several revisions could be made that might increase the overall reporting of incidents. Two changes in particular were considered important in improving the success of eliciting incidents. The 16 month time frame employed in Edmonton was considered not only awkward but too lengthy for good recall. The Hamilton survey was to have a 12 month reference period which coincided with the calendar year 1977. The screening items were also revised in an attempt to elicit more incidents, particularly those referring to the crimes with the lowest hit rates in the Edmonton study.

6.1 Study Design

With the co-operation of the Hamilton-Wentworth Regional Police Force, 2,862 individuals listed as victims of one of the seven crimes included in the survey were selected from the offence reports in the police files. In contrast to Edmonton, a camouflage sample was not incorporated into the design of the Hamilton pretest.

In order that the interviewing could begin in January 1978, it was necessary to conduct the actual selection in December. Therefore, only incidents occurring prior to December 1, 1977 were available for selection. The reference sample consisted of incidents of the selected crimes during the period January 1, 1977 to November 30, 1977. This time frame corresponded approximately to the reference period of the survey. A stratified simple random sample of incidents of break and enter, assault,

theft-motor vehicle, theft and vandalism was selected. For the crime categories of robbery and sexual assault, all incidents that were within the scope of the survey were selected. A total of 1,883 incidents was included in this sample.

The telescope sample was chosen from incidents occurring between July 1, 1976 and December 31, 1976. In Edmonton, a very small number of successful interviews was completed with this subsample because non-interview rates had been underestimated. Therefore, a large number of incidents was included in this sample for the Hamilton pretest. As well, in Edmonton, only incidents of break and enter, assault, robbery and theft were included. All eligible cases of robbery and assault and a stratified simple random sample of incidents of break and enter, theft, theft-motor vehicle, assault and vandalism were selected in Hamilton, for a total of 1,048 incidents.

In summary, there was a total of 2,931 incidents selected from the Hamilton-Wentworth Regional Police offence reports. Fifty-seven individuals were selected for two different incidents and six individuals were chosen for three incidents.

6.2 Results

An overall improvement in results was achieved in the Hamilton pretest, indicating that the methodology for conducting telephone victimization surveys was successful. No major problems were unearthed which necessitated further changes in the basic design of the survey.

The hit rate improved significantly indicating that the changes in questionnaire design and reference period were effective although there is no way to determine the degree to which they influenced this improvement. For incidents occurring during the reference period, the hit rate was 71.8%, ranging from 55.7% for assault to 82.1% for robbery. Overall this represented an increase of approximately 9% from the telephone sample of the Edmonton study. At this level, the hit rate would suggest that the methodology is successful and that future surveys are feasible.

Telescoping remains a difficult consideration. Overall, the reporting rate was 21.4% This is similar to the results of the Edmonton pretest. It is possible to drastically reduce the problems posed by telescoping; however, the solutions may not be congruent with the constraints of Canadian victimization surveys. Through bounding interviews in a panel design, the difficulty of forward telescoping can be almost entirely removed and shortening the reference period would reduce internal telescoping. These alternatives could be employed if an ongoing survey was anticipated but this is not the case.

The amount of internal telescoping suggests that, given a year reference period, estimates for shorter periods may not be reliable. Again the effect of this can be minimized if it is remembered that the emphasis is evaluation and therefore it is the change in estimates that is crucial. It would be assumed that any telescoping would be constant over two or more unbounded surveys.

The definition of a series was altered for the Hamilton pretest. The number of incidents required to constitute a series was increased from three to four. The attempt to reduce the number of series incidents reported was successful to a limited degree. However, it remains that certain individuals are victimized a number of times over a year and cannot report the incidents as distinct events. There are, in fact, several related theoretical and operational problems that must be considered.

When estimating the incidence of crime, reports of series create a problem since it has not yet been determined how to count series reports. The very fact that they are dealt with differently is an admission that they are exceptions. The analysis is complicated by the fact that the individual's estimate of the number in the series is often a 'wild guess'. Equally important is the fact that only one incident form is completed for a series of incidents and although all the events in a series are similar, according to the definition, a summary description of the details of an event perhaps cannot be compared with the details

of the victimization reported by others in the survey. The analysis of risk and impact would be confounded by this situation. In this discussion no solutions have been suggested other than urging that every effort be made to reduce the number of series events reported by reducing those which involve interviewer errors. Series incidents will not disappear and although including them in some analysis such as comparing the demographics of victims and non-victims in general terms may be acceptable, caution should be employed and it is perhaps advisable to deal with series events separately.

As in Edmonton, it was possible to compare the police classification with the survey classification. There was a considerable overall increase in the number of incidents classified identically by the police and by the survey. A number of factors were responsible for this, most importantly the improvements in the questionnaire and the training of interviewers. The actual classification rules remained basically the same. Approximately 80% of the incidents had the same classification under both schemes.

The percentage of incidents which the survey could not classify was reduced in Hamilton. It is necessary to emphasize that while the comparison of police and survey classification is valuable for identifying problems in questionnaire design, the more descriptive classifications which are possible will be more useful in analyzing the event in future surveys.

During the Edmonton and Hamilton pretests, it became very obvious that an essential procedure for a successful victimization telephone survey was the verification of the authenticity of the survey by the local police department. Many respondents became wary when the questions concerning burglar alarms, locked doors and activity patterns were asked and certainly this was with some justification. Respondents were given both the local Statistics Canada and police department telephone numbers if they questioned the survey. This happened with regularity and, although no estimate as to the exact number was available from the police, it was

obvious that hundreds of interviews would not have been completed without this procedure. The co-operation of the Edmonton City Policy Department and the Hamilton-Wentworth Regional Police Department was essential to the success of the pretests during both the sample selection and the interview periods.

7. CONCLUSIONS

The overall objective of the pretests reported here was to produce a cost-efficient victimization survey methodology which would address the needs of researchers concerned with crime and its effect on society and those directly involved in efforts to reduce crime. In order to identify and include within the questionnaire these information requirements, consultation took place with representatives of law enforcement agencies, researchers and those experienced with victimization studies in the U.S.

The methodological tests revealed that telephone interviewing was feasible. It was felt that an important factor in the success of the telephone was the police verification procedure. Personal interviewers, equipped with Statistics Canada I.D. cards, do not contend with respondents questioning their legitimacy, whereas this is a considerable problem for the telephone interviewers. The subject matter of the survey tends to reinforce the uncertainty of some respondents contacted by telephone.

The following guidelines were formed as the result of the two pretests and would be recommended for future surveys:

(1) the police number should be one listed in the telephone directory;
(2) all calls should be handled consistently at a centralized location within the police department;
(3) calls must be answered at all hours of the day;
(4) the police should not be expected to justify the survey but strictly verify its authenticity.

An obvious omission from this discussion is reference to a sampling frame for future surveys. Two avenues which have been investigated are the use of a random digit dialing technique and telephone company listings. Random digit dialing has been researched in the U.S. with very satisfactory results. Telephone company listings, if available, may also be an excellent frame. They contain, on computer file, all subscribers who would typically be included in a telephone directory as well as non-published numbers. An advantage of the telephone listings is that it allows for the exclusion of business subscribers, therefore drastically reducing the number of non-productive calls. It is also updated frequently thus avoiding a number of pit-falls normally associated with employing a telephone directory as a sampling frame.

It will be necessary for future surveys to deal with telephone sampling on an ad hoc basis given the population to be studied, the geographic area to be covered and other idiosyncrasies of a specific survey.

The final stage in the development of a tested and documented Canadian Victimization Survey was a pilot survey producing data related to the original objectives of the research. During January and February 1979, a full-scale survey was conducted in Vancouver. The data resulting from that survey are presently being analyzed.

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RESUME

Le présent article expose la méthodologie et l'analyse de deux principaux essais préliminaires afin de comparer l'efficacité de différentes méthodes d'interview et d'évaluer la possibilité de recueillir des données répondant aux exigences de l'enquête sur les victimes d'actes criminels.

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