A PANEL BIAS STUDY IN THE NATIONAL CRIME SURVEY

Henry Woltman and John Bushery, U.S. Bureau of the Census

Purpose and Scope

One of the methodological features the National Crime Survey (NCS) has in common with the other large scale demographic surveys of a continuing nature carried out by the Bureau of the Census is that sample households are subject to repeated interviews. The NCS was designed such that the rate at which new households are introduced into the survey would result in a maximum of seven interviews at six month intervals. However, due to the lag between the date interviewing started and the introduction of the rotation scheme and the fact that only about half of the sample was interviewed during the initial interviewing period of July-December 1972, some households in the initial sample will be interviewed more or fewer than seven times. As reported by many authors ([1], [2]), repeated interviewing of the same household can produce a "conditioning" effect which is reflected in the data reported.

This research was intended primarily to analyze the data available from the NCS itself for evidence that the number of reported victimizations is affected by the number of times a household is interviewed. In the remainder of this paper, we will refer to the potential bias resulting from repeated interviewing of the same households as "panel" bias, as the NCS sample may be viewed as consisting of a number of panels which at any point in time are being interviewed for the first through seventh time (disregarding the small number of households which may be interviewed more than seven times for the reasons given above).

The victimization data presented in this paper relate to the two types of crime - personal and household. Personal crimes are further delineated as crimes of violence, assault (a subset of crimes of violence) and personal theft. Household crimes are delineated into mutually exclusive categories of larceny, burglary and motor vehicle theft. The definition of each of these crimes is given in Attachment A of this paper.

In addition, the data in the paper are presented in terms of victimization rates as are the published crime victimization data. That is, the number of victimizations per 1000 interviewed households or persons 12 years and older are presented. Since the NCS sample is essentially self weighting, the victimization rates in this paper are based on unweighted counts of victimizations so that the estimates of panel bias are not confounded by the complex estimation procedure used in this survey. Further these rates relate to victimizations reported as occurring in the six months prior to specific months of interview rather than in terms of specific months of occurrence. The latter is the frame of reference used for the published data. It should also be noted that a crime victimization is not necessarily the same as a crime incident. A victimization is defined as a specific criminal act as it affects a single victim. In criminal acts against persons, the number of victimizations is determined by the number of victims of such acts. Because more than one person may be victimized during certain crimes against persons, the number of victimizations is somewhat higher than the number of incidents. Each criminal act against a household is assumed, however, to involve a single victim, the affected household. Further, as the published NCS data do not include victimizations which occurred in a series of incidents the data in this paper also exclude the victimizations which were reported as occurring in such incidents. A series of crimes is defined as multiple occurrences for which the respondent is not able to clearly delineate one occurrence from another.

Repeated interviewing may affect aspects of the survey other than reporting of the characteristics of interest. One of these of importance, for which data is available, is the noninterview rate. In this survey, two types of noninterviews are identified; those resulting from an occupied housing unit for which no interview was conducted with any of the household members (denoted as type A) and those where a specific individual(s) within an interviewed household was not interviewed (denoted as type Z). The latter noninterviews result from the fact that in general each individual is required to respond for himself to the personal incident screening questions and to the detailed questions about any reported incident. A household respondent is used to obtain data on any household incidents. Thus, an additional aspect of this research is to determine if repeated interviewing has any effect on the type A and type Z noninterview rates.

Potential Effects of Panel Bias on the NCS Estimates of Change

As the effects of seasonal differences on quarter-to-quarter estimates of change in the victimization rates as derived from this survey are at present unknown, the estimated change in the victimization rates for calendar quarters one year apart is a statistic of major importance. In order to illustrate how panel bias may affect such estimates of change, consider the information provided in Illustration A and B for estimates of victimizations reported as occurring in the 3rd quarter of each year. Illustration A shows that in order to estimate the number of persons victimized in the 3rd quarter of any year, data collected in eight separate interview months, August through March of the next year, using a 6 month reference period are used. This is necessary so that each month of the quarter is represented by victimizations reported as occurring in that month from interviews that took place 1, 2, 3, 4, 5 and 6 months after the reported month of occurrence. Illustration B shows, for the 3rd quarter of 1973 through 1979, the distribution of the panels in the eight interview months used for estimation

by the number of times these panels were interviewed. Here, each panel contains a systematic one-twelfth of the monthly sample and each quarter of occurrence estimate is derived from 96 panels of data. (It should also be noted that for various reasons discussed later, the number of times a specific sample household was interviewed does not necessarily correspond to the number of times the panel was interviewed.) As is evident from the distributions in illustration B, if some form of panel bias exists in this survey, estimates of change for the 3rd quarter of each year may not be based on equivalently biased data until the 1977-78 and subsequent comparisons. When the sample is thoroughly "aged" (third quarter of 1977) each quarter of occurrence estimate will be based on equivalently biased data and the relative estimates of change can be unbiased if the effects of any panel bias are constant over time. A similar situation exists for the 1st, 2nd and 4th quarter estimates of change. In order to provide an operational model for the purpose of evaluating the effect of panel bias on the estimates of change consider the following.

ILLUSTRATION A. Interview Months Required to Produce July-September Quarter of Occurrence Estimates

(Circled X's within double lines denote particular month's of occurrence from each interview month used for the July-September quarter of occurrence estimate.)

Interview Month	Reported Month of Occurrence of Victimization												
	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.
August	X	X	X	X	X	(X)							
September		X	X	X	X	(X)	(X)						
October			X	X	X	(X)	(X)	(X)					
November				X	X	(X)	(X)	(X)	X				
December					X	(X)	(X)	(X)	X	X			
January						(X)	(X)	(X)	X	X	X		
February							(X)	(X)	X	X	X	X	
March								(X)	X	X	X	X	X

ILLUSTRATION B. Distribution of Panels by Number of Times Interviewed for the July-September Quarter of Occurrence Estimates

Quarter of Occurrence	Number of Panels by Number of Times Interviewed							
	Total	2	3	4	5	6	7	8
July-September 73	96	30	48	18	-	-	-	-
July-September 74	96	16	6	25	37	12	-	-
July-September 75	96	16	16	16	6	15	21	6
July-September 76	96	16	16	16	16	16	6	10
July-September 77	96	16	16	16	16	16	16	-
July-September 78	96	16	16	16	16	16	16	-
July-September 79	96	16	16	16	16	16	16	-

Similar to Waksberg and Neter [2], define

$$E\bar{v}_{qm,\ t+1} = E\bar{v}_{qmt}\ (1 - \alpha_{t,t+1}) \qquad (1)$$

where $E\bar{v}_{qmt}$ = expected victimization rate for a panel interviewed for the t^{th} time in month m used to make the estimate for quarter of occurrence q.

$E\bar{v}_{qm,\ t+1}$ = expected victimization rate for a panel interviewed for the $(t+1)^{st}$ time in month m used to make the estimate for quarter of occurrence q.

$\alpha_{t,t+1}$ = panel bias effect for panels interviewed for the t^{th} and $(t+1)^{st}$ times. It is assumed that the parameter is constant for all m.

Let the estimated victimization rate for quarter of occurrence q equal

$$\bar{v}_q = \frac{\sum_{m=1}^{8} \sum_{t \geq 2} \sum_{j} v_{qmtj}}{(3/4)\sum_{m=1}^{8} \sum_{j=1}^{12} n_{qmj}} \qquad (2)$$

where v_{qmtj} = number of reported victimizations for the j^{th} panel interviewed for the t^{th} time in month m used to make the estimate for quarter of occurrence q.

As shown in Illustration A, for a given month, m, used to estimate the victimization rate for quarter of occurrence, q, v_{qmtj} may represent victimizations reported as occurring in only one month, two months or all three months of the quarter.

n_{qmj} = number of interviewed households or persons 12+ in the j^{th} panel of month m used to make the estimate for quarter of occurrence q.

Assuming $n_{qmj} = \bar{n}$

$$\bar{v}_q = \frac{\sum_{m=1}^{8} \sum_{t \geq 2} \sum_{j} v_{qmtj}}{(3/4)96\bar{n}} = \frac{1}{72} \sum_{m=1}^{8} \sum_{t \geq 2} \sum_{j} \bar{v}_{qmtj}$$

$$E\bar{v}_q = \frac{1}{72} \sum_{m=1}^{8} \sum_{t \geq 2} \sum_{j} E\bar{v}_{qmtj}$$

$$E\bar{v}_q = \frac{1}{72} \sum_{m=1}^{8} \sum_{t \geq 2} C_{qmt}\ \bar{V}_{qmt} \qquad (3)$$

where C_{qmt} = number of panels interviewed for the t^{th} time in month m used to make the estimate for quarter of occurrence q.

$E\bar{v}_{qmt.} = \bar{V}_{qmt}$ = expected victimization rate for panels interviewed for the t^{th} time in month m used to make the estimate for quarter of occurrence q.

Using equation (1)

$$E\bar{v}_q = \frac{1}{72} \sum_{m=1}^{8} \left\{ C_{qm2}\, \bar{V}_{qm2} + C_{qm3}\, \bar{V}_{qm2}\, (1-\alpha_{2,3}) + C_{qm4}\, \bar{V}_{qm3}\, (1-\alpha_{3,4}) + \ldots \right\} \quad (4)$$

then if $\bar{v}_{q'}$ = estimated victimization rate for the same data quarter one year later,

$$(E\bar{v}_q - E\bar{v}_{q'}) = \frac{1}{72} \sum_{m=1}^{8} [(C_{qm2}\, \bar{V}_{qm2} - C_{q'm2}\, \bar{V}_{q'm2}) + (C_{qm3}\, \bar{V}_{qm2} - C_{q'm3}\, \bar{V}_{q'm2})(1-\alpha_{2,3}) + (C_{qm4}\, \bar{V}_{qm3} - C_{q'm4}\, \bar{V}_{q'm3})(1-\alpha_{3,4}) + \ldots] \quad (5)$$

Defining the bias of the estimated difference due to repeated interviewing of the same panels as

$$\left\{ E(\bar{v}_q - \bar{v}_{q'}) - E(\bar{v}_q - \bar{v}_{q'}/\alpha_{t,t+1} = 0 \text{ for all } t \geq 2) \right\}$$

$$\text{Then Bias } (\bar{v}_q - \bar{v}_{q'}) = \frac{1}{72} \sum_{m=1}^{8} [(-\alpha_{2,3})\, (C_{qm3}\, \bar{V}_{qm2} - C_{q'm3}\, \bar{V}_{q'm2}) + (-\alpha_{3,4})\, (C_{qm4}\, \bar{V}_{qm3} - C_{q'm4}\, \bar{V}_{q'm3}) + \ldots] \quad (6)$$

Thus, as a first step in evaluating the bias of the estimated difference in the victimization rates for data quarters one year apart, it is necessary to obtain estimates of the α terms. This research was intended to provide such estimates.

Source of Data

From the NCS rotation chart shown below one can see that the NCS consists of multiple samples denoted as J01, J02, J03, J04, etc. each of which contains approximately 37,500 designated housing units. As the interviewing of the full NCS sample is conducted over a six month period, one sixth of the units in each sample are designated to be interviewed in a given calendar month. As noted earlier, and as also illustrated in the rotation chart, in each calendar month each sample (i.e., J01, J02, etc.) is further subdivided into six panels for the purpose of systematically introducing new households into the survey. In the period January-June 1973, then, all six panels of sample J01 in each of the months were interviewed for the second time while all six panels of sample J02 in each of these months were interviewed for the first time. In the next six month interviewing period, July-December 1973, all panels of sample J01 were interviewed for the third time while all panels in sample J02 were interviewed for the second time, etc. Table 1 below then indicates the sample data used for our investigation of "panel" bias.

Panels in samples J01, J02, J03 and J04 interviewed for the first time were not used in this study as the first interview is used only to "bound" data collected in subsequent interviews. That is, for each interview after the first, the interviewer is provided with a record of any incidents reported in the previous interview to insure that these are not included in the current interview. This procedure is used to eliminate to the extent possible, forward telescoping of incidents into the six month reference period.

Since for each interview period shown in table 1, the expected value of the victimization rate for samples J01 and J02 will be equal if there is no effect of repeated interviewing of the same panel, a simple comparison of the victimization rates derived from samples J01 and J02 for each time period provides estimates of $\alpha_{2,3}$, $\alpha_{3,4}$, $\alpha_{4,5}$ and $\alpha_{5,6}$, respectively. In addition, a comparison of the rates obtained by cumulating the data over the four time periods provides an estimate of the average effect of these.

As alluded to earlier, in a given sample (J01 or J02) and interview period, some households will be interviewed fewer times than shown in table 1. This results from movement of the household members over time, noninterviews, the introduction of newly constructed units into the sample, and the fact that about 10 percent of the households in sample J01 were interviewed for the first time in January-June 1973 rather than in the initial interviewing period of July-December 1973.

Data obtained from the survey indicate that over the period July 1973 to March of 1975, an average of 86 percent of the households are identical to those included in the previous interview which occurred 6 months earlier while 10 percent of the households were different. The remaining 4 percent consisted of households which were not previously interviewed or were not previously in the sample (i.e., newly constructed units).

Thus, one might speculate that for each of the time periods used in this study only about $(.86)^{(t-1)}$, where t = number of times interviewed shown in table 1, of the households will actually have been interviewed for the number of times shown in table 1 for that time period. In addition, when comparing the estimated victimization rates derived from samples J01 and J02 for each of the time periods shown in table 1, we would expect each of the estimates to contain unbound data from approximately 14 percent of

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NCS ROTATION CHART – NATIONAL SAMPLE

JULY 1972 – JUNE 1975

Year and month	J01	J02	J03/J04
1972 JULY	11 12 13 14 15 16		
AUG.	21 22 23 24 25 26		
SEPT.	31 32 33 34 35 36		
OCT.	41 42 43 44 45 46		
NOV.	51 52 53 54 55 56		
DEC.	61 62 63 64 65 66		
1973 JAN.	11 12 13 14 15 16	11 12 13 14 15 16	
FEB.	21 22 23 24 25 26	21 22 23 24 25 26	
MAR.	31 32 33 34 35 36	31 32 33 34 35 36	
APR.	41 42 43 44 45 46	41 42 43 44 45 46	
MAY	51 52 53 54 55 56	51 52 53 54 55 56	
JUNE	61 62 63 64 65 66	61 62 63 64 65 66	
1973 JULY	11 12 13 14 15 16	11 12 13 14 15 16	
AUG.	21 22 23 24 25 26	21 22 23 24 25 26	
t_1 SEPT.	31 32 33 34 35 36	31 32 33 34 35 36	
OCT.	41 42 43 44 45 46	41 42 43 44 45 46	
NOV.	51 52 53 54 55 56	51 52 53 54 55 56	
DEC.	61 62 63 64 65 66	61 62 63 64 65 66	
1974 JAN.	11 12 13 14 15 16	11 12 13 14 15 16	11
FEB.	21 22 23 24 25 26	21 22 23 24 25 26	21
MAR.	31 32 33 34 35 36	31 32 33 34 35 36	31
t_2 APR.	41 42 43 44 45 46	41 42 43 44 45 46	41
MAY	51 52 53 54 55 56	51 52 53 54 55 56	51
JUNE	61 62 63 64 65 66	61 62 63 64 65 66	61
1974 JULY	12 13 14 15 16	12 13 14 15 16	11 12
AUG.	22 23 24 25 26	22 23 24 25 26	21 22
SEPT.	32 33 34 35 36	32 33 34 35 36	31 32
t_3 OCT.	42 43 44 45 46	42 43 44 45 46	41 42
NOV.	52 53 54 55 56	52 53 54 55 56	51 52
DEC.	62 63 64 65 66	62 63 64 65 66	61 62
1975 JAN.	13 14 15 16	13 14 15 16	11 12 13
t_4 FEB.	23 24 25 26	23 24 25 26	21 22 23
MAR.	33 34 35 36	33 34 35 36	31 32 33
APR.	43 44 45 46	43 44 45 46	41 42 43
MAY	53 54 55 56	53 54 55 56	51 52 53
JUNE	63 64 65 66	63 64 65 66	61 62 63

Segments in mixed status – about ten percent of the segments will be interviewed for the first time during this six-month period.

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the households which were different from those at the previous interview, not previously interviewed or not previously in sample.

It seems to us, then, that those estimates will tend to underestimate any differences which result from repeated interviewing of the same households. On the other hand, these data reflect the actual survey conditions and the estimates, therefore, reflect any effect of repeated interviewing of the same sample panels as carried out under the actual survey conditions.

Results

For the personal crime categories, the estimates of the α terms (i.e., the panel bias effct defined by equation (1)) are all positive except for the crime of personal theft for panels interviewed for the 3rd and 4th, 4th and 5th, and 5th and 6th times respectively, where there is practically no difference between the estimated victimization rates. (These are shown in tables 2 through 5 and the estimates of the α terms (x 100) are shown in the percent difference column.) The fact that the α terms are positive indicates that the victimization rates for panels interviewed for the 2nd time are greater than those for panels interviewed for the 3rd time during the same time period, the rate for panels interviewed for the 3rd time are greater than those interviewed for the 4th time during the same time period, etc.

Generally, the estimated differences for the personal crime categories are no more than 6 percent except for crimes of violence and assault for panels interviewed for the 5th and 6th times where the differences are 8 and 15 percent respectively. Although we are dealing with large samples, the characteristic of interest is a relatively rare item and as a result the standard error on each of these estimates is quite large relative to the estimate. In fact the coefficients of variation all exceed 65 percent. Thus, these estimates are too unreliable to conclude about the magnitude and direction of any panel differences for these crimes.

Considering the household crime categories, most of the estimated α terms are also positive (i.e., the victimization rates for panels interviewed for the 2nd time are greater than those for panels interviewed for the 3rd time during the same period, etc.) The differences range from about 3 to 9 percent with the exception of a 15 percent difference for motor vehicle theft for panels interviewed for the 3rd and 4th times. Again, however, the relative error on each of these estimates is large so that it is not possible to make a reasonable inference as to their magnitude or direction. A notable exception to the frequent occurrence of positive α terms occurs for panels interviewed for the 3rd and 4th times where the estimated victimization rates for panels interviewed for the 3rd time was about 4 - 6 percent less than the rates for panels interviewed for the 4th time. At this point we can attach no particular importance to this result considering the relatively large sampling errors on these estimates.

Recall that the panels in sample J01 were interviewed for the 3rd, 4th, 5th and 6th times from July 1973 to March 1975 while the panels in sample J02 were interviewed for the 2nd, 3rd, 4th and 5th times during this sample time period. Thus differences between the victimization rates for sample J02 and J01 over this entire time period reflect the average effects of $\alpha_{2,3}$, $\alpha_{3,4}$, $\alpha_{4,5}$, and $\alpha_{5,6}$ and should be somewhat more reliable than the estimates of the individual α term.

As shown in table 6, the estimated victimization rate obtained from sample J02 is greater than the rate obtained from sample J01 for each of the crime categories. The estimated differences range from as small as 1 percent for burglary to 10 percent for motor vehicle theft. Unfortunately, the standard errors on these estimates are still relatively large even though we have accumulated data for approximately 220,000 personal interviews and 96,000 household interviews for both sample J01 and sample J02. The lowest coefficient of variation is about 50 percent for motor vehicle theft.

On the basis of these results, it is obvious that it will be necessary to accumulate much more of the NCS sample data over time to provide estimates of any real panel differences resulting from repeated interviewing with any degree of precision. Also, it will not be possible to provide reliable estimates of the bias of the estimates of change for quarters of occurrence one year apart, using the model developed in this paper, until such estimates are available.

Concerning the effect of repeated interviewing on the noninterview rates for this survey, the data indicate that repeated interviewing of the same sample panels has not had any appreciable effect on the type A and type Z noninterview rates. As shown in table 7, there has been an increase in both of the noninterview rates from July 1973 to March 1975 for both samples J01 and J02. The rate for noninterviewed persons within interviewed households (type Z) increased from 1.3 percent to 1.5 or 1.6 percent while the rate for completely noninterviewed households (type A) increased from 3.7 to 3.9 percent for sample J01 and from 3.4 to 4.0 percent for sample J02. However, as the rates were fairly small during July-December 1973, when sample J01 panels were interviewed for the third time and sample J02 panels were interviewed for the second time, it would seem that the increase in the noninterview rates does not pose a serious problem in terms of any additional bias introduced into the survey estimates as a result of the adjustment of the sample data for noninterviews.

[1] Bailar, Barbara A., "The Effects of Rotation Group Bias on Estimates from Panel Surveys", Journal of the American Statistical Association, 70, No. 349, (March 1975), 23-30.

[2] Neter, John and Waksberg, Joseph, U.S. Bureau of the Census, "Response Errors in the Collection of Expenditures Data by Households Interviews: An Experimental Study", Technical Paper No. 11.

Attachment A

Definitions of Types of Crimes

Personal Crimes - All crimes against persons. Includes crimes of violence and personal crimes of theft. (See below.)

Crimes of Violence - Rape, robbery of persons, and assault. (See below.)

Assault - An unlawful physical attack by one person upon another, including both aggravated and simple assault. (See below.) Excludes rape and attempted rape, as well as attacks involving theft or attempted theft, which are classified as robbery.

Rape - Carnal knowledge through the use of force or the threat of force, including attempts, Statutory rape (without force) is excluded.

Robbery - Theft or attempted theft, directly from a person or business, of property or cash by force or threat of force, with or without a weapon.

Simple Assault - Attack without a weapon resulting in minor injury (e.g., bruises, black eye, cuts, scratches, swelling) or in undetermined injury requiring less than two days of hospitalization. Also includes attempted assault without a weapon.

Aggravated Assault - Attack with a weapon resulting in any injury and attack without a weapon resulting either in serious injury (e.g., broken bones, loss of teeth, internal injuries, loss of consciousness) or in undetermined injury requiring two or more days of hospitalization. Also includes attempted assault with a weapon.

Personal Crimes of Theft - Theft of property or cash either with contact (but without force or threat of force) or without contact between victim and offender.

Household Crimes - All crimes against property (not persons) at or near the home. Includes burglary, household larceny and motor vehicle theft. (See below.)

Burglary - Unlawful or forcible entry of a home or business, usually, but not necessarily, attended by theft. Includes attempted forcible entry. (See below.)

Unlawful Entry - A form of burglary committed by someone having no legal right to be in the premises even though force is not used.

Forcible Entry - A form of burglary in which force is used to gain entry (e.g., by breaking a window or slashing a screen).

Household Larceny - Theft or attempted theft of property or cash from the home (involving neither forcible nor unlawful entry), or from its immediate vicinity.

Motor Vehicle Theft - Stealing or unauthorized taking of a motor vehicle, including attempts at such acts.

TABLE 1. Number of Interviewed Persons and Households Used for Panel Bias Analysis

Month of Interview	Sample J01 Panels			Sample J02 Panels		
	Number of times interviewed	No. of interviewed persons 12+	No. of interviewed households	Number of times interviewed	No. of interviewed persons 12+	No. of interviewed households
July-December 1973	3	74,999	32,667	2	74,550	32,581
January-June 1974 1/	4	67,281	29,509	3	67,182	29,554
July-December 1974 2/	5	55,991	24,734	4	55,653	24,630
January-March 1975 3/	6	22,554	9,918	5	22,592	9,975

1/ Sample reduction.

2/ Only 5 of 6 panels used as first panel of each sample dropped.

3/ Only 4 of 6 panels used as second panel of each sample dropped.

Table 2 - Estimated Differences in Victimization Rates for Panels Interviewed for the 2nd and 3rd Times in July-December 1973

(Rates expressed as number of victimizations reported as occurring in six months prior to month of interview per 1000 interviewed households or persons 12+.)

Type of Crime	Victimization Rate - 2 times	Victimization Rate - 3 times	Difference Between Victimization Rates (2 times - 3 times)		Standard Error of Percent Difference (percentage points)
			Absolute (per 1000)	Percent (2 times as base)	
Total Personal Crimes	60.95	58.09	2.86	4.7	3.2
Crimes of Violence	16.70	15.99	0.71	4.3	5.7
Assault	13.07	12.44	0.63	4.8	6.2
Personal Theft	44.25	42.11	2.14	4.8	3.5
Total Household Crimes	116.85	109.44	7.41	6.3	2.8
Burglary	47.36	45.83	1.53	3.2	4.4
Household Larceny	59.73	54.46	5.27	8.8	3.7
Motor Vehicle Theft	9.76	9.15	0.61	6.2	8.2

Table 3 - Estimated Difference Between Victimization Rates for Panels Interviewed for the 3rd and 4th Times in January-June 1974

(Rates expressed as number of victimizations reported as occurring in six months prior to month of interview per 1000 interviewed households or persons 12+).

Type of Crime	Victimization Rate - 3 times	Victimization Rate - 4 times	Difference Between Victimization Rates (3 times - 4 times)		Standard Error of Percent Difference (percentage points)
			Absolute (per 1000)	Percent (3 times as base)	
Total Personal Crimes	64.44	63.44	1.00	1.6	3.2
Crimes of Violence	16.06	15.10	0.96	6.0	5.0
Assault	12.09	11.44	0.65	5.4	5.7
Personal Theft	48.38	48.33	0.05	0.1	5.0
Total Household Crimes	108.58	113.25	- 4.67	- 4.3	3.3
Burglary	42.53	45.27	- 2.74	- 6.4	5.0
Household Larceny	55.25	58.86	- 3.61	- 6.5	4.5
Motor Vehicle Theft	10.79	9.12	1.67	15.5	8.1

Table 4 - Estimated Difference Between Victimization Rates for Panels Interviewed for the 4th and 5th Times on July-December 1974

(Rates expressed as number of victimizations reported as occurring in six months prior to month of interview per 1000 interviewed households or persons 12+).

Type of Crime	Victimization Rate - 4 times	Victimization Rate - 5 times	Difference Between Victimization Rates (4 times - 5 times)		Standard Error of Percent Difference (percentage points)
			Absolute (per 1000)	Percent (4 times as base)	
Total Personal Crimes	59.12	58.53	0.59	1.0	8.1
Crimes of Violence	16.21	15.38	0.83	5.1	6.7
Assault	12.24	11.77	0.47	3.8	7.7
Personal Theft	42.91	43.15	-0.24	-0.6	1.8
Total Household Crimes	121.64	115.71	5.93	4.9	3.7
Burglary	48.07	46.05	2.02	4.2	5.4
Household Larceny	63.99	60.89	3.10	4.8	4.7
Motor Vehicle Theft	9.58	8.77	0.81	8.5	9.4

Table 5 - Estimated Difference in Victimization Rates for Panels Interviewed for the 5th and 6th Times in January-March 1975

(Rates expressed as number of victimizations reported as occurring in six months prior to month of interview per 1000 interviewed households or persons 12+).

Type of Crime	Victimization Rate - 5 times	Victimization Rate - 6 times	Difference Between Victimization Rates (5 times - 6 times)		Standard Error of Percent Difference (percentage points)
			Absolute (per 1000)	Percent (5 times as base)	
Total Personal Crimes	67.41	65.71	1.70	2.5	4.5
Crimes of Violence	16.20	14.94	1.26	7.8	9.3
Assault	12.57	10.69	1.88	15.0	9.7
Personal Theft	51.21	50.77	0.44	0.9	4.4
Total Household Crimes	119.20	116.25	2.95	2.5	4.4
Burglary	48.72	45.57	3.15	6.5	7.1
Household Larceny	59.95	61.10	- 1.15	- 1.9	10.2
Motor Vehicle Theft	10.53	9.58	0.95	9.0	15.2

Table 6 - Estimated Difference Between Victimization Rates for NCS Samples J01 and J02 for Interview Months July 1973 through March 1975

(Rates expressed as number of victimizations reported as occurring in six months prior to month of interview per 1000 interviewed households or persons 12+.)

Type of Crime	Victimization rate for sample J02 1/	Victimization rate for sample J01 2/	Difference Between Victimization Rates (J02 minus J01)		
			Absolute (per 1000)	Percent (J02 as base)	Standard Error of Percent Difference (percentage points)
Total Personal Crimes	62.22	60.61	1.61	2.6	2.3
Crimes of Violence	16.33	15.46	0.87	5.3	3.4
Assault	12.51	11.79	0.72	5.8	3.5
Personal Theft	45.89	45.15	0.74	1.6	2.7
Total Household Crimes	115.78	112.90	2.88	2.5	2.1
Burglary	46.21	45.69	0.52	1.1	3.0
Household Larceny	59.47	58.12	1.35	2.3	2.8
Motor Vehicle Theft	10.11	9.09	1.02	10.1	5.0

1/ Rates based on 219,977 interviewed persons 12+ and 96,740 interviewed households. See table 1.

2/ Rates based on 220,825 interviewed persons 12+ and 96,828 interviewed households. See table 1.

Table 7 - Noninterview Rates for NCS Samples J01 and J02

Interview Months	Type Z Noninterview Rate 1/		Type A Noninterview Rate 2/	
	Sample J01 (percent)	Sample J02 (percent)	Sample J01 (percent)	Sample J02 (percent)
July-December 1973	1.3	1.3	3.7	3.4
January-June 1974	1.3	1.2	3.5	3.3
July-December 1974	1.4	1.5	3.8	3.7
January-March 1975	1.5	1.6	3.9	4.0

1/ noninterviewed persons within interviewed units.

2/ noninterviewed units.