

Technical Background on the Redesigned National Crime Victimization Survey

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Purpose of these briefing materials

These briefing materials on the redesigned National Crime Victimization Survey (NCVS) provide a summary of the changes made to the questionnaire and procedures and their impact. The methods by which these changes were phased in are presented. A detailed comparison of the new and old questionnaires and procedures is discussed along with reasons why these new methods produce higher crime rates. The new type of crime classification scheme is presented. Finally, the eventual method for comparing crime estimates time series is described.

Redesigning the National Crime Victimization Survey

The National Crime Victimization Survey (NCVS) — a major source of the nation's statistics on criminal victimizations — has undergone an extensive redesign. A collaborative effort on this redesign among several institutions and agencies, including the Bureau of Justice Statistics and the Bureau of the Census, began in the late 1970's and has focused principally on improving the accuracy and utility of crime measurement.

The National Crime Victimization Survey began in 1972. It collects victimization data from a sample of about 100,000 individuals living in about 50,000 households. Prior to the redesign, the victimizations were categorized as personal crimes of violence (rape, robbery, and assault), personal crimes of theft, and household crimes (burglary, household larceny, and motor vehicle theft).

In the mid 1970's, the National Academy of Sciences reviewed the National Crime Victimization Survey. While the survey was found to be an effective instrument for measuring crime, reviewers identified aspects of the methodology and scope of the NCVS that could be improved. They proposed that research investigate the following:

- an enhanced screening section that would better stimulate respondents' recall of victimizations, thus reducing underreporting because of forgotten incidents;
- screening questions that would sharpen the concepts of criminal victimization and diminish the effects of subjective interpretations of the survey questions;
- additional questions on the nature and consequences of victimizations that would yield more useful data for analysis.

In response, the Bureau of Justice Statistics sponsored a research consortium to investigate the issues raised in the review and to make recommendations that would improve the accuracy and utility of the NCVS. The redesign consortium completed its work in 1985.

More recently, the issue of specifically improving the measurement of sex crimes and domestic violence resulted in the formation of a special committee associated with the American Statistical Association's Committee on Law and Justice Statistics. This committee developed enhanced questions on rape, sexual assault, and domestic violence to get better estimates of these crimes that are difficult to measure.

Implementing the new questionnaire and procedures

The Bureau of Justice Statistics and the Bureau of the Census examined the utility, feasibility and cost of the consortium's redesign recommendations and developed new questionnaires and procedures to be implemented. In 1986, a number of important changes judged to be *non-rate-affecting* were introduced. Most of these changes were made to the incident report, which contains questions designed to obtain data on characteristics and circumstances of reported crime incidents. The changes included more specific questions about the victim's behavior during an incident and the extent to which those actions affected the outcome, new questions dealing with perceived substance abuse by offenders, and expanded coding on other topics, such as offender weapon use. The Bureau of Justice Statistics released several reports analyzing the new data.

More comprehensive changes were tested and phased in on a more gradual basis. These changes were considered *rate-affecting* because of their expected impact on the number of crimes reported in the National Crime Victimization Survey. They include a substantial reworking of the screener (the part of the questionnaire that ascertains whether the respondent has been a crime victim) and survey procedures (such as the use of computer-assisted telephone interviewing and redefining series crimes). Based on test results that were encouraging, the new questionnaire and procedures were phased in from January 1992 through June 1993 in half the sample areas. This overlap phase-in method of the old to the new allows the Bureau of Justice Statistics to continue to produce estimates of annual change in crime rates and enables analysts to assess the effect of the new questionnaire and procedures on crime measures. Since July 1993 the redesigned methods have been used in all sample areas.

Comparing new and old questionnaires and procedures

This comparison is limited to differences that existed during the overlap period (January 1992-June 1993).

New methods

- New questionnaire screener
- Computer-assisted telephone interviewing for 30% of sample
- Series crime re-defined as 6 or more related incidents
- Survey population estimates are ratio adjusted to known population figures *adjusted* for the estimated census population undercount.

Old methods

- Old questionnaire screener
- Computer-assisted telephone interviewing for 5% of sample
- Series crime defined as three or more related incidents
- Survey population estimates are ratio adjusted to *unadjusted* population figures.

Table 1 compares 1992 crimes rates between the new and old methods by type of crime.

Table 1. 1992 NCVS crime rates by type of crime

Type of crime	New methods rate	Old methods rate	Percent difference
Personal crimes ^a	51.1	34.4	-
Crimes of violence	49.3	32.1	-
Rape	1.8	0.7	161.8 ^b
Sexual assault ^c	1.1	-	-
Robbery	6.2	5.9	4.1
Completed	4.1	3.9	5.4
Attempted	2.1	2.0	1.5
Assault	40.2	25.5	57.9 ^b
Aggravated	11.1	9.0	23.6 ^b
Simple	29.1	16.5	76.5 ^b
Property crime	325.3	264.4	23.0 ^b
Household burglary	58.7	48.9	20.1 ^b
Motor vehicle theft	18.6	20.1	-7.8
Theft	248.0	195.4	26.9 ^b

-Not applicable.

^aIncludes the crimes of purse snatching and pocket picking.

^bSignificant at the 5% level.

^cSexual assault is a new crime category introduced with the redesigned NCVS.

Reasons for differences in crime rates between the new and old methods

The reason for differences in crime rates between the new and old methods relates to the differences between the new and old questionnaire and procedures discussed above. The screener differences vary by type of crime and will be addressed separately, followed by discussions of the three procedural differences.

Screener

Even though many changes to the screener may relate to specific types of crimes, there are some changes in the format that carry across all types of crimes. One is the avoidance of the *yes/no* question-and-answer format of the old screener. The new screener uses a short-cues approach throughout. With a short-cues screener, the respondent is provided an extended list of cues regarding crime victimizations and situations in which crime victimizations might have occurred. The idea is to provide respondents sufficient time to recall victimizations (which are fairly rare) and help in structuring the recall task before being required to respond. Another general change in the new screener is the exclusion of criminal terms and concepts found in the old screener.

Reasons for differences in violent crime rates because of the new and old screener questions

The new screener questions provide more specific cues regarding kinds of items used as weapons and kinds of offender actions that better define the in-scope crimes of violence for the NCVS. In particular, the explicit cuing of rape and other sexual assaults has been added to the new screener. A side-by-side comparison of the new and old screener questions is provided.

Furthermore, two frames of reference have been added or more explicitly defined in the new screener. The first relates to crimes being committed by someone the respondent knows. The second relates to the possible location of a crime or activities the respondent may have been involved in. This screener question takes the few sporadically mentioned cues of location/activity in the old screener questions and creates another specific frame of reference with a greatly expanded list of location/activity cues.

Violent crime screener questions

New

1. Has anyone attacked or threatened you in any of these ways—
 - a. With any weapon, for instance, a gun or knife—
 - b. With anything like a baseball bat, frying pan, scissors, or stick—
 - c. By something thrown, such as a rock or bottle—
 - d. Include any grabbing, punching, or choking,
 - e. Any rape, attempted rape or other type of sexual attack—
 - f. Any face to face threats—

OR

- g. Any attack or threat or use of force by anyone at all? Please mention it even if you are not certain it was a crime.
2. Incidents involving forced or unwanted sexual acts are often difficult to talk about. Have you been forced or coerced to engage in unwanted sexual activity by—
 - a. someone you didn't know before
 - b. a casual acquaintance OR
 - c. someone you know well

Old

1. Did anyone take something directly from you by using force, such as by a stickup, mugging or threat?
2. Did anyone TRY to rob you by using force or threatening to harm you?
3. Did anyone beat you up, attack you or hit you with something, such as a rock or bottle?
4. Were you knifed, shot at, or attacked with some other weapon by anyone at all?
5. Did anyone THREATEN to beat you up or THREATEN you with a knife, gun, or some other weapon, NOT including telephone threats?
6. Did anyone TRY to attack you in some other way?

All types of crimes screener questions

New

1. Were you attacked or threatened OR did you have something stolen from you—
 - a. At home including the porch or yard—
 - b. At or near a friend's, relative's, or neighbor's home—
 - c. At work or school—
 - d. In places such as a storage shed or laundry room, a shopping mall, restaurant, bank or airport—
 - e. While riding in any vehicle—
 - f. On the street or in a parking lot—
 - g. At such places as a party, theater, gym, picnic area, bowling lanes, or while fishing or hunting—

OR

- h. Did anyone ATTEMPT to attack or attempt to steal anything belonging to you from any of these places?
2. People often don't think of incidents committed by someone they know. Did you have something stolen from you OR were you attacked or threatened by—
 - a. Someone at work or school—
 - b. A neighbor or friend—
 - c. A relative or family member—
 - d. Any other person you've met or known?
3. Did you call the police to report something that happened to YOU which you thought was a crime?
4. Did anything happen to you which you thought was a crime, but did NOT report to the police?

Old

1. Was anything stolen from you while your were away from home, for instance, at work, in a theater or restaurant, or while traveling?
2. Did you call the police to report something that happened to YOU which you thought was a crime?
3. Did anything happen to YOU which you thought was a crime, but did NOT report to the police?

Reasons for differences in crime of theft and household larceny rates because of the new and old screener questions

The number of cues in the new screener has been greatly increased in an effort to expand the frame of reference of things that may have been stolen.

As with crimes of violence, the two new frames of reference (someone you know and location/activity) provide many more cues to assist respondents in recalling crimes of theft and possibly household larcenies.

Crimes of theft and household larceny screener questions

New

1. Was something belonging to YOU stolen, such as—
 - a. Things that you carry, like luggage, a wallet, purse, briefcase, book—
 - b. Clothing, jewelry, or calculator—
 - c. Bicycle or sports equipment—
 - d. Things in your house—like a TV, stereo, or tools—
 - e. Things outside your home such as a garden hose or lawn furniture—
 - f. Things belonging to children in the household—
 - g. Things from a vehicle, such as a package, groceries, camera, or cassette tapes—

OR

- h. Did anyone ATTEMPT to steal anything belonging to you?
2. About your motor vehicles
 - a. Did anyone steal any parts such as a tire, tape deck, hubcap or battery?
 - b. Did anyone steal any gas from them?
 - c. Did anyone ATTEMPT to steal parts attached to them?

Old

1. Was anything at all stolen that is kept outside your home, or happened to be left out, such as a bicycle, a garden hose, or lawn furniture?
2. Did anyone steal, or TRY to steal parts attached to it, such as a battery, hubcaps, tape deck, etc.?
3. Did you have your (pocket picked/purse snatched)?
4. Did anyone steal things that belonged to you from inside ANY car or truck, such as packages or clothing?
5. Was anything stolen from you while you were away from home, for instance at work, in a theater or restaurant, or while traveling?
6. Was anything at all stolen from you?
7. Did you find any evidence that someone ATTEMPTED to steal something that belonged to you?

Reasons for differences in burglary rates because of the new and old screener questions

In general, the same frame of reference is established for burglary in the new and old screener. However, the new screener has

several more specific cues. These additional cues relate to how the offender might have gotten into or attempted to get into the respondent's home and/or other types of buildings that may be on the respondent's property.

Burglary screener questions

New

1. Has somebody—
 - a. Broken in or **ATTEMPTED** to break into your home by forcing a door or window, pushing past someone, jimmying a lock, cutting a screen, or entering through an open door or window?
 - b. Has anyone illegally gotten in or tried to get into a garage, shed or storage room?

OR

- c. Illegally gotten in or tried to get into a hotel or motel room or vacation home where you were staying?

Old

1. Did anyone break into or somehow illegally get into your home, garage, or another building on your property?
2. Did you find a door jimmyed, a lock forced, or any other signs of an **ATTEMPTED** break in?
3. Did anyone take something belonging to you or any member of this household, from a friend's or relative's home, a hotel or motel, or vacation home?

Motor vehicle theft rates

There is no significant difference in motor vehicle thefts rates between the new and old methods. One reason is that the new and old screener questions are very similar. Another reason is that motor vehicle thefts are highly salient events (demonstrated by the fact that they

have the highest percent reported to police), suggesting little room for improvement in their measurement. Similar results were observed in the Computer-Assisted Telephone Interviewing (CATI) research. While CATI increased ratios for most types of crime, it had no significant effect on motor vehicle theft rates.

Motor vehicle theft screener questions

New

1. Was it—
 - a. Stolen or used without permission?
 - b. Did anyone **ATTEMPT** to steal any vehicles?

Old

1. Did anyone steal, **TRY** to steal, or use it without permission?

Reasons for differences in crime rates because of the new and old procedures

Computer-assisted telephone interviewing (CATI)

The use of CATI from a centralized telephone facility has been previously shown to increase the number of reported crimes. The combined effect of centralization (ability to monitor interviewers) and computerization of the questionnaire are generally believed to help standardize the interviewer-respondent interaction leading to higher and more realistic CATI crime rates. Even though this CATI effect was explicitly measured only with the old questionnaire, there is evidence that the effect applies to the new questionnaire as well. Specifically, the use of CATI increased the rates of crimes of violence, crimes of theft, and household larceny by about 15-20% and burglary by about 10%. CATI's effect on motor vehicle thefts was negligible.

Series crimes

Under old procedures, a series crime was defined as three or more similar but separate crimes which the victim is unable to recall individually or describe in detail to an interviewer. These crimes have been excluded from annual estimates because the victims were unable to provide details for each event and a consensus was never reached on how to handle them. Special reports have included series crimes as one victimization.

Recognizing the difficulty that series crimes pose in terms of estimation, the Bureau of Justice Statistics decided for the new procedures to raise the minimum threshold for accepting

a series report from three to six incidents. This decision was based on a special study of series crimes which showed that respondents were able to complete separate incident reports for as many as 5 incidents. The result is that if a respondent reports three to five similar incidents to an interviewer, data on each incident are collected. While difficult to assess, the effect on crime rates is probably a small increase of 1-5% for most types of crime. The notable exceptions are assaults and some types of thefts, where the "increase in crime rates may be in the 10-15% range.

Adjusted population controls

Concurrent with the introduction of the new questionnaire is the use of NVCS population controls that have been adjusted for census population undercount. Unadjusted population controls were used for the old questionnaire. The shift toward blacks and younger population groups (both of which traditionally have higher than average victimization rates) increases the rates of crime categories sensitive to changes in the race or age distribution (such as crimes of violence) by 1-2% (table 2).

Table 2. Civilian population age 12 and over adjusted for census population undercount

	<u>Adjusted (new)</u>	<u>Unadjusted (old)</u>	<u>Percent difference</u>
Civilian noninstitutional population (12+)	209,353,000	206,414,000	1.4%
White	177,748,000	175,614,000	1.2
Black	24,778,000	23,872,000	3.8
Age 12-15	14,567,000	14,133,000	3.1
16-19	13,954,000	13,454,000	3.7
20-24	18,968,000	18,350,000	3.4
25-34	42,858,000	41,600,000	3.0
35-49	55,920,000	55,213,000	1.3
50-64	32,726,000	32,998,000	-0.8
65+	30,359,000	30,667,000	-1.0

The shift toward blacks and younger population groups (both of which traditionally have higher than average victimization rates) increases the rates of crime categories sensitive to changes in the race or age distribution (such as crimes of violence) by 1-2%.

Reasons for differences in the percent of crimes reported to police between the new and old methods

In general, the percent of crimes reported to police are lower with the new methods, in particular for assaults (table 3).

The lower percentages with the new methods comes from the fact that the increases in crimes *not* reported to police are greater than the increases for crimes reported to police. There are several inter-related reasons for this differential impact. One is the more expanded cuing of less serious crimes (crimes less likely to be reported to the police), which were not as well defined in the old screener. Another is that crimes reported to police may be more memorable and less subject to measurement error reduction.

Table 3. 1992 NCVS percent of crimes reported to police, by type of crime

Type of crime	New methods percent	Old methods percent	Percent difference
Personal crimes ^a	42.3	48.5	-
Crimes of violence	42.9	49.8	-
Rape	32.2	52.5	-38.6
Sexual assault ^b	32.2	-	-
Robbery	58.4	51.1	14.3
Completed	66.9	60.7	10.2
Attempted	41.3	32.7	26.3
Assault	41.3	49.4	-16.4 ^c
Aggravated	54.7	61.6	-11.2
Simple	36.2	42.8	-15.4 ^c
Property crime	33.8	36.3	-6.7
Household burglary	50.8	53.5	-5.1
Motor vehicle theft	76.5	74.7	2.4
Theft	26.7	28.0	-4.9

-Not applicable.

^aIncludes the crimes of purse snatching and pocket picking.

^bSexual assault is a new crime category introduced with the redesigned NCVS.

^cSignificant at the 5% level.

Redesign of type of crime classification scheme

A major reclassification scheme has shifted most of what were previously categorized as personal crimes of theft into property crimes of theft. Under the old scheme, theft was characterized as a personal or household crime based on location of the incident. If an item were stolen from the grounds of a home, it was considered a household theft; if the same item were stolen from someplace away from the home it was considered a personal theft. This distinction was rather arbitrary and unwieldy, since many items are jointly owned by members of a household. The redesigned NCVS classifies all thefts as household thefts unless there was contact between victim and offender. Personal thefts with contact (purse snatching and pocket-picking) are now the only types of theft that are categorized as personal theft. Table 4 compares the old and new type of crime classification scheme.

Overlap between the old and new NCVS methods

As discussed previously, an integral part of the planned transition from the old methods to the new methods of conducting the NCVS was to include a substantial overlap period in which both methods were implemented concurrently. Besides being used for comparing crime estimates, the overlap data can be used to extend earlier time trends data. Statistical models will be developed to adjust for the effects of the new methods on victimization reporting. Adjustment factors will be estimated at least for the major crime categories and possibly for other important variables if reliable differences are found.

Table 4. Changes in totals reflect the headings under which offenses are counted

Type of crime (old classification)	1992 crime rate	Type of crime (new classification)	1992 crime rate
Personal crimes	126.8	Personal crimes	51.1
Crimes of violence	49.3	Crimes of violence	49.3
Rape/other sexual assault	2.9	Rape/other sexual assault	2.9
Robbery	6.2	Robbery	6.2
Completed	4.1	Completed	4.1
Attempted	2.1	Attempted	2.1
Assault	40.2	Assault	40.2
Aggravated	11.1	Aggravated	11.1
Simple	29.1	Simple	29.1
Crimes of theft	77.5	Purse snatching/pocket picking	1.8
Household crimes	180.8	Property crimes	325.3
Burglary	58.7	Burglary	58.7
Household larceny	103.5	Motor vehicle theft	18.6
Motor vehicle theft	18.6	Theft*	248.0

*The theft category is a new crime category. It includes those crimes that were previously classified in two other

crime categories: *Household larceny* and *personal larceny without contact* (a subcategory of *crimes of theft*).