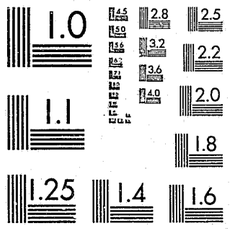

SAN JOSE METHODS TEST OF KNOWN CRIME VICTIMS

LAW ENFORCEMENT ASSISTANCE ADMINISTRATION

SAN JOSE METHODS TEST OF KNOWN CRIME VICTIMS

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NATIONAL INSTITUTE OF LAW ENFORCEMENT AND CRIMINAL JUSTICE
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FOREWORD

This report is the first in a series of technical documents whose purpose is to describe the methodological features of the statistical measurement processes of the Statistics Division of the National Institute of Law Enforcement and Criminal Justice.

This report presents the results of a statistical methods test of known crime victims. The test was part of a series of feasibility and methodological studies designed to analyze victim recall, victim cooperation, and the classification of victim-reported events into officially recognized crime categories. These feasibility studies are being conducted in preparation for a proposed nationwide survey to measure crime incidence—the National Crime Panel—to be conducted for the Law Enforcement Assistance Administration by the Bureau of the Census.

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I. Summary and Conclusions

In January 1971, a personal interview survey of known victims of crime was conducted in Santa Clara County, Calif., by the U.S. Bureau of Census, under LEAA sponsorship and design specifications.

The survey utilized a probability sample of 620 persons who were known to have been victims of specified crimes during 1970. The sample was selected from offense reports maintained by the San Jose Police Department. The offense records chosen were for personal (as opposed to commercial) victims of the crimes of robbery, assault, rape, burglary, and larceny.

The basic purpose of the survey was to continue examination of memory bias related to victim recall. Earlier studies of recall ability were undertaken in Washington and Baltimore. More specifically, the aim of the San Jose survey was to examine recall acumen to assist in determining an optimum reference period for the forthcoming National Crime Panel victim surveys. Results from the Washington and Baltimore studies provided important and fairly conclusive insights into the magnitude of the telescoping phenomenon and the extent of bias in relying on a victim to recall the crime incident in the same month it actually occurred.

Evidence from neither the Washington test nor the Baltimore test, however, was conclusive regarding the degree to which known victims could place an event within the proper reference period, irrespective of whether the precise month was remembered. The inconclusive nature of the evidence from those two tests was due to their experimental designs which are intended to address other methodological questions.

Besides the problem of reference period, other methodological objectives served by the San Jose Reverse Record Check Study included the refinement of the questionnaire; the efficacy of measuring rape incidence through the victim approach; and continuing analysis of: (1) Reasons for inaccuracies in survey reporting and (2) the success of classifying survey-determined crimes into legal categories.

This report looks at some of the more interesting results of the San Jose Reverse Record Check. Moreover, the report serves to document the methods of inquiry used for the study, so that the results can be compared with the Washington and Baltimore experiences, previously documented in reports prepared by the Bureau of the Census.

The major conclusions yielded by this study are as follows:

(1) A reference period of 12 months is not worse than one of 6 months for simply assessing whether a crime occurred.

(2) To place an occurrence in a specific time frame (month or quarter), respondents are more accurate with a 6-month reference period than a 12-month reference period.

(3) Police-known victims for most crimes reported the incident in the interview a high percentage of the time, except assault victims and rape victims. Their reporting rates were about one-half and two-thirds, respectively.

(4) For cases of personal victimization which were not reported in the survey interview, two-thirds involved incidents where the victim and the assailant were related or otherwise known to each other. On the other hand, stranger-to-stranger confrontations were reported in three of every four cases.

(5) Our ability to classify crimes according to UCR criteria is fairly accurate. Only minor modifications are suggested for the survey instrument for future efforts in terms of refining the classification procedures.

In light of conclusions (1) and (2) above when considered in connection with a continuing survey, a 6-month reference period is better than a 12-month period for producing calendar year data and for obtaining earlier and more timely results. With a 6-month rolling reference period, some data could theoretically be available after 12-months—assuming bounded interviews—and the data would be "centered" 3 months ago. For a 12-month reference period, 18 months would be required before data, comparably reliable, would be available and it would be centered 6 months ago. The sample size, however, for a 6-month reference period is twice that for a 12-month period.

II. Objectives of Study

A. Reference Period

In designing the study, the principal question facing us was, "Does the erosion of memory due to the passage of time significantly affect the number of crime incidents reported by victims in an interview situation?" The answer, of course, could have an enormous impact on the design of a continuing panel survey to measure crime incidence through the use of general population sampling. If, for example, we could determine that a reference period of 6 months ago is not appreciably different from one of 3 months ago in terms of recall failure, then we would opt for a 6-month reference period since the required sample size for a given degree of reliability would be reduced by one-half. (The length of the reference period is especially critical for crime incidence surveys inasmuch as the rarity of the phenomenon—in a statistical sense—requires large sample sizes for reliable measurement.) By extension, an analogous statement can be made about a 12-month reference period versus a 6-month period.

The preceding discussion implies that in an ongoing survey it is requisite for the victim to recall an event as being within the reference period, but is not at all essential for him to remember the precise date or month of occurrence. Short of total memory failure, the only bias emerging from this approach is telescoping,[1] which can be largely corrected[2] with bounded interviews when a continuing panel operation is utilized.

The chief concern addressed, then, in the San Jose Reverse Record Check was to examine the extent of total memory failure. Analysis of the results includes differential assessment by type of crime and whether extenuating circumstances are correlated with faulty memories or purposive nonreporting.

[1] The mnemonic phenomenon of reporting an event as occurring within a given reference period when in fact it occurred in some prior time interval.

[2] A bounded interview technique will correct for telescoping bias in those identical survey units which are in overlap panels from one interview to the next. The technique does not apply to survey units in replacement panels or to nonidentical units in overlapping panels. The total overlapping units in the National Crime Panel will likely be about 75–80 percent.

B. Rape Measurement

One of the more difficult methodological considerations in designing a victimization survey is the problem of measuring the incidence of rape. Historically, there has been a great deal of reluctance to pose, in an interview setting, a question of the genre, "Were you raped at any time during the past_____months?"

An inquiry phrased in such indelicate terms would likely promote public charges of the unbridled insensitivity of government snoopers as well as congressional outrage. It appeared quite plausible, however, that a measurement of rape incidence could be made from a survey interview without blatant question-wording of the form "Were you raped * * * ?"

In the course of developing the survey instruments through feasibility tests in Washington and Baltimore one of the question sequences asks, "* * * were you knifed, shot at, or attacked in some other way by anyone at all?" Affirmative responses are followed up with further questioning to determine the nature of the attack. It is possible, of course, that rape victims would respond affirmatively to this question, and probably with considerably less embarassment than one phrased in less subtle terms.

C. Classification of Crimes

It is to be expected that any statistics which purport to measure the incidence of crime would inevitably be compared with crimes known to and reported by the police, issued regularly in the FBI's "Uniform Crime Reports." For the victim surveys, therefore, considerable effort has been expended in developing the instruments so that crimes elicited can be classified in accordance with the definitions used by UCR. This has been done in order to make comparisons between UCR and victim survey results meaningful.

On the other hand, much attention has been given to the very real problem of constructing interview questions in such a way as to trigger the respondent's memory properly concerning the event without burdening his mind with legal labels for crimes. It should also be noted that tabulation plans call for presenting victim-event data in sufficient detail to permit analysts who so desire to describe crimes in ways which may depart from the constraints imposed by UCR definitions.

A third objective, therefore, to be addressed by the San Jose Reverse Records Check was a continuation of the examination of whether the instrument itself can be coded to conform to FBI definitions for crimes. This problem was addressed previously in both the Washington and the Baltimore tests.

III. Study Design

With the cooperation of the San Jose City Police Department and the assistance of Robert Cushman and his associates of the Santa Clara criminal justice pilot program, a probability sample of personal (as opposed to commercial) victims of crimes was selected from the offense reports in the police files. The victims were chosen to provide uniform representation over each of the 12 months of 1970 for each of five types of crime—burglary, robbery, larceny, assault, and rape. Except for rape, a systematic selection of an expected 12 offense reports was chosen from each month of calendar year 1970 for each type of crime. For rape, six offense reports were selected from each month.

Excluded as being out-of-scope were cases where the victim was younger than 16 years old and cases where the victim was either a commercial establishment or the person victimized was acting in a commercial capacity (for example, a store clerk who was held up for the cash register receipts). Also excluded was any victim whose home address at the time the event was reported to the police was outside Santa Clara County.

The expected and actual distribution of sample cases was as follows:

TABLE A.—*Expected and actual number of sample cases by type of crime*

Type of offense	Sample size		
	Expected per month	Total expected	Total actually selected
Total	54	648	620
Robbery	12	144	136
Assault	12	144	137
Rape	6	72	72
Burglary	12	144	142
Larceny	12	144	133

Personal interviews were attempted with the 620 named victims during January 1971 by Bureau of the Census interviewers.

The interviewers were not told that the names of the respondents had been taken from offense reports maintained by the police department. This procedure was necessary in order to avoid an obvious bias when testing recall ability.

It should be noted that the San Jose Reverse Record Check was conducted in conjunction with a larger survey of victimization, which utilized a general probability sample of about 5,000 households selected throughout Santa Clara County. That survey is the subject of a separate report to be prepared when the results are tabulated. The interviewers who had been hired for the larger survey conducted the Reverse Record Check Study. The same questionnaire forms were also employed for the two studies.

Three basic questionnaires were utilized. The first—the so-called screener—consists of a number of questions designed to elicit a simple yes or no regarding personal or household victim incidents. Respondents[3] were asked to answer in terms of events which occurred to them "during 1970, that is, between January 1 and December 31 of last year." The crimes covered by the screener were the five aforementioned ones, plus auto theft. (Auto theft was included to distinguish it from other kinds of larcenies.) The screener also provided basic demographic data and contained several attitudinal questions about crime.

For persons with affirmative responses to the portion of the screener dealing with crime incidents, a second questionnaire was administered depending on the type of crime. Under one procedure a questionnaire relating to personal violent crimes was used. With the other procedure a questionnaire relating to theft of property was used. Both supplementary questionnaires were to obtain a large amount of detail about the event—month, time, and place of occurrence; property damage; injuries suffered; time lost from work; characteristics of offender; amount and type of property loss; and whether police, insurance companies or other officials were notified.

[3] In the larger survey a split-sample technique was employed. Half the households were interviewed with a "household respondent" screener, whereby a single responsible member of the household reported for all members. The households in the remaining half-sample had a self-respondent approach, where each household member reported for himself. In the reverse record check, only the self-respondent technique was used.

Victims were interviewed in their homes or place of work. Movers were followed up, where possible, unless they had left Santa Clara County. Completed questionnaires were compared against the offense reports by Washington research staff to match up the proper incidents (many respondents reported incidents other than the ones which were sampled from the police files).

IV. Results of the Reverse Record Check

A. Response

The rate of response in the San Jose Reverse Record Check was 63.5 percent. Of the noninterview cases, the large majority—76 percent—were persons who could not be located. Another 11 percent of the noninterview cases had moved from the area; the remaining 13 percent were for other reasons, including refusals, and persons who were never available. (See app. table 1.)

By type of crime, the interview completion rate showed fairly modest variation, ranging from 73 percent for burglary to 59 percent for robbery. (See app. table 2.)

For comparison, the completed interview rate in each of the three cities used for reverse record checks is shown below.

TABLE B.—*Completed interview rate by city*

City	Interview rate (percent)	Sample size
Washington	67.4	484
Baltimore	68.7	527
San Jose	63.5	620

The low response rates for named individuals obtained in the three city experiments are not indicative of the response levels to be expected from general population samples. By contrast, the response rate from the general household sample in San Jose was about 97 percent, which is consistent with normal high levels obtained by Bureau of the Census interviewers when the sample consists of occupied housing units rather than persons.

B. Reference Period

The data collected in San Jose Reverse Record Check were tabulated in a variety of ways for purposes of analyzing the reliability of various reference periods. Table C below shows the extent to which cases sampled from police records were reported in the survey as occurring during the reference period—that is, within the past 12 months, or during 1970.

TABLE C.—*Cases sampled from police records by whether reported in survey "within past 12 months" by type of crime*

Type of crime	Total police cases interviewed	Reported to interviewer as "within past 12 months"[1]	
		Total	Percent
All crimes	394	292	74.1
Violent	206	129	62.6
Assault	81	39	48.1
Rape	45	30	66.7
Robbery	80	61	76.3
Property	188	162	86.2
Burglary	104	94	90.3
Larceny	84	68	81.0

[1] Literally, the question-wording of the interview document was "during 1970, that is between January 1 and December 31 of last year * * *."

One of the most noteworthy findings of the survey is that about three-fourths of the incidents for which the victim was interviewed resulted in mention of the event by the victim to the survey interviewer. The property crimes of burglary and larceny were reported with 86 percent recall, significantly greater than the 63 percent recall for the violent crimes of assault, rape, and robbery.

Again, as with Washington and Baltimore, the poorest reported crimes were those of assault—48 percent in San Jose. (A discussion of the characteristics of cases not reported is presented later in this report.)

Emphasis should be placed on the fact that the survey results show a 74-percent recall rate when the inquiry is for "the past 12 months." The experiment did not tell us what the recall expectation would be if varying recall periods had been used. Future methodological studies could be designed to address this question more rigorously.

It is possible, however, to gain some additional insights about reference periods by examining the San Jose data in other ways. Though the survey asked about crimes occurring during 1970, respondents were also asked to provide the month of occurrence, where possible. Results were tabulated to show the extent to which respondents were able to place events properly as occurring within the past month, the past three months, etc. These results are shown in table D.

TABLE D.—*Cases sampled from police records by time period by whether reported in survey interview within same period, all crimes (unweighted sample tallies)*

Reported to police	Total	Reported to interviewer within same period	
		Total	Percent
Within past month	36	24	66.7
Within past 3 months	101	70	69.3
Within past 6 months	201	135	67.2
Within past 9 months	304	202	66.4
Within past 12 months	394	265	[1] 67.3

[1] Includes only those cases for which month was reported in interview. Compare with 74.1 percent shown in table C and see text following table E for explanation.

The figures in table D were computed from unweighted tallies. Those figures do not reflect adjustments which may be due to differential sample sizes by type of crime (the expected sample size for each of the crimes of assault, burglary, larceny, and robbery was n; for rape, it was $n/2$). Nor do the figures in table D reflect an adjustment for varying response rates by type of crime.

With weighting adjustments of the type described above, it is interesting to note the stability of the numbers exhibited among three estimation procedures. (See table E following.)

TABLE E.—*Comparison of recall rates by reference period under 3 estimation schemes*

Reported to police	Reported to interviewer within same period		
	Recall rate unweighted (percent)	Recall rate weighted for sample size differentials (percent)	Recall rate weighted for both sample size and noninterview adjustment (percent)
Within past month	66.7	69.2	67.7
Within past 3 months	69.3	68.7	68.1
Within past 6 months	67.2	66.5	65.6
Within past 9 months	66.4	66.2	65.7
Within past 12 months	[1] 67.3	[1] 67.0	[1] 66.2

[1] See note at base of table D.

There were a total of 27 cases reported in the survey interview for which the date (month) could not be recalled by the respondent. These cases were properly recalled as occurring "within the past 12 months," and account for the difference of 74.1 percent shown in table C and 67.3 percent shown in tables D and E.

Of the 27 cases mentioned, 13 actually occurred during the last 6 months of 1970. If we assume these 13 cases would have been reported under the circumstances that the interview document had been worded to ask about events occurring "during the last 6 months," then 74 percent of the cases for that reference period would have been recalled. Similarly, for a 3-month reference period, the figure would be 74 percent. The assumption cited is tenable if we make the further assumption that the only cases which would not be reported under such circumstances would be those "telescoped" to an earlier (more distant) time period. These figures are summarized in table F.

TABLE F.—*Cases sampled from police records by time period by whether assumed reported in survey interview within same period, all crimes (unweighted sample tallies)*

Reported to police	Total	Assumed reported to interviewer within same period	
		Total	Percent
Within past month	36	24	66.7
Within past 3 months	101	75	74.3
Within past 6 months	201	148	73.6
Within past 9 months	304	222	73.0
Within past 12 months	394	292	74.1

It is clear on the basis of the results shown either in table D or in table F that a reference period of 12 months is basically as reliable as the other reference periods shown, as long as recall of the precise month of the occurrence is not a criterion for consideration. Indeed, if recall ability within the reference period were the only criterion for choosing the optimum period for a continuing survey, we would naturally be led to choosing a 12-month reference period because of the implications on the number of interviews required to achieve a given level of reliability.

The proposed plans for the National Crime Panel, however, call for a rotating sample of some 60,000 households to be interviewed at the rate of 10,000 a month, using a rolling reference period of 6 months. In effect the procedure calls for each 10,000 household subset to be interviewed about events occurring during the previous 6 months; so that the January panel would be interviewed about the preceding July–December period, the February panel about the period August–January, etc. This procedure will ultimately permit a "moving" index of crime to be estimated, say, semiannually, based on 60,000 interviewed

households. Such an index could be constructed, theoretically, after the first 6 months of data was compiled and would be "centered 3 months ago."

Alternatively, a 12-month reference period would produce mathematical equivalency in terms of sampling variance with 30,000 interviews spread uniformly over the first 6 months. The moving index however, would be less timely, centering 6 months ago rather than 3 months ago.

Moreover, in addition to moving averages there will be data produced relating to a specific time period, most likely calendar year. For this purpose it will be requisite to have the month or quarter of occurrence of an event reported, as accurately as possible, by the respondent. Results of the San Jose study indicate that the period of occurrence is more likely to be recalled for events occurring within the previous 6 months than for events occurring 7–12 months ago, i.e., 67 percent versus 53 percent. On a month-by-month basis, however, there is very little to choose from after the first 3 months. Cases of 1 month ago have reporting accuracy of 67 percent; 2 months and 3 months ago are about 55 percent accurate. After that, 4 or more months ago averages around 33 percent correct reporting. (See table G below.)

TABLE G.—*Cases sampled from police records by time period by whether reported in survey interview during the same period*

Reported to police	Total	Reported to interviewer during same period	
		Total [1]	Percent
1–6 months ago	201	135	67.2
1–3 months ago	101	70	69.3
1 month ago	36	24	66.7
2 months ago	34	19	55.9
3 months ago	31	17	54.8
4–6 months ago	100	50	50.0
4 months ago	32	12	37.5
5 months ago	32	9	28.1
6 months ago	36	14	38.9
7–12 months ago	193	103	53.4
7–9 months ago	103	47	45.6
7 months ago	36	13	36.1
8 months ago	33	11	33.3
9 months ago	34	11	32.4
10–12 months ago	90	27	30.0
10 months ago	29	10	34.5
11 months ago	27	3	11.1
12 months ago	34	13	38.2

[1] Note subtotals do not add to totals. Though a respondent may have failed to recall the exact month, his error may still have placed the event within the same 3-month or 6-month period that it occurred.

C. Measurement of Rape

The San Jose study was the first attempt in the series of Census—LEAA feasibility tests to determine whether the instruments developed to date could successfully elicit mention of rape attacks by known victims.

In evaluating the results, it should be observed first that the completed interview rate for rape victims selected from the police files was as "good" as for all crimes as a whole (62.5 percent versus 63.5 percent). Neither of the other violent crimes surveyed (robbery or assault) had completed interview rates higher than that for rape.

For those rape victims for whom it was possible to obtain an interview, two-thirds of them (30 out of 45 cases) reported the incident in the survey test. Though on the face of it this ratio of reporting leaves something to be desired, it is interesting to note that rape victims appear more likely to mention (or remember) the incidents in a survey atmosphere than victims of assault. About one-half the interviewed assault victims reported the events during the survey interview. (See text table C.)

Five of the "rape" victims, though mentioning the incident in the interview, reported the kind of details that caused the event to be classified in the test as an assault. There is no way of determining whether these five cases were misclassified by the police; or whether alternatively, the victims may have "edited" the details for the interviewer's benefit—either through shame or embarrassment or through memory failure.

It is worth noting that all five cases were attempted rapes according to police standards. This suggests the survey instrument needs further refinement to clear up ambiguities between aggravated assaults and attempted rapes in the classifications. Further analysis of the unreported cases reveals that only four of the 15 were stranger-to-stranger attacks, according to the police offense reports (actually one of the four cases had a blank entry for offender on the police form). The remaining 11 cases all involved an alleged offender who was known by the victim.

Examining the offender-victim relationship by whether the event was reported in the interview shows that 84 percent of the rape attacks by strangers were reported compared to 54 percent of the rape attacks by known assailants. These figures are summarized in table H.

TABLE H.—*Relationship of victim-offender in rape cases, by whether reported in interview*

Relationship of offender to victim [1]	Total interviewed	Percentage reporting incident in interview (percent)
All cases	45	66.7
Relative	0	.....
Known	24	54.2
Stranger	19	84.2
No entry	2	50.0

[1] As determined from police offense report.

D. Comparison of Victim-Offender Relationship by Whether Reported in Interview

To gain further insight into some of the correlates which may be related to reporting incidents in an interview, an analysis of the victim-offender relationship versus the reporting habits was made. A separate discussion about rape appears in the preceding section C of this report. Information on the police form was available to permit tallies of the relationship between the victim and the alleged offender for violet crimes. No tally was made of the property crimes in this regard largely because personal confrontation between victim and offender rarely occurs during the commission of the crime.

The results indicate that stranger-to-stranger confrontations are more salient than those involving persons who know or are related to each other. Violent crimes involving strangers were reported in the interview 75 percent of the time; those involving relatives were reported only 22 percent of the time; and those involving persons who knew each other (not kin) were reported with 58 percent frequency.

These results are displayed in table I.

Of the cases not reported in the survey, two of every three were incidents where the victim and the assailant were related or otherwise known to each other. (See table J below.)

TABLE J.—*Incidents not reported in interview by victim-offender relationship*

Incidents by type of offender	Unweighted		Weighted [1] (percent)
	Number	Percent	
Total incidents not reported	76	100	100
Offender Status:			
Relative	14	18	15
Known	33	44	48
Stranger	25	33	31
Not recorded	4	5	6

[1] See footnote table I.

In setting up the study design, assault and robbery cases were each sampled so that their overall sample size was twice that of the rape cases. For this reason, when examining the results shown in table I or in table J, it is more appropriate to use the weighted figures than the unweighted ones. There are no important differences, however, in the two sets of figures.

E. Classification of Crimes

One of the very important methodological analyses of the San Jose study was a comparison of the reported crimes as classified by the police versus the classification from the interview procedure. There are several variants which have a bearing on inconsistencies that may occur between the two classification schemes. Among them are the following:

TABLE I.—*Police sample cases interviewed by victim-offender relationship by whether incident was reported in interview*

Victim-offender relationship and reporting status	Assault	Rape	Robbery	Total all 3	Total weighted (percent)[1]
Total cases	81	45	80	206	.....
Proportion reporting incident (percent)	48.1	66.7	76.3	63.1	63.7
Offender a relative	18	.....	.....	18	.....
Proportion reporting incident (percent)	22.2	.....	.....	22.2	22.2
Offender known	38	24	16	78	.....
Proportion reporting incident (percent)	81.6	54.2	68.9	57.7	56.9
Offender a stranger	24	19	56	99	.....
Proportion reporting incident (percent)	54.2	84.2	80.4	74.7	76.3
No entry for offender	1	2	8	11	.....
Proportion reporting incident (percent)	100.0	50.0	62.5	63.6	61.5

[1] Recomputed to adjust for differential expected sample size by type of crime—size of sample for rape was $n/2$; for robbery and assault, the sample size was each n.

(1) The survey instrument may be inadequately constructed,

(2) Individual police departments may not conform perfectly to reporting standards established for "Uniform Crime Reports,"

(3) The details of an event that lead to classification in the survey may be poorly remembered or purposely altered by the respondent when interviewed,

(4) The details of an event that lead to classification in police records may not be communicated cogently by the victim to the police officer,

(5) The police officer may not properly record the details on the offense report,

(6) Interviewer variance may introduce errors.

In the San Jose study, it is not clear to what degree the above mentioned variants were operating. Only the first of the 6 points, however, is subject to improvement through modification of the survey instrument. Improvements in the question construction were made following the feasibility test conducted in Washington and again following the Baltimore study.

Appendix table 3 shows a cross tally of police classified crimes by the interview classification categories for the five types of crime studied. A summary of those results appears below in table K.

TABLE K.—*Proportion of crimes classified identically between police and survey schemes, assuming police as standard*

Type of crime, according to police classification	Total	Classified same in survey	
		Number	Percent of total
Total	292	245	84
Assault	39	33	85
Burglary	94	91	97
Larceny	68	56	82
Robbery	61	54	89
Rape	30	24	80

The figures above assume the police classification to be the standard and show the proportion of cases which were classified into the same categories through the survey procedures. The reverse position—the assumption that the survey classification is standard—would also be interesting to examine. To do so, however, requires weighting the data to reflect differential selection rates for the crimes sampled (the crimes measured do not occur in the general population of crime acts with equal frequencies; in 1970, for example, fewer than 200 rapes occurred in San Jose compared to several thousand burglaries, according to police reports). The variances due to these differential weighting factors by type of crime are so large that the re-weighted results cannot be meaningfully analyzed. A useful study in the future would be one carefully designed to measure the degree to which police classify crimes according to the victim survey definitions, assuming the latter as the standard.

In general, it is clear from table K that for most police—determined offenses, the probability that the event would be classified the same way through the survey route is fairly high. (Again note that the converse has not been conclusively determined; see preceding paragraph.)

An attempt was made to provide a separate analysis of petty versus grand larceny in terms of police-survey classification practices. Traditionally, victim surveys have produced dollar amount losses in crimes of theft that exceed the amounts recorded in police statistics (cf. the Washington and Baltimore test results). This phenomenon would appear to have serious implications on the survey-determined larcenies, as to whether they can be properly classified as grand or petty—i.e., above or below $50.

In the San Jose study, the results were inconclusive for two reasons. The number of petty[4] larcenies included in the test was too few to analyze reliably; and a fairly large percentage of the larceny cases contained no information on dollar loss from either the survey results, the police report, or both.

Data on dollar loss comparison for all crimes appears in appendix tables 6–8. In general, the survey results produced loss amounts that exceeded the police assessment. For those cases for which determination of dollar loss was available from both sources (police and survey), the median value as reported in the survey was about 40 percent higher than the police determination for grand larceny and burglary, and about 80 percent for robbery. For petty larceny, the median values were the same, but these results are based on only 10 cases.

F. Index of Inconsistency

A useful measure of association which can be employed for assessing the agreement between two classification schemes is the index of inconsistency. The index, I, has traditionally been used for a 2 by 2 matrix to examine inconsistency between observations obtained in interviews on two separate occasions. The 2 by 2 index applies when the elements of the population belong to either one of two classes.

The index has been extended by Bershad[5] to the more general case where the elements of the population are classified as belonging to one of L classes, $L \geqq 2$. The L–fold index is applicable to the survey-police cross-classification of offenses where the police classification can be thought of as the first "interview" and the survey classification as the second "interview."

In computing the index, it was done both including rape and excluding rape. The index with rape excluded may then be compared to the index values for Washington and for Baltimore. In neither of those cities was rape surveyed. The indices for the three cities are shown in table L.

TABLE L.—*Index of inconsistency (4 x 4 matrix) for police versus survey crime classes for 3 surveys*

Study	Index of inconsistency[1]
Washington	0.326
Baltimore	.168
San Jose:	
Without rape	.147
With rape [2]	.147

[1] For the crimes of assault, burglary, larceny, and robbery.
[2] With rape, the matrix of course becomes 5 x 5.

Table L shows that the inconsistency between the two classification schemes was considerably reduced between the Washington and the Baltimore tests. This is largely due to rather major improvements in the survey instrument that were made for the Baltimore survey. Additional modifications in the instrument were made for San Jose; although it may not be reasonable to attribute the slight decrease in inconsistency between Baltimore and San Jose solely to questionnaire changes (see the 6 classification variants cited on page 10 of this report).

In general, an index of inconsistency of 0.147 is regarded as fairly good. Perfect consistency, of course, would yield a value of zero. It is not likely that additional changes in the questionnaire will appreciably reduce the index of inconsistency below the level shown for San Jose.

Some methodologists dislike the L–fold index because it conceals differences that can be identified by examining the 2 by 2 indices. In that regard, if we examine a 2 by 2 classification from San Jose for each type of crime (assault versus not assault, robbery versus not robbery, etc.), we can see how each crime contributes to the L–fold "average." These results are summarized in table M.

TABLE M.—*Index of inconsistency (2 x 2) for each type of crime in San Jose study*

Type of crime	Index of inconsistency	Range of index (95 percent confidence limits)
Assault	0.165	0.091–0.298
Burglary	.115	.069– .191
Larceny	.196	.126– .305
Robbery	.126	.071– .222
Rape	.118	.053– .262

[4] In California, the legal distinction between petty and grand larceny is $200. For purposes of this survey, the UCR criterion of $50 was employed.

[5] U.S. Bureau of the Census, Technical Notes No. 2, Washington, D.C. 1969; P. 1, "The Index of Inconsistency for an L–Fold Classification System, L>2," by Max A. Bershad.

V. Recommendations for Future Methods Tests

In the course of working with the San Jose data, as well as the Washington and Baltimore data, a number of methodological studies suggested themselves for the future. Some such studies might be undertaken prior to the establishment of the National Crime Panel, others in conjunction with the Panel, and still others independently of the Panel. A listing of possible methods tests follows:

(1) A test of the effects on reporting frequencies under varying reference periods (e.g., within the past 3 months, within the past 6 months, within the past year), utilizing a general population sample with a multiple split-sample approach.

(2) A test of whether the Warner[6] randomized response technique is better than conventional questioning methods for eliciting reports of assaults (perhaps rapes and robberies also).

(3) An experiment designed to compare the categories into which various police agencies would classify crimes on the basis of data elements determined from an interview survey.

(4) A test of whether proxy-respondent reporting of crimes is different in amount and type from self-respondent reporting, utilizing a sample of known crimes from police files.

(5) A test of whether the measure of change in crime incidence between two periods differs by type of respondent (self versus proxy).

[6] Warner, S. L., "Randomized Response: A Survey Technique for Eliminating Evasive Answer Bias," *Journal of American Statistical Association*, vol. 60; 1965.

VI. Appendix Tables

TABLE 1.—*Interview rate and noninterviews by reason for noninterview*

Total police cases	Interviews	Interview rate	Noninterview by reason					
			Total	Moved	Unable to locate	Never available	Refusal	Other
620	394	63.5	226	24	171	6	5	20

TABLE 2.—*Completed interview rate by type of crime*

Type of crime	Number in sample	Number of completed interviews	Number of non-interviews	Completion rate (percent)
All crimes	620	394	226	63.5
Assault	137	81	56	59.1
Burglary	142	104	38	73.2
Larceny	133	84	49	63.2
Robbery	136	80	56	58.8
Rape	72	45	27	62.5

TABLE 3.—*Classification of offenses, police versus survey*

Police classification	Survey classification						
	Total	Assault	Burglary	Larceny	Robbery	Rape	Other
Total	292	38	103	64	59	26	2
Assault	39	33			5	1	
Burglary	94		91	2			1
Larceny	68		12	56			
Robbery	61			6	54		1
Rape	30	5				25	

TABLE 4.—*Incidents by month of occurrence by month reported in survey*

Reported to police	Reported in interview														Not reported in interview
	Total	January	February	March	April	May	June	July	August	September	October	November	December	Month NA	
Total	292	22	11	18	15	22	22	27	20	27	28	26	27	27	102
January	22	13	1	1		1	1					1		4	12
February	17	4	3	3			1			1		1	1	3	10
March	21	2	4	10	1	2	1	1							8
April	26	2	2	3	11	3	2	1						2	8
May	25		1		1	11	1	6	1	1				3	8
June	26				2	3	13	2	1	3				2	10
July	27	1					2	14	6	1	1			2	9
August	23					2		2	9	4	3	1		2	9
September	22						1	1	1	12	3			4	10
October	27			1					2	3	17	1		3	4
November	29									2	4	19	2	2	5
December	27											3	24		9

TABLE 4A.—*Incidents of assault by month of occurrence by month reported in survey*

Reported to police	Reported in interview														Not reported in interview
	Total	January	February	March	April	May	June	July	August	September	October	November	December	Month NA	
Total	39	2	3	0	3	6	2	3	3	2	4	3	4	4	42
January	4	1	1									1		1	5
February	2		2												3
March	1				1										5
April	5			3	1									1	3
May	4					3		1							5
June	4				1	2	1								3
July	4	1					1	2							4
August	1										1			1	4
September	1									1	1	4			1
October	6								1	1			2	1	1
November	3													4	3
December	4														

TABLE 4B.—*Incidents of burglary by month of occurrence by month reported in survey*

Reported to police	Reported in interview														Not reported in interview
	Total	January	February	March	April	May	June	July	August	September	October	November	December	Month NA	
Total	94	9	5	6	5	5	8	8	4	11	6	10	8	9	10
January	7	6												1	1
February	7	1	1	1						1			1	2	1
March	8		3	3	1		1								1
April	9	2	1	2	2		1							1	0
May	8				1	3	1	1						2	0
June	6				1	1	4								4
July	9						1	6	1	1					0
August	9					1			3	3	1			1	0
September	8						1			5	1			1	2
October	4										4				0
November	11									1		9		1	0
December	8											1	7		1

TABLE 4C.—*Incidents of rape by month of occurrence by month reported in survey*

Reported to police	Reported in interview														Not reported in interview
	Total	January	February	March	April	May	June	July	August	September	October	November	December	Month NA	
Total	30	4	0	1	1	3	4	4	2	0	4	3	3	1	15
January	3	2				1									0
February	3	2					1								1
March	1			1											1
April	2				1		1								1
May	2					2									2
June	2						2								1
July	4							3	1						0
August	2							1	1						3
September	2										1			1	1
October	3										2	1			2
November	3										1	2			3
December	3												3		0

TABLE 4D.—*Incidents of robbery by month of occurrence by month reported in survey*

Reported to police	Reported in interview														Not reported in interview
	Total	January	February	March	April	May	June	July	August	September	October	November	December	Month NA	
Total	61	2	0	7	3	5	3	4	5	10	7	3	8	4	19
January	4	1		1			1							1	4
February	2	1												1	1
March	6			5		1									1
April	4				3	1									2
May	6					2		2	1	1					1
June	5						1	1		3					2
July	3						1	1	1						3
August	6								2	1	1	1			1
September	6								1	3				2	0
October	8			1						2	5				0
November	4										1	1	2		1
December	7											1	6		3

TABLE 4E.—*Incidents of larceny by month of occurrence by month reported in survey*

Reported to police	Reported in interview														Not reported in interview
	Total	January	February	March	April	May	June	July	August	September	October	November	December	Month NA	
Total	68	5	3	4	3	3	5	8	6	4	7	7	4	9	16
January	4	3												1	2
February	3			2								1			4
March	5	2	1	1				1							0
April	6		1	1	2	1		1							2
May	5		1			1		2						1	0
June	9				1	1	4		1					2	0
July	7							3	1		1			2	2
August	5							1	3		1				1
September	5						1			3	1				2
October	6								1		2			3	1
November	8									1	2	5			0
December	5											1	4		2

TABLE 5.—*Police sample cases interviewed, by relationship of offender to victim, for violent crimes*

Relationship of offender to victim [1]	Cases interviewed									
	Total		Aggravated assault		Simple assault		Rape		Robbery	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Total	206	100.0	26	100.0	55	100.0	45	100.0	80	100.0
Reporting	130	63.1	14	53.8	25	45.5	30	66.7	61	76.3
Not reporting	76	36.9	12	46.2	30	54.5	15	33.3	19	23.7
Relative	18	100.0	4	100.0	14	100.0				
Reporting	4	22.2			4	28.6				
Not reporting	14	77.8	4	100.0	10	71.4				
Known	78	100.0	6	100.0	32	100.0	24	100.0	16	100.0
Reporting	45	57.7	5	83.3	16	50.0	13	54.2	11	68.8
Not reporting	33	42.3	1	16.7	16	50.0	11	45.8	5	31.2
Stranger	99	100.0	16	100.0	8	100.0	19	100.0	56	100.0
Reporting	74	74.7	9	56.2	4	50.0	16	84.2	45	80.4
Not reporting	25	25.3	7	43.8	4	50.0	3	15.8	11	19.6
NA	11	100.0			1	100.0	2	100.0	8	100.0
Reporting	7	63.6			1	100.0	1	50.0	5	62.5
Not reporting	4	36.4					1	50.0	3	37.5

[1] According to police form.

TABLE 6.—*Dollar loss comparison—interview versus police records*

Total cases	223
Interviewer higher	94
Police report higher	20
Same amount	21
Not determined [1]	88
Percent of cases in which interview higher	42.2
Percent of cases in which interview higher (excluding "not determined" cases)	69.6

[1] Item nonresponse either in survey or on police form, or both.

TABLE 7.—*Average dollar loss comparison by type of crime*

Type of crime (police classification)	Average loss reported by		Percent difference (1)–(2) / (2)
	Survey (1)	Police (2)	
Larceny, total	$358	$240	49.2
$50 or over	378	311	21.5
Under $50 [1]	295	21	130.5
Burglary	598	432	38.4
Robbery	290	254	14.2

[1] Based on only 10 cases.

TABLE 8.—*Median dollar loss comparison by crime*

Type of crime (police classification)	Median loss reported by		Percent difference (1)–(2) / (2)
	Survey (1)	Police (2)	
Larceny, total	$200	$152	31.6
$50 or over	340	240	41.7
Under $50 [1]	22	22.50	−2.2
Burglary	379	270	40.4
Robbery	42	23	82.6

[1] Based on only 10 cases.

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