Bureau of Justice Statistics
Technical Report

Lifetime Likelihood of Victimization

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This report provides estimates of the likelihood that a person will become a victim of crime during his or her lifetime, or that a household will be victimized during a 20-year period. This contrasts with the conventional use of a 1-year period in measuring crime and criminal victimization. Most prominently, the National Crime Survey (NCS) surveys a sample of U.S. households and publishes annual victimization rates, and the FBI's Uniform Crime Reports (UCR) provide annual rates of crimes reported to the police.

Annual victimization rates

Annual victimization rates alone do not convey the full impact of crime as it affects people. No one would express his or her concern by saying, "I am terribly afraid of being mugged between January and December of this year." People are worried about the possibility that at some time in their lives they will be robbed or raped or assaulted, or their homes will be burglarized.

Annual rates can provide a false sense of security by masking the real impact of crime. Upon hearing that the homicide rate is about 8 to 10 per 100,000 population, one feels safe; after all, 1 chance in 10,000 is not very frightening. Actually, however, at recent homicide rates about 1 of every 133 Americans will become a murder victim; for black males the proportion is estimated to be 1 of every 30.[1] Similarly, while 16 out of 10,000 women

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The Bureau of Justice Statistics National Crime Survey provides annual victimization rates based on counts of the number of crimes reported and not reported to police in the United States. These rates are based on interviews twice a year with about 101,000 persons in approximately 49,000 nationally representative households. Those annual rates, while of obvious utility to policymakers, researchers, and statisticians, do not convey to American citizens the full impact of crime on them nor do they answer a critical question for each individual: What is the possibility that I will be a crime victim? This technical report is designed to shed light on this question.
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are rape victims annually, the lifetime chances of suffering a rape are much greater.

Certainly, annual rates are useful. A 1-year period is probably optimum for researchers, statisticians, and planners. It encompasses exactly one cycle of seasonal variation. It is long enough to smooth out the impact of extraordinary events (such as a mass murder in a small city) and to allow time for collecting and analyzing data. On the other hand, a 1-year period is short enough to show changes and trends in crime rates. The problem lies with

people's perception of the meaning of annual rates with respect to their own lives. If the Earth revolved around the sun in 180 days, all of our annual crime rates would be halved, but we would not be safer.

Calculating lifetime victimization rates

For this report, lifetime likelihoods of victimization were calculated from NCS annual victimization rates and life tables published by the National Center for Health Statistics.[2] The probability that a person will be victimized at a particular age basically depends upon (a) the probability that the person is still alive at that age and (b) the probability that a person of that age will be victimized. The lifetime likelihood of personal victimization is derived from the probabilities of being victimized at the various ages that constitute a lifetime. A similar method is used for calculating the long-term likelihood of crimes against households.

Because of the assumptions involved in the calculations and because the data derive from a sample survey, the numbers presented in this report are estimates only; they should be interpreted only as indications of approximate magnitude, not as exact measures. Essentially they are calculated values of lifetime risk rather than descriptions of what has been observed.

For the purposes of this report, a "lifetime" begins at age 12. This is dictated by the data available from the NCS, which does not cover persons younger than 12 years old. Also,

"series" victimizations, those representing three or more similar incidents about which the victim could not provide detail on each event separately, have been excluded. If series victimizations were included in the calculations as representing one crime incident, the total number of annual violent victimizations would increase by approximately 8%. The exclusion of series victimizations, then, results in an underestimation to some degree of the actual probabilities of victimization, especially with regard to multiple victimizations.

Assumption of constant annual rates

The estimates of lifetime likelihood of victimization are derived under the assumption that, throughout their lifetimes, people in the U.S. have incurred, and will continue to incur, criminal victimization at the same annual rates as were observed in the years 1975 through 1984. Calculations are based upon the average annual victimization rates for 1975-84 (except that data for rape are for 1973-82). Annual victimization rates for the population, and for any group within the population, are assumed to remain constant at the average levels recorded for those years. For example, it is assumed that the rate at which white females of age 34 become victims of assault was the same in the past and will be the same in the future as it was in 1975-84. To the extent that annual rates were different in the past or may change in the future, the estimates of lifetime victimization are inaccurate.

Of course victimization rates actually vary from year to year. Victimization data are not available for years before the mid-1970s (when the NCS was started), but crime rates as reported by UCR indicate that annual victimization rates probably were lower then than in the period 1975-84. The UCR data, however, are not suitable for estimating lifetime victimization because they include only crimes reported to the police, and because there is no information about the age, sex, or race of the victims.

Since 1981, annual victimization rates reported by NCS have declined. If this trend were to continue, the lifetime victimization probabilities would decrease.

Because there is very little usable information about past variation in annual victimization rates, and because future changes are unpredictable in both direction and magnitude, there is

no feasible alternative to assuming constant values.

The lifetime likelihood of victimization can be interpreted as an estimate of a person's entire lifetime experience, starting in years prior to 1975-84 and continuing into the future until the person's death. Such an estimate is subject to two sources of error that result from assuming constant annual rates: (1) the probable overestimation of victimization rates in past years, and (2) the uncertainty regarding future annual rates. Estimates of this type are shown

in table 1. Alternatively, the estimate can be restricted to the future, by taking into account only those victimizations that will be incurred in the remainder of the person's lifetime, starting at his or her current age. This eliminates errors due to past changes in annual rates. Estimates using the latter option are presented in table 2; the values in table 1 constitute such estimates for persons whose current age is 12.

Table 1. Lifetime likelihood of victimization				
	Percent of persons who will be victimized by crime starting at 12 years of age			
	Total One or more victimizations	Number of victimizations		
		One	Two	Three or more
Violent crimes, total*				
Total population	83%	30%	27%	25%
Male	89	24	27	38
Female	73	35	23	14
White	82	31	26	24
Male	88	25	27	37
Female	71	36	22	13
Black	87	26	27	34
Male	92	21	26	45
Female	81	31	26	24
Violent crimes, completed*				
Total population	42%	32%	9%	2%
Male	48	34	11	3
Female	36	28	6	1
White	41	31	8	2
Black	53	35	13	4
Rape				
Total female	8%	8%	—	—
White	8	7	—	—
Black	11	10	1	—
Robbery				
Total population	30%	25%	5%	1%
Male	37	29	7	1
Female	22	19	2	—
White	27	23	4	—
Black	51	35	12	4
Assault				
Total population	74%	35%	24%	15%
Male	82	31	26	25
Female	62	37	18	7
White	74	35	24	16
Black	73	35	25	12
Robbery or assault resulting in injury				
Total population	40%	30%	7%	2%
Personal theft				
Total population	99%	4%	8%	87%
Male	99	3	8	88
Female	99	4	10	84
White	99	4	9	87
Male	99	3	8	88
Female	99	4	10	86
Black	99	5	12	81
Male	99	5	10	84
Female	98	7	15	76

Note: Data are based on average victimization rates measured by the National Crime Survey for 1975-84, except for rape data, which are based on victimization rates for 1973-82. All crimes include attempts except where noted. See box on page 4 for crime definitions.
— Less than 0.5%.
* Includes rape, robbery, and assault.

Personal victimization rates

Based on 1975-84 annual victimization rates, an estimated 5 out of 6 people will be victims of violent crimes (rape, robbery, and assault), either completed or attempted, at least once during their lives. (table 1). (For the precise definitions of the crimes discussed in this report see the "Crime definitions" box on page 4.) About half the population will be victimized by violent crime more than once. Males are somewhat more likely to become victims than females.

The greatest contrast is in multiple victimizations. It is estimated that more than 2 in 5 black males will be victimized by a violent crime three or more times. This is almost double the likelihood for black females and more than triple the likelihood for white females.

When attempted crimes are excluded, the differences in lifetime victimization rates between blacks and whites are greater. About 5 in 10 blacks, compared with 4 in 10 whites, will suffer a completed violent crime.

Based on 1973-82 rates, nearly 1 out of 12 females will be the victim of a completed or attempted rape. The estimated rate for black females is 1 out of 9.

It is estimated that 3 in 10 persons will be victims of a completed or attempted robbery during their lifetimes. The victim's sex and race appear to have a greater effect upon the lifetime likelihood of victimization for robbery than for other crimes. Blacks are almost twice as likely to be robbed as whites; males are about 70% more likely to be robbed than females.

About 3 out of 4 people will become victims of a completed or attempted assault; 2 in 5 will be victims of this crime at least twice. Males are more likely to be assaulted than females, but the likelihood is nearly the same for blacks and whites.

At 1975-84 victimization rates, an estimated 2 in 5 persons will be injured as the result of a robbery or assault; about 1 in 10 will be injured more than once. (Injuries reported by the NCS range from minor to life threatening.)

According to these estimates, nearly everyone will be the victim of a personal theft at least once, with about 7 in 8 persons being victimized three or more times. In general, findings for

theft do not vary by the sex or race of the victim.

The likelihood of becoming the victim of a violent crime in the remainder of one's lifetime declines more rapidly than life expectancy, reflecting declining victimization rates with increasing age (table 2). For example, the average remaining life expectancy at age 60 is nearly half as long as at age 30, but a

person of age 60 is only about one-quarter as likely as a 30-year-old to become a victim of violent crime during the remainder of his or her lifetime. Similarly, those who are 30 are five times likelier than those who are 60 to be injured during a robbery or assault over the remaining course of their lives.

Table 2. Lifetime likelihood of victimization, by age

| | Percent of persons who will be victimized by crime starting at various ages | | | |
| | Total One or more victimizations | Number of victimizations | | |
		One	Two	Three or more
Violent crimes*				
Current age				
12 years old	83%	30%	27%	25%
20	72	36	23	14
30	53	35	13	4
40	36	29	6	1
50	22	19	2	—
60	14	13	1	—
70	8	7	—	—
Robbery or assault resulting in injury				
Current age				
12 years old	40%	30%	7%	2%
20	30	25	4	1
30	19	17	2	—
40	11	11	1	—
50	7	6	—	—
60	4	4	—	—
70	2	2	—	—
Personal theft				
Current age				
12 years old	99%	4%	8%	87%
20	98	9	16	73
30	93	19	25	48
40	82	31	19	33
50	64	37	19	8
60	43	32	9	2
70	24	21	3	—

Note: Data are based on average victimization rates measured by the National Crime Survey for 1975-84. All crimes include attempts. See box on page 4 for crime definitions.
— Less than 0.5 percent.
* Includes rape, robbery, and assault.

Table 3. Long-term likelihood of household victimization

| | Percent of households that will be victimized by crime over a 20-year period | | | |
| | Total One or more victimizations | Number of victimizations | | |
		One	Two	Three or more
Burglary				
All households	72%	36%	23%	14%
Urban	80	32	26	22
Suburban	70	36	22	12
Rural	64	37	19	8
Household larceny				
All households	89%	24%	27%	38%
Urban	93	19	25	49
Suburban	90	23	26	41
Rural	82	31	27	25
Motor vehicle theft				
All households	19%	17%	2%	—
Urban	27	23	4	—
Suburban	20	18	2	—
Rural	11	10	1	—

Note: Data are based on average victimization rates measured by the National Crime Survey for 1975-84. Only completed crimes are included. See box on page 4 for crime definitions.
— Less than 0.5%.

Estimates of the likelihood of a personal theft drop off much less rapidly with age than do the estimates for violent crime victimization. Personal theft victimization probabilities are approximately proportional to remaining life expectancies.

Victimization of households

At 1975-84 victimization rates, over a period of 20 years almost 3 out of 4 households will suffer a burglary; 3 out of 8 will suffer more than one (table 3). Nearly 9 out of 10 households will be victimized by larceny; more than 1 in 3 will be victimized by this crime three or more times. About 1 in 5 of all households will be victims of motor vehicle theft.

For all of these crimes urban households are more likely to be victimized than those in the suburbs, and victimization is even less likely in rural areas. The difference is greatest for motor vehicle theft; urban households are about $2\frac{1}{2}$ times as likely as rural households to be victims of this crime.

Assumptions and their effects

Although the numbers in this report are estimates rather than exact measures, they are based upon reliable data and established mathematical techniques. They provide a realistic picture of the order of magnitude of the likelihood of being victimized, if past and future victimization rates are near the levels of 1975-84. Unavoidably, however, such estimates are subject to error. Aside from the normal sampling error associated with the use of annual NCS victimization rates, part of the error results from assumptions that had to be made in carrying out the computations. The assumption of constant rates of victimization over time was discussed earlier. Another key assumption is that victimization is equally likely for all members of a population group, defined by age, race, and sex. In other words, any victimization can, with equal probability, be inflicted upon any member of the group.

Equal victimization probabilities

In a sense, the assumption of equal probability of victimization is what gives meaning to victimization rates. Subgroups of the population are selected to make the assumption as valid as possible, by dividing the population in accordance with characteristics that are believed to correlate with susceptibility to victimization. That is why NCS uses breakdowns in terms of age, race, sex, income, and the like (instead of, for example, height, weight, left-handedness vs. right-handedness, or sign of the zodiac).

The assumption of equal victimization probabilities introduces an error into the estimates of long-term and lifetime likelihood of victimization. This is because, even in population groups that have been selected to have homogeneous characteristics, certain individuals have been found to be victimized much more frequently than chance alone would predict. The number of people in any group who are victimized two, three, or more times in a year is substantially greater than would be the case if victimization were equally probable for all members of the group.[3] This appears to be true of household victimization as well as personal victimization.

The procedure for processing NCS victimization data does not track an individual or a household from year to year; consequently, the available information on multiple victimizations is restricted to those that take place during a period of 1 year or less. These single-year data consistently show the pattern of multiple victimization described above, but they are not suitable for use in calculating long-term or lifetime probabilities. Because of this, equal victimization probability was assumed in the calculations.

Crime definitions from the National Crime Survey

Assault--An unlawful physical attack, whether aggravated or simple, upon a person, including attempted or threatened attacks with or without a weapon. Excludes rape and attempted rape, as well as attacks involving theft or attempted theft, which are classified as robbery. Severity of crimes in this category range from threats to attacks that result in life-threatening injuries.

Burglary (completed)--Unlawful or forcible entry of a residence, usually, but not necessarily, attended by theft. The entry may be by force, such as breaking a window or slashing a screen, or it may be through an unlocked door or an open window. As long as the person entering had no legal right to be present in the structure, a burglary has occurred. Furthermore, the structure need not be the house itself for a household burglary to take place. Illegal entry of a garage, shed, or any other structure on the premises also constitutes household burglary. In fact, burglary does not necessarily have to occur on the premises. If the breaking and entering occurred in a hotel or in a vacation residence, it still would be classified as a burglary for the household whose member or members were staying there at the time.

Household larceny (completed)--Theft of property or cash from a residence or its immediate vicinity. For a household larceny to occur within the home itself, the thief must be someone with a right to be there, such as a maid, a delivery person, or a guest. Forcible entry, attempted forcible entry, or unlawful entry are not involved.

Motor vehicle theft (completed)--Stealing or unauthorized taking of a motor vehicle.

Personal theft--Includes both personal larceny with contact and personal larceny without contact. Personal larceny with contact is theft of purse, wallet, or cash by stealth directly from the person of the victim, but without force or the threat of force, including attempted purse snatching. Personal larceny without contact is theft or attempted theft, without direct contact between victim and offender, of property or cash from any place other than the victim's home or its immediate vicinity. The property need not be strictly personal in nature; the act is distinguished from household larceny solely by place of occurrence. Examples of personal larceny without contact include the theft of a briefcase or umbrella from a restaurant, a portable radio from the beach, clothing from an automobile parked in a shopping center, a bicycle from a school yard, food from a shopping cart in front of a supermarket, etc. In rare cases, the victim sees the offender during the commission of the act.

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

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

As a result, the estimates of long-term and lifetime likelihoods of victimization probably tend to show a slightly larger number of people and households being victimized at least once than is actually the case. That is, the estimated victimizations are distributed too thinly over too large a portion of the population. (Note, however, that the exclusion of series victimizations results in some degree of underestimation of the proportion of people and households that are victimized at least once.)

In a 1-year period, more people actually incur multiple victimizations than would be estimated by the equal probability assumption. Over a lifetime, however, the reverse apppears to be the case. This is because the equal probability assumption considers the probability of a person being victimized in any year to be independent of what happens in other years. But in reality, if a person is inordinately susceptible to being victimized, that susceptibility is likely to continue from year to year. During a lifetime, the person will incur many more than his or her "fair share" of victimizations; the "excess" multiple victims will tend to be the same people year after year.

Single-year data on multiple victimizations were used to estimate the magnitude of the error caused by using the equal probability assumption. Several methods of calculation were employed. It was determined that this error is of the same order of magnitude as the errors and uncertainties from other causes such as unpredictable changes in annual victimization rates.

Further details on methodology

A methodological appendix with further details on the calculation of the findings presented in this report is available on request from BJS by calling Herbert Koppel at (202) 724-7770.

Notes

[1] Langan, Patrick A. and Christopher A. Innes, The Risk of Violent Crime, Bureau of Justice Statistics Special Report, NCJ-97119, May 1985, p. 2; Report to the Nation on Crime and Justice, 2nd edition, Bureau of Justice Statistics, forthcoming, ch. 2. The numbers for the general population were derived from coroner and medical examiner reports for the years 1978-82. A more refined technique, including data for 1983, was used to determine the rate for black males. Very similar results were obtained by the FBI in a study based on homicides reported to the police in 1978-80; see Crime in the United States, 1981 (Washington: USGPO 1982), Appendix V, pp. 339-40. Simpler methodology can be used in dealing with homicide than with other crimes because there are no multiple victimizations; a person can be killed only once.

[2] Victimization rates were taken from the annual Bureau of Justice Statistics publication Criminal Victimization in the United States for the years 1975-84, with additional data from the NCS. Life tables are from the National Center for Health Statistics, Vital Statistics of the United States, 1980, Vol. II, Sec. 6, Life Tables.

[3] Sparks, Richard F., Hazel G. Green, and David J. Dodd, Surveying Victims (New York: John Wiley and Sons, 1977), pp. 88-97; Gottfredson, Michael R., "On the Etiology of Criminal Victimization" and Sparks, Richard F., "Multiple Victimization: Evidence, Theory, and Future Research," The Journal of Criminal Law and Criminology, vol. 72, no. 2 (1981).

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