

# THE EFFECTS OF "SELF-HELP" PRECAUTIONARY MEASURES ON CRIMINAL VICTIMIZATION AND FEAR

RESEARCH REPORT SERIES  
NUMBER 12

108223

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CRIMINAL  
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Co-Directors: C. Bruce Traughber  
Office of the Attorney General  
Commonwealth of Kentucky

Knowlton W. Johnson, Ph.D.  
Urban Studies Center  
College of Urban and Public Affairs  
University of Louisville

Manager: Jack B. Ellis

University Faculty: Gordon S. Bonham, Ph.D.  
Gennaro F. Vito, Ph.D.

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Mr. Jack B. Ellis  
Urban Studies Center  
College of Urban and Public Affairs  
University of Louisville  
Louisville, Kentucky 40292  
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THE EFFECTS OF "SELF-HELP" PRECAUTIONARY MEASURES  
ON CRIMINAL VICTIMIZATION AND FEAR

Research Report Series: Number 12

Conducted by

Urban Studies Center  
College of Urban and Public Affairs  
University of Louisville

Fran H. Norris, Ph.D.  
Knowlton W. Johnson, Ph.D.

for  
Kentucky Criminal Justice Statistical Analysis Center

David L. Armstrong  
Attorney General

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## AUTHORS' NOTES

Dr. Fran Norris, principal author, was responsible for overseeing this secondary analysis of data collected in a Statistical Analysis Center (SAC) 1985-86 Victimization Survey. The survey itself was directed by Dr. Knowlton Johnson, coauthor. Dr. Norris conducted the statistical analysis. Both authors made essentially equal contributions to the study with regard to developing its measures, interpreting the data, and writing the final report.

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This report is a product of the Kentucky Criminal Justice Statistical Analysis Center.

Co-Directors

Knowlton W. Johnson  
Urban Studies Center

C. Bruce Traughber  
Office of the Kentucky Attorney General

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COMMONWEALTH OF KENTUCKY  
OFFICE OF THE ATTORNEY GENERAL

DAVID L. ARMSTRONG  
ATTORNEY GENERAL

CAPITOL BUILDING  
FRANKFORT 40601

Dear Reader:

Kentucky's Criminal Justice Statistical Analysis Center is now three years old. During these formative years, the SAC has had an impact beyond all reasonable expectations. From our first research on PFO's, Offender-Based Tracking Systems, prison populations, child abuse and crime victims have come new programs and legislation that have, and will continue to have, a beneficial impact on Kentucky's system of criminal justice.

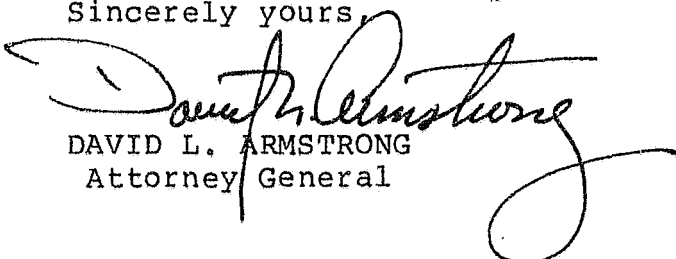
One area of special concern to me has been the plight of crime's victims. We have devoted considerable energy to researching various victim-related issues and are receiving national attention for our work. Our CREST (Crime Estimation) project is now an annual survey of the impact of crime on Kentucky's citizens.

I want to commend the various state agencies that have been so cooperative in working closely with us on our various research projects--the Cabinet for Human Resources, the Corrections Cabinet, the Department for Public Advocacy, the Legislative Research Commission, the State Police and the Administrative Office of the Courts. The Bureau of Justice Statistics and our grant monitor, Mr. Don Manson, have always been helpful and supportive as well.

A special thanks is due the men and women in the General Assembly of Kentucky who have recognized the importance of the SAC and appropriated General Fund dollars for its continued operation. With their support, the SAC will be able to continue providing what we believe is policy-relevant research of the highest caliber.

As I turn the reins of the SAC over to a new Attorney General in 1988, I want to thank you for your cooperation and support as we have worked so hard to create this research arm of Kentucky's criminal justice system. Facts and figures are valuable tools as we work to fulfill government's first obligation--to enhance the safety and security of citizens.

Sincerely yours,

  
DAVID L. ARMSTRONG  
Attorney General

## EXECUTIVE SUMMARY

In July 1984, the Kentucky Criminal Justice Statistical Analysis Center (SAC) was established in the Office of the Attorney General with its research support provided through the Urban Studies Center in the College of Urban and Public Affairs at the University of Louisville. From the outset, the Kentucky SAC has made a concerted effort to produce and disseminate useful research findings relating to criminal victimization and the fear of crime. During the first three years in operation, SAC completed a major longitudinal study of criminal victimization and fear of crime, established a statewide crime estimation program based on self-reported victimization and fear data, and organized a statewide criminal victimization research conference for August 1987.

The results being presented in Research Report #12 are based on a secondary analysis of data from the Kentucky SAC's 1985-86 longitudinal study of criminal victimization and fear. This executive summary first presents selected findings from the larger longitudinal study reported in SAC Research Report #9 before turning to the scope of the present study and its procedures, findings, and implications.

### Findings from "Criminal Victimization in Kentucky: A Longitudinal Study"

- Over 20 percent (20.5%) of the households experienced a crime during Report Year 1986; 19.4 percent experienced a property crime; and 2.5 percent experienced a violent crime. These rates were about the same as those reported in Kentucky during Report Year 1985.
- The 1986 crime rate was more than twice as high among households that had experienced a crime in 1985 (40.8%) as it was among those that had not experienced a crime in the previous year (15.5%).
- Most Kentuckians take some precautions against crime. Methods frequently practiced include locking vehicles when parked away from home and keeping an eye out on one another's homes. Very few respondents have had burglar alarms installed.
- In the short term (within one year of the incident) respondents from households victimized by crime were more fearful than respondents from nonvictim households.

- In the long term (more than one year after the incident) the level of fear in victim households continued to be higher than the level of fear in nonvictim households. The long-term effects of violence on fear were more pronounced than were the long-term effects of experiencing property crimes.
- Only about 9 percent of the respondents of victim households reported use of any of the victim services of which they were aware.
- The investigators concluded that programs need to be designed for victims that focus on their continuing fear of crime and on their risk for recurrent victimization. One possibility noted for future study was that of incorporating instruction in crime prevention into victim programs.

### Scope of Present Study

The present study addresses the efficacy of "self-help" prevention measures (e.g., locking automobile, engraving property, etc.) as a "stand alone" crime- and fear-reducing strategy. Two questions guided the research reported herein: (1) To what extent are "self-help" precautionary measures effective in preventing victimization and (2) To what extent do these measures reduce the long-term impact of victimization on fear? This study does not address the question of whether the activities of crime prevention specialists significantly reduce criminal victimization or the fear of crime. This issue will be addressed in a future SAC study.

### Procedures and Measures

- Selected by random-digit-dialing techniques, 557 persons were interviewed by telephone in the spring of 1985. Of these persons, 445 were interviewed again one year later.
- The data were weighted by the probability of selection in 1985 and by 1986 response rates so that the findings may be considered generally representative of the Kentucky population.
- Victimization was scaled using a crime severity index developed by Wolfgang and others which weights and sums the following components into a single value: (1) harm and injury to victims, (2) forcible sexual intercourse, (3) intimidation, (4) forced entry of premises, (5) stolen motor vehicle, and (6) property damage.

- Fear of crime was the sum of six items which reflected the extent to which the respondent was preoccupied with the threat of victimization.
- Precaution reflected a general behavioral orientation toward being cautious about crime. It was scored as the number of "self-help" measures used by the respondent among these eight possible measures: lock vehicle at home, lock vehicle when away, have valuables engraved, use crime prevention stickers or decals, ask service personnel for identification, have burglar alarm, leave radio, television, or lights on when away, and lock doors and windows when away. These precautions may or may not have been implemented with the help of a crime prevention specialist.
- Nine vulnerability measures were controlled for in study analyses. These were: age, sex, education, race, number of adults in household, number of children in household, residence (urban/rural), employment, and social activity.
- Regression analyses were conducted in which Victimization 86, Fear 85, and Fear 86 were the dependent measures. These equations allowed the effects of precaution and prior victimization to be estimated independently of the effects they share with one another and with the nine vulnerability factors.
- In predicting victimization, joint effects were taken into consideration to test the possibility that precaution was more important for those at higher risk for crime. Risk was reflected by measures of prior victimization and self-reported risk (fear).
- In predicting fear, joint effects were also examined to test the possibility that taking precautions after victimization may hasten recovery from the fear reaction.

### Results of the Study

- When examined individually, none of the self-help precautionary measures were associated with reduced frequencies of victimization in the following year. This held both for "any crime" and for "property crime." In general, this also held when the severity of crimes was taken into account in measuring victimization.
- Precaution, the index scaled to represent one's general behavioral orientation, had no effect on victimization in the following year.
- Victimization in the first year did predict victimization in the following year. However, victims who practiced high



precaution after the first incident were neither more nor less likely than other victims to be victimized again.

- Fear of crime (perceived risk) did not predict victimization in the following year. Nor did low precaution and high perceived risk combine to predict subsequent victimization.
- Concurrent measures of precaution and fear were correlated. This correlation could indicate either that high fear leads to precaution or that precaution reinforces the fear. Precaution was not related to changes in fear occurring between 1985 and 1986.
- Victimization was related to fear. Victims who practiced high precaution after the first incident abandoned their fear no more rapidly than did other victims.

#### Public Policy Implications

- The policy of promoting self-help precautionary measures independently of other crime prevention tactics is insufficient as a solution to the problems of crime and fear.
- Contrary to the study's expectations, victims' self-initiated efforts to be cautious seem to hold little promise of reducing either their risk of future victimization or their levels of fear. The study does not rule out the possibility that professional interventions could be more effective.
- Alternative strategies which focus less on the security of individual households and more on social and physical aspects of the community should be explored. Because these strategies may be more costly than programs focusing on self-help alone, additional funds should be allocated to crime prevention activities.
- Future research is needed to establish whether self-help measures (1) are more effective for particular subgroups of the population, such as inner-city dwellers; (2) are more effective in combination with other crime prevention strategies; and (3) are more effective when implemented with the guidance of crime prevention specialists.

## TABLE OF CONTENTS

Authors' Notes . . . . .	ii
Letter from the Attorney General . . . . .	iii
Executive Summary . . . . .	iv
List of Tables . . . . .	ix
Background and Purpose . . . . .	1
Crime Prevention and Fear-Reduction Strategies in Perspective . . . . .	2
Victims as an At-Risk Population . . . . .	4
Method . . . . .	7
Sample Selection and Weighting Procedures . . . . .	7
Measures . . . . .	9
Victimization . . . . .	9
Fear . . . . .	10
Precaution . . . . .	10
Vulnerability Measures . . . . .	11
Results: Summary . . . . .	12
Results: Supporting Statistical Analyses . . . . .	17
Self-Help Measures and Subsequent Victimization . . . . .	17
Crime Frequency . . . . .	17
Crime Severity . . . . .	17
Precaution as a Victimization-Prevention Strategy . . . . .	18
Precaution Main Effect . . . . .	19
Precaution Joint Effects . . . . .	19
Precaution as a Fear-Reducing Strategy . . . . .	20
Short-Term Effects . . . . .	20
Long-Term Effects . . . . .	21
Public Policy Implications . . . . .	23
Self-Help is Insufficient . . . . .	23
Alternative Strategies . . . . .	24
Implications for Future Research . . . . .	25
Summary and Conclusions . . . . .	26
References . . . . .	28
Appendices	

## LIST OF TABLES

1.	Respondent Characteristics by Household Type . . . . .	8
2.	Relationship of Self-Help Measures to Subsequent Victimization . . .	13
3.	Effects of Precaution and Victimization on Subsequent Victimization: Results from Hierarchical Regression Analysis . . . . .	15
4.	Long-term and Short-term Effects of Precaution and Vivtimization on Fear: Results from Hierarchical Regression Analysis . . . . .	16

# THE STUDY

## BACKGROUND AND PURPOSE

Criminal victimization and the fear of being victimized are well-known threats to the quality of life in urban and rural communities (American Psychological Association, 1984; Brown, 1984; U.S. Department of Justice, 1983). The prevalence of these threats is most acute among city dwellers, nonwhites, women, the less-educated, and the poor (Research & Forecasts, Inc., 1980; Skogan & Maxfield, 1981). Public officials have responded to the threats of crime in recent years by sponsoring initiatives that focus not only on the person committing the crimes but also on the victims or potential victims of those crimes. The victim's movement has burgeoned into a major social force, stimulating the development of programs and legislation affecting victims or potential victims of crime.

This public policy shift from offender rehabilitation and defendants' rights to concern over the victim's rehabilitation and rights has taken place at all levels of government. In the 1970s and 1980s, the U.S. Department of Justice supported a number of crime victim initiatives having implications for the entire nation (U.S. President's Task Force, 1982; National Institute of Justice, 1986; Bureau of Justice Statistics, 1986). State and local officials have also initiated a variety of crime- and fear-reducing initiatives involving the police, individual citizens, and entire communities (Duncan, 1980). Additionally, some 40 states have enacted victim compensation programs, and 17 states, including Kentucky, have also enacted victim Bills of Rights (Bard & Sangrey, 1986).

The study being presented addresses the efficacy of only one of the many initiatives launched as solutions to the threats of criminal victimization and fear: the promotion of "self-help" prevention measures among citizens. Many crime prevention programs, as one facet of their total effort, encourage citizens to take deliberate precautionary measures such as locking doors and windows, installing alarm systems, marking property, checking for identification (I.D.), or making sure their automobiles are locked at all times when not occupied. The preventive value of precautionary behavior, as it varies naturally within the general population, has been examined only in a very limited fashion, usually within the confines of specific neighborhood-level interventions (where personal security was promoted only as one of many

preventive efforts). It is the purpose of this research to examine the effects of self-help measures independently of other crime prevention tactics.

Another purpose of the study is to examine the effects of self-help preventive measures among crime victims in comparison with citizens whose lives have not recently been touched by crime. To our knowledge, the moderating role of citizen precaution and its effects among victims of crime have not been heretofore examined.

In sum, two research questions have guided this study: (1) To what extent are self-help measures effective in preventing victimization and re-victimization? and (2) To what extent do self-help measures reduce the long-term impact of victimization on fear? Our major emphasis is upon the potential value of a self-help prevention strategy--without regard to other crime prevention strategies--in protecting citizens, especially crime victims.

#### **Crime Prevention and Fear-Reduction Strategies in Perspective**

Concern over crime and the fear of crime have prompted the development of diverse programs and strategies in our nation. The effects of innovative police practices, environmental design, citizen participation, and citizen-initiated preventive measures appear to have been studied most often. Success at reducing crime or fear by means of innovative police practices has been mixed. In a Kansas City experiment, preventive patrols designed to increase the visibility of the police had no effect on either the actual amount of crime or on the fear of crime (Kelling, Pate, Dieckman, & Brown, 1974), but foot patrols were found to reduce the fear of crime in another study (Police Foundation, 1981). The COPE (Citizen-Oriented Police Enforcement) project found directed patrol to be of little value for reducing fear of crime, but contacts between the police and citizens that were aimed at solving specific neighborhood problems showed considerable promise (Cordner, 1986). Recent experiments in Houston, Texas and Newark, New Jersey, found that an aggressive program of expanded contacts between police and citizens can reduce overall fear of crime (Pate, Wycoff, Skogan, & Sherman, 1986).

There have also been mixed findings on the effects of Neighborhood Watch programs, which are known most for promoting citizen involvement in protecting their own communities. Although there have been numerous evaluations of Neighborhood Watch programs that have reported reductions in crime, and occasionally, reductions in fear of crime, nearly all of the program

evaluations have been found to be seriously flawed (Lurigio & Rosenbaum, 1986). Of the two programs that have been rigorously evaluated, the well-known Seattle evaluation (Cirel, Evans, McGillis, & Whitcomb, 1977; Lindsay & McGillis, 1986) yielded positive results showing a reduction in residential burglary in the target areas relative to the control areas. In contrast to the Seattle evaluation, Rosenbaum, Lewis and Grant (1985; 1986) found evidence in their evaluation of a Chicago Neighborhood Watch program of an increase in a variety of social problems, including fear of crime and vicarious victimization.

"Crime prevention through environmental design" (Jeffery, 1971) and "defensible space" (Newman, 1972) designate yet another set of strategies that have been promoted as effective approaches in reducing crime and fear. These programs seek to reduce opportunities for actual crime and thereby reduce fear by restructuring the urban environment. Poor lighting, blind spots, and people traffic patterns are examples of physical attributes of the environment that may combine to produce a high risk of victimization and high levels of fear (Henig & Maxfield, 1978). While evaluations of environmental design programs are somewhat sparse, Newman's (1972) work strongly suggested that crime in public housing could be reduced by introducing physical changes in the dwellings. Fowler and Mangione's (1982) evaluation of the Hartford project, in which they examined the effects of a number of physical changes that were implemented along with other changes in policing the neighborhood and in involving citizens in neighborhood activities, was somewhat less conclusive. The results showed some overall reductions in the levels of crime and fear, but no effects could be attributed directly to the program, particularly to its efforts to redesign the environment.

Of all crime prevention strategies, the promotion of citizen-initiated precautions or "self-help" measures has been one of the most common public policy responses (Duncan, 1980). Its popularity stems in part from proponents' claims that reductions in the probability of being victimized and in the level of fear are both viable results. Self-help measures are also inexpensive to implement. Possibly as a result of widespread promotion, self-help measures are used widely in American households. Whitaker (1986) reported that one in four has had valuables engraved. In statewide surveys in Kentucky (Johnson, Norris & Burgess, 1986; Johnson & Hardyman, 1987) we found that a large majority of citizens take self-help measures such as leaving their lights,

radios, or televisions on when away from home and asking for identification (I.D.) from service and delivery personnel.

Like other crime prevention strategies, the effectiveness of campaigns to promote self-help measures is far from conclusive, primarily because these measures have been implemented along with other preventive measures. In an evaluation of a Monterey County, California, burglary prevention program that heavily emphasized self-help preventive measures, an interrupted time series analysis yielded results that showed the program failed to affect crime rates (Johnson, 1980). In contrast, evaluations of programs in cities such as Seattle, Washington and Minneapolis, Minnesota, in which self-help measures were promoted along with other strategies, showed that such programs can produce reductions in crime and/or the fear of crime (Cirel, Evans, McGillis, & Whitcomb, 1977; Kaplan, Palkovitz, & Pesce, 1978).

To date, older adults appear to have been the most frequent beneficiaries of programs designed to promote precaution among specific at-risk groups. Older persons have generally been considered important more for their fear of crime than for their objective probability of experiencing crime (Hindelang, Gottfredson & Garofalo, 1978; Lindquist & Duke, 1982). The Senior Safety and Security Program (Harel & Broderick, 1980), for example, presented audiovisual materials dealing with crime prevention, provided home security inspections, and promoted the use of safer locks as vehicles for reducing fear of crime among the urban aged. SAFE (Seniors Against a Fearful Environment) had similar goals in another city (Johnson, Norton & Triganopolos, 1978; Norton & Courlander, 1982). Neither program, however, provided much evidence that it was successful in reducing the fear of its elderly participants.

#### **Victims as an At-Risk Population**

To our knowledge, victims of crime do not appear to have been targeted for interventions designed to promote self-help preventive measures. For two reasons, we find this somewhat surprising. First, on both theoretical and empirical grounds, victims must be considered more likely than the general population to be victimized at some future time. Fattah (1967), for example, argued that certain victims were predisposed to victimization because of their circumstances (e.g., occupation) or character traits (e.g., greed). According to Fattah, many victims provoke, or at least create, situations that increase their risk of exposure to crime. Similarly, Von Hentig (1948) proposed that



certain persons may be at risk because they are careless or fearless. Wolfgang and Ferracuti (1967) described the more extreme example in which the victim is a part of a subculture where confrontations are frequent and violence is expected. Whatever the explanation, Hindelang and others (1978) presented strong evidence that "victimization proneness" is a reality. Within the twelve-month reference period studied, multiple personal victimizations were reported substantially more often than an "independence model" (a Poisson distribution of expected probabilities) would predict. Moreover, the likelihood of experiencing particular crimes (e.g., burglary) was considerably higher among those who had experienced other incidents (e.g., assault) than it was among those who had experienced no other incidents. In short, if the promotion of self-help precautionary measures behavior is a viable strategy for "victimization prevention," prior victims would seem to be an important and readily identifiable target group for such preventive interventions.

Fear is among the most common and lasting reaction victims suffer from the experience; this prolonged fear is the second reason that victims are a particularly important population with regard to promoting precaution as public policy. Janoff-Bulman and Frieze (1983) described the process of coping with victimization as one of rebuilding the assumptive world, with the belief in "personal invulnerability" as one of the most critical assumptions affected by victimization. Skogan (1977) reported that victims of rape, robbery, personal theft, and burglary were more likely than nonvictims to feel unsafe, although the same was not true of victims of assault, auto theft, and simple larceny. Cook, Smith, and Harrell, (1987) found evidence that victims of more severe crimes remained more fearful than victims of less severe crimes for at least four months following the incident (the last measurement point), although the more general trend was for effects of victimization on psychological distress to cease by the end of four months. Rape victims, specifically, have been found to be quite fearful (Burgess & Holmstrom, 1974; Kilpatrick, Veronen, & Resick, 1979). Calhoun, Atkeson, and Resick, (1982) interviewed rape victims and matched controls six times over a one-year interval, concluding that fear reactions were among the longest lasting of all problems experienced by rape victims. These symptoms still differed between groups at the end of the study. Other aspects of social and psychological adjustment were initially poor among victims but generally returned to levels comparable to those of the controls. Similarly, we (Johnson et al., 1986) found that victims in our statewide sample

had higher fear than nonvictims for considerably more than a year after the incident, although the depressive symptoms present in the first few months had dissipated by that time. The difference in fear levels was stronger between victims of violence and victims of property crime than between property crime victims and nonvictims. Although the severity of the crime experienced is an important determinant of the intensity of the fear experienced, these studies, taken together, indicate that fear may be among the most lasting consequences of victimization. Thus, if promoting precaution through the use of self-help measures is a viable fear-reduction strategy, victims again would seem to be an important target group.

## METHOD

### Sample Selection and Weighting Procedures

The sample for this study consists of 445 respondents, generally representative of adults in Kentucky, who participated in both interviews of a two-wave panel study conducted in 1985 and 1986. The characteristics of the respondents are presented in Table 1.

The sample was drawn using a two-stage cluster design which assured that every household with a telephone had an equal probability of inclusion in the sample (Waksberg, 1978). (Approximately 88 percent of Kentucky households have telephones.) Initially, about 5,000 households were administered a short screening instrument to identify whether any adult living in that household had been a crime victim in the past year. From this information, households were categorized by their exposure to violent crime, property crime, or no crime. Within each category, the probability that a household was selected for the complete interview varied inversely with the probability that a household would be assigned to that category. For example, a given household was most likely to be assigned to the "no-crime" category. Therefore, a smaller proportion of no-crime households was interviewed. Within each household selected for the complete interview, one person was selected randomly from all adult members of the household. He or she was then asked to report for all persons residing in that household. In victim households, the selected respondent may or may not have been the victim of the crime.

In the first wave, 557 respondents were interviewed, which represented 82 percent of the households determined to be eligible for the complete interview. The 1986 sample of 445 households represents 80 percent of the 1985 sample. Of those who participated in the 1985 interview, about 6 percent refused to participate in 1986; 1 percent began but did not complete the interview; about 1 percent had died or become too ill to participate; and 12 percent could not be located or were unavailable for an interview. Response rates in 1986 varied little across most demographic subgroups of the sample. Eighty-two percent of male respondents, compared to 79 percent of female respondents, remained in the study. Eighty percent of both blacks and whites continued to participate as did 80 percent of both urban and rural respondents. Respondents with greater than a high school education were somewhat more likely than others to continue (86% versus 77%). Participation rates also varied with age, increasing with

Table 1

Respondent Characteristics by Household Type (Unweighted)							
	Victim Households		Nonvictim Households		Total		
	n	%	n	%	n	%	
Sex							
Male	57	45	126	40	183	41	
Female	69	55	192	60	261	59	
Age							
Under 25	25	20	36	11	61	14	
25 - 34	30	24	75	24	105	24	
35 - 44	37	29	62	19	99	22	
45 - 54	16	13	43	14	59	13	
55 - 64	10	8	48	15	58	13	
65 and older	8	6	54	17	62	14	
Employment status							
Full-time	68	54	157	49	225	51	
Part-time	13	10	28	9	41	9	
Unemployed	45	36	133	42	178	40	
Education							
First to eighth grade	10	8	44	14	54	13	
Ninth to high school graduate	68	55	168	54	236	55	
College, business school	35	29	76	25	111	26	
Graduate school	10	8	21	7	31	7	
Race							
White	113	90	289	92	402	92	
Black	11	9	23	7	34	8	
Other	2	1	1	3	3	1	
Number in household							
One	14	11	51	16	65	15	
Two	33	26	95	30	128	29	
Three to four	61	48	132	42	193	44	
Five or more	18	14	39	12	57	13	
Marital status							
Married for first time	56	45	193	61	249	56	
Never married	25	20	44	14	69	16	
Remarried	10	8	19	6	29	7	
Widowed	9	7	30	9	39	9	
Separated	3	2	5	2	8	2	
Divorced	22	18	27	9	49	11	
Total n	126		318		444		

age up to 40 and then decreasing. Response rates in 1986 were also lower among those respondents who had reported either a violent crime (68%) or both a violent and property crime (63%) in their first interview than among those who reported only a property crime (84%) or no crime (82%).

The data are weighted to adjust for both the probability of selection in 1985 and the differential response rates by crime type in 1986. Separate weights were derived for women who reported violence in the first year, men who reported violence, other women, and other men. For each group the weight was the product of the 1985 weight and the inverse of the 1986 response rate. The 1985 weight was the inverse of the household's probability of selection (1 for violent-crime households, 3 for property-crime households, and 11 for no-crime households). The product was then adjusted so that the total weighted sample size was the same as the total unweighted sample size. This step adjusts the weights so that statistical tests may be applied to the data.

More details on the sampling, interviewing, and follow-up procedures can be found in SAC Research Reports #3 and #9.

## Measures

### Victimization

Victimization was measured in both 1985 and 1986 and was scaled using the Crime Severity Index developed by Wolfgang, Figlio, Tracy, and Singer, (1985). These investigators developed this scale and its severity weights from data collected from 60,000 persons nationwide who were asked to rate the seriousness of a wide range of crimes. Overall, they found a high level of agreement among people nationwide as to what constitutes a serious crime. In this system, various components of a criminal event are weighted and summed to a total score. The six components are: (1) harm and injury to victims; (2) forcible sexual intercourse; (3) intimidation; (4) forced entry of premises; (5) stolen motor vehicles; and (6) property damage. For most of the components, the weight is the product of the severity rating of that component (ranging from 1.47 to 35.67) and the number of victims to which it applies. In each interview, the severity scale was administered for the most serious incident experienced by that household in the past year. The higher the score, the higher the severity of crime experienced. Scores ranged from 0 (nonvictims) to 48. About 20 percent of the sample had non-zero scores. Among these victims, mean severity was approximately 5.

### Fear

Fear of crime was assessed in both 1985 and 1986. The scale was developed to tap the extent to which the respondent is preoccupied with the threat of victimization. Fear implies a state beyond merely being aware or cautious about crime. The scale's six items, each of which has a four-point response format, are as follows: (1) "How safe do you feel walking alone in your neighborhood during the day?"; (2) "How safe do you feel outside in your neighborhood at night?"; (3) "How much does fear of crime prevent you from doing things you would like to do?"; (4) "When you leave your house or apartment, how often do you think about being robbed or physically assaulted?"; (5) "When you leave your house or apartment, how often do you think about it being broken into or vandalized while you're away?"; and, (6) "When you're in your home, how often do you feel afraid of being attacked or assaulted by someone that you know such as a relative, neighbor, or acquaintance?" A factor analysis supported the unidimensionality of the scale, with factor loadings exceeding .50. The scale has high internal consistency ( $\alpha = .79$ ). Test-retest stability over a one-year interval was moderate ( $r = .68$ ). The scale was scored so that the higher the score, the higher the fear. Scores ranged from 6 to 24 with a mean of 10.1.

### Precaution

Precaution represents a general behavioral orientation ranging from carelessness (a low score) to cautiousness (a high score), rather than the respondent's use of any single self-help measure. The index is the sum of responses to eight self-help prevention measures selected for their correspondence to existing promotional programs. However, the measures may or may not have been implemented with the help of a crime prevention specialist. Coded 0 (no) or 1 (yes), the items were: lock vehicle at home; lock vehicle when away from home; have valuables engraved; use antiburglary stickers and decals; ask service personnel for identification; have burglar alarm; leave lights, radio, or television on when away; and lock doors and windows when away. In the interview schedule, five of the eight items allowed the respondent to answer "partially yes" rather than generally "yes" or "no." For the three items concerned with locking, "partially" was treated as a "no." For the two items concerned with using warning stickers and having valuables engraved, "partially" was treated as a "yes." A single index was created

(range = 0 to 8) after a factor analysis and Guttman scalogram analysis revealed that the items could be considered as independent of each other (inter-correlation coefficients approaching zero). The index was distributed normally with few subjects using none or only one self-help measure and with few using as many as seven or eight. The most common number used (mode) was 3 and the sample average (mean) was 3.9.

#### Vulnerability Measures

Nine variables were included in the study because previous research has suggested that they correlate with fear, victimization, or both. All are based on data from the first interview in 1985. Four were personal characteristics: age (in years), sex (male = 1; female = 2), education (in years), and race (white = 1; nonwhite = 2). Two measures were included to describe the household's occupants: number of adults and number of children. The final three measures were included as measures of "lifestyle": urban residence (non-SMSA = 1; SMSA = 2); employment activity (retired, homemaker, or disabled = 1; worker or student = 2), included as a rough indicator of the extent to which the respondent was "out and about" pursuing functional activities; and social activity, the sum of scores (range 0-15) from three items concerning frequency of getting together with friends, organizational participation, and frequency of getting together with family members.

## RESULTS: SUMMARY

A full discussion of the results, one which includes more detail on the supporting statistical analyses, may be found in the report section titled, "Results: Supporting Statistical Analyses." In this section, we will present the highlights for the reader who is less interested in the statistical procedures. The two sections have been prepared so that either may stand alone; thus the reader who prefers the more detailed results may safely skip this section.

We began by examining the relationship between each of the eight self-help measures and victimization in 1986: Did the people who used them have a lower frequency of victimization than others in the following year? Without exception, the use of a particular self-help measure did not affect the victimization rate to any significant degree. For example, of those who did not "lock vehicles when away from home," or who did this only partially, 18.6 percent reported some type of crime in 1986; comparably, 21.8 percent of those who said they do "lock vehicles when away" reported some type of crime in 1986. (Overall, 20.5 percent of the sample reported some type of crime in 1986.)

In subsequent analyses, we used a measure of victimization which took the severity of crimes into account; the higher the score, the more severe the crime experienced. No individual self-help measure was found to be strongly associated with a reduced risk of severe crime. The "correlations" shown in Table 2 are statistical measures of the strength of the association between each of the self-help measures and victimization. A value of 0 indicates no relationship. A value of +1 would indicate a perfect relationship when a high score on one measure is associated with a high score on another measure. And a value of -1 would indicate a perfect relationship when a high score on one measure is associated with a low score on another measure. Negative relationships would be expected between the self-help measures and victimization. The strongest correlation obtained was between "asking for ID" and victimization. At a value of  $-.10$ , it can be considered statistically reliable but is nonetheless quite small in magnitude. The findings were about the same when we used a statistical procedure that allowed us to control for the effects of other variables in assessing the effects of each self-help measure. The results of this procedure are labeled as "betas" in Table 2.



Table 2

## Relationship of Self-Help Measures to Subsequent Victimization

"Self-Help" Measures	Crime Frequency				Crime Severity 86	
	Number in Sample Responding Yes in 1985	Percent of Sample Responding Yes in 1985	Percent of "Yes Group" Reporting Any Crime in 1986 <sup>a</sup>	Percent of "Yes Group" Reporting Property Crime in 1986 <sup>a</sup>	Correlation <sup>d</sup>	Beta <sup>d</sup>
Lock vehicle, home	193	45.5	22.6	21.0	-.03	-.03
Lock vehicle, away	350	81.4	21.8	20.5	.03	.02
Engrave valuables	169	38.0	18.3	17.2	-.08	-.09
Use stickers	98	22.0	14.3	14.3	-.03	.00
13 Ask for I.D.	195	44.5	18.1	17.3	-.10 <sup>b</sup>	-.09
Burglar alarm	27	6.0	24.8	23.3	.00	.02
Lights or sound on	304	68.3	20.0	19.1	.04	.03
Lock windows and doors	385	86.5	19.7	18.5	.02	-.03
SUMMARY MEASURES	Total Sample Size = 445	100.0	Total Sample's % = 20.5	Total Sample's % = 19.4 <sup>c</sup>	Multiple R = .15	Variance Accounted For by Set = .02

<sup>a</sup>The "Yes Group" and "No Group" did not differ significantly ( $\chi^2$  of  $p < .05$ ) in any comparison.

<sup>b</sup>Significant,  $p < .05$

<sup>c</sup>Some persons reported both violent and property crimes.

<sup>d</sup>A value of 0 indicates no relationship, +1 a perfect relationship when one variable increases as the other increases, and -1 a perfect relationship when one variable increases as the other decreases. Negative relationships were expected between self-help and victimization. See text for more complete description.

Like correlations, the betas potentially range from -1 to +1, but never exceed +.03 or -.09 in Table 2.

The potential value of "precaution" as a general behavioral orientation (not tied to a specific self-help measure) was then examined. The contributions to victimization of several other variables in addition to precaution (the vulnerability factors) were assessed in the same procedure. The correlations and betas resulting from these analyses are presented in Table 3. Of the variables examined, age was the best predictor: younger adults were more likely to be victims of crime than older adults. The amount of precaution exercised was not related to victimization.

Precaution could be more (or only) important for populations at high risk for crime. Therefore, we also examined the impact of precaution in combination with two other variables. One of these variables was fear of crime, selected because it reflected respondents' perceived risks of becoming crime victims. The other was prior victimization, selected because we previously have found victims to be at higher risk than nonvictims for future crime. Fear of crime was not related to the actual subsequent occurrence of crime. The results further indicated that those persons who were most afraid and who practiced high precaution did not become crime victims less often than those who were afraid but less cautious about crime. Prior victimization did predict victimization. However, victims who practiced high precaution after the first incident were no less likely to be revictimized than were other victims.

Finally, we evaluated the potential value of precaution as a fear-reducing strategy, a strategy that might be particularly important for victims. Both the 1985 and 1986 measures of fear were examined as outcomes of victimization in 1985. Using the same general procedures as those used for predicting victimization, the contributions to fear of several variables other than precaution and victimization were assessed at the same time. These results, presented in Table 4, indicate that fear was higher among women, victims, the homebound, the less educated, and the more cautious. Fear increased among nonwhites and younger persons over the one-year interval between interviews. There was also some evidence that the fear reaction of victims was maintained over that year, although victims' fear increased no further. We had expected victims who practiced high precaution after the first incident to get over their fearfulness sooner than other victims, but found no evidence to support this expectation.

Table 3

Effects of Precaution and Victimization on Subsequent Victimization:  
Results from Hierarchical Regression Analysis

<u>Variables Entered</u>	<u>Correlation<sup>a</sup></u>	<u>Beta<sup>a</sup></u>	<u>R<sup>2</sup> Change<sup>b</sup></u>
Vulnerability measures			.046*
Age	-.17***	-.17**	
Sex	-.04	-.01	
Race	.01	.00	
Education	.03	-.06	
Number of adults	.02	-.01	
Number of children	.02	-.06	
Urban residence	.07	.07	
Employment activity	.11*	.05	
Social activity	.08	.09	
Precaution 85 (P85)	-.05	-.10	.005
Fear 85 (F85)	.03	.05	.007
Victimization 85 (V85)	.21***	.19***	.028***
Joint Effects			.002
P85 x V85		.05	
P85 x F85		-.02	
R <sup>2</sup> Adjusted (df)			.056*** (14,399)

<sup>a</sup>A value of 0 indicates no relationship, +1 indicates a perfect relationship when one variable increases as the other increases and -1 indicates a perfect relationship when one variable increases as the other decreases.

<sup>b</sup>Percent of variance in victimization accounted for by variable or variables (e.g., .046 = 5%).

\*p < .05

\*\*p < .01

\*\*\*p < .001

Table 4

Long-term and Short-term Effects of Precaution and Victimization on Fear:  
Results from Hierarchical Regression Analysis

Variable(s) Entered	Fear 85			Fear 86		
	Correlation <sup>a</sup>	Beta <sup>a</sup>	R <sup>2</sup> Change <sup>b</sup>	Correlation <sup>a</sup>	Beta <sup>a</sup>	R <sup>2</sup> Change <sup>b</sup>
Fear 85	NA	NA	NA	.68***	.64***	.459***
Vulnerability measures			.082***			.032**
Age	.08	-.02		-.02	-.14**	
Sex	.22***	.20***		.21***	.06	
Race	.05	.04		.14**	.10**	
Education	-.14**	-.10		-.15**	-.05	
Number of adults	.00	.04		.00	-.03	
Number of children	-.05	-.01		-.03	-.07	
Urban residence	.04	-.02		.06	.04	
Employment activity	-.20***	-.11*		-.17***	-.07	
Social activity	-.05	-.06		.00	.02	
Precaution 85 (P <sub>85</sub> )	.28***	.29***	.082***	.23***	.01	.000
Victimization measures			.036***			.002
Victimization 86 (V <sub>86</sub> )	NA	NA		.08	.06	
Victimization 85 (V <sub>85</sub> )	.20***	.21***		.14**	-.03	
Joint Effects			.003			.003
P <sub>85</sub> x V <sub>86</sub>		NA			-.03	
P <sub>85</sub> x V <sub>85</sub>		.06			-.04	
R <sup>2</sup> Adjusted (df)			.180*** (12,401)			.477*** (15,398)

<sup>a</sup>A value of 0 indicates no relationship, +1 indicates a perfect relationship when one variable increases as the other increases, and -1 indicates a perfect relationship when one increases as the other decreases.

<sup>b</sup>Percent of variance in fear accounted for by variable or variables. (e.g., .032 = 3%)

\*p < .05; \*\*p < .01; \*\*\*p < .001

## RESULTS: SUPPORTING STATISTICAL ANALYSES

### Self-Help Measures and Subsequent Victimization

Table 2 displays data concerning the relationship of each of the eight self-help measures to subsequent victimization. The different measures varied in their prevalence of use by this sample, ranging from a low of 6 percent (burglar alarms) to a high of 87 percent (locking doors and windows when away). Overall, from neither the bivariate analyses nor multivariate analyses (i.e., those where effects of other variables were controlled) was there evidence that these self-help measures were individually effective in preventing crime.

### Crime Frequency

Individually, none of the self-help measures reduced the frequency of victimization in the following year to a degree that can be considered statistically reliable. As shown in Table 2, this result held both for "any crime" and for "property crime." Because these self-help measures would not be expected to prevent crimes of family violence, we repeated these analyses, omitting from the victimization measures crimes committed by acquaintances. Findings (not shown in Table 2) were the same as for "any crime" and "property crime." It should be noted that the estimates of crime for those using burglar alarms may not be reliable because of the small number of respondents who made use of this precaution.

### Crime Severity

Table 2 also shows the relationships between these precautionary measures and that victimization measure which was scored to take into account the severity of crimes. "Correlations" and "betas" were the statistics used to assess the strength of the relationships. For both of these statistics, a value of 0 corresponds to no relationship, and the potential range is from +1 (a perfect relationship where one variable increases as the other increases) to -1 (a perfect relationship where one increases as the other decreases). Negative relationships would be expected between precaution and victimization.

As can be seen, the correlations in Table 2 all are much closer to 0 than to -1. Of all the specific measures, asking for I.D. had the only correlation with the crime severity scale high enough to be considered statistically reliable. At -.10, it still must be considered weak in magnitude. When

considered in conjunction with the finding that asking for I.D. had no effect on the frequency of crime, this finding suggests that asking for I.D. may be moderately effective in preventing crimes of violence and/or of greater severity. The multiple correlation between the set of self-help measures and crime severity also was quite low. (Always expressed as a positive value, this statistic potentially ranges from 0 to +1.)

Table 2 also shows the relationship between each of the specific measures and victimization when the effects on victimization of the nine vulnerability factors are first taken into account, using a hierarchical regression procedure. The "betas" are similar to correlations. They also range from -1 to +1; the higher the absolute value, the stronger the relationship. The beta, however, represents the effects on victimization of the particular self-help measure which is independent of the effects of other self-help measures and the vulnerability measures. In this analysis, none of the self-help measures, including asking for I.D., had significant betas. Altogether, the set of precautionary measures explained about 2 percent of the variance in the crime severity scale, compared to the 5 percent accounted for by the vulnerability factors.

#### Precaution as a Victimization-Prevention Strategy

The potential value of "precaution" as a general behavioral orientation (not tied to a specific self-help measure) was examined using hierarchical multiple regression as the statistical technique. Victimization in 1986 (subsequent victimization) was the dependent measure. Table 3 first presents the correlations between each independent measure and Victimization 86, and then gives the results from the hierarchical regressions. The betas are as they were in the final step of the equation; none of the betas changed substantially across steps when the variables were entered in the order presented here. At each step in the equation, Table 3 also gives the "R<sup>2</sup> change", a statistic potentially ranging from 0 to +1 that corresponds to the percent of variance accounted for by the variable or variables entered at that step. The higher the R<sup>2</sup> change, the more highly the predictor variables are associated with victimization.

The results presented in Table 3 using the severity scale did not differ substantially from those obtained from regressing a dichotomous victimization measure on the same independent measures.

### Precaution Main Effect

By "main effect," we refer to the effect of precaution on victimization for the sample as a whole, i.e., for Kentucky's general population. In the regression analysis, the vulnerability measures were entered first to assess whether the probability of victimization could be accounted for by such factors as age, urban residence, or lifestyle. Altogether, the vulnerability measures explained about 5 percent of the variance in Victimization 86, primarily because of a significant effect of age (higher levels of victimization were associated with younger age). Although significant in the bivariate correlations, employment activity was not a significant predictor in this equation where age was controlled.

Precaution 85 was then entered into the equation to test whether it explained variance in subsequent victimization (Victimization 86) over and above that accounted for by the vulnerability measures. It had no effect (i.e., explained less than 1 percent of the variance).

### Precaution Joint Effects

By "joint effects," we refer to the effects of precaution in combination with other variables. The presence of such effects would indicate that precautionary behavior is more (or only) important among populations at high risk for crime. The interview did not provide an objective (externally defined) measure of risk that was more specific than the vulnerability factors. Nonetheless, it was possible to identify two variables which should be indicative of high-risk status: Victimization 85 (former victims have a crime rate twice that of nonvictims) and Fear 85 (which measures whether individuals perceive themselves as being at high risk for crime).

To test for these possible interactive relationships, Fear 85, Victimization 85, and two multiplicative interaction terms were also entered, in that order, into the equation. The interaction terms were scored as products of the mean deviations of the precaution and victimization/fear measures and thus were approximately independent of the main effects of the component measures (Pedhazur, 1982). Thus, in Table 3, the "victimization by precaution" term ( $P_{85} \times V_{85}$ ) represents the possibility that precautionary behaviors are more important among prior victims, and the "fear by precaution" term ( $P_{85} \times F_{85}$ ) represents the possibility that precaution is more important among those at self-reported high risk.

As shown in Table 3, Fear 85 explained less than 1 percent of additional variance in Victimization 86. This suggests that a gap exists between respondents' perceived and actual probabilities of victimization. However, a statistically significant 3 percent of the variance in Victimization 86 was predicted by Victimization 85, even after all the preceding variables were controlled for in the analysis. Neither of the interaction terms had significant effects. Thus, the findings indicate (1) that persons of perceived high risk who practiced high precaution were neither less nor more likely than others to be victimized and (2) that victims who practiced high precaution after the first incident were neither more nor less likely than other victims to be victimized again.

#### **Precaution as a Fear-Reducing Strategy**

The short- and long-term effects of victimization on fear, and whether those effects could be lessened by post-victimization precaution, were also examined in this study. The results are presented in Table 4. Table 4 first gives the correlations between the fear measures and the independent measures. Fear 85 and Fear 86 both were correlated with sex (higher among women), education (higher among the less educated), employment activity (higher among the homebound), precaution (higher among the cautious), and Victimization 85 (higher among victims). Fear 86 was, in addition, correlated with race (higher among nonwhites).

#### **Short-Term Effects**

The regression of Fear 85 included the same variables as those described for Victimization 86 except for the fear main effect and interaction terms. The effect of victimization in this regression represents its immediate or short-term effects (those present one year or less after the incident). In this equation, the vulnerability measures explained a significant amount of the variance, totaling about 8 percent across the nine factors included. More specifically, fear appeared to be higher among women, the homebound, and the less educated. Precaution 85 and Victimization 85 also are related significantly to level of fear in 1985, independently of relationships they have with the vulnerability measures. It should be noted that the nature of the data does not allow us to conclude that victimization (or precaution) "caused" the fear, but simply that victims (and the more cautious) had higher



fear than nonvictims. While this fear may or may not have been caused by the incident, we can say that it is not accounted for by any differences between victims and nonvictims in a large number of personal characteristics (age, sex, race, and education), household characteristics (presence of other adults and children), or lifestyle characteristics (place of residence, employment activity, and social activity).

There was no evidence for an interaction between Precaution 85 and Victimization 85 in predicting Fear 85. This lack of an interaction indicates that more cautious victims were no less fearful than less cautious victims within (on the average) the first few months after the incident.

### Long-Term Effects

For assessing the long-term effects of victimization and precaution, Fear 86 was the dependent measure. The regression of Fear 86 was comparable to the regression of Fear 85. In this case, however, Fear 85, Victimization 86, and a Precaution 85 by Victimization 86 interaction term were also included as independent measures (but considered here more as "control" variables). Fear 85 was entered first, before the set of vulnerability measures. Thus, for Fear 86, effects of the vulnerability measures, precaution, and Victimization 85 are independent of any effects they may have through prior fear. The effect of victimization in this regression, then, represents its lagged effect (that occurring more than one year after the incident). A positive beta would point to an additional increase in fear between the first and second years, while a negative beta would point to a decrease or recovery from the fear of the first year.

In the regression of Fear 86, Fear 85 explained nearly half of its variance. The set of vulnerability measures explained about 3 percent of the "changes" in fear occurring over this one-year interval. More specifically, fear in 1986 was significantly higher among younger adults and nonwhites than could be accounted for by their fear in 1985.

Precaution 85 had no effect on Fear 86 with Fear 85 controlled. Taken together, the victimization measures also explained no variance in Fear 86. In interpreting this finding, it should be noted that Victimization 86 is not related to Fear 86, even when Fear 85 is not controlled (a correlation of .08). Few subjects (on an unweighted basis) experienced violent crimes in this year; and, as discussed previously, the victimization-fear relationship may depend

upon the levels of violence entailed in the incident. On the other hand, Victimization 85 was modestly related to Fear 86 (a correlation of .14,  $p < .01$ ) when its effects through Fear 85 were not controlled. This pattern suggests that the relationship of victimization to fear in the second year is explained by its relationship to fear in the previous year, with no further increases or decreases in fear attributable to it. The nature of the "long-term" effect is that the level of fear associated with victimization in the first year of the study was maintained over the following year.

Finally, Precaution 85 did not interact with either Victimization 85 or Victimization 86 in explaining changes in fear occurring between the first and second years of the study. Most notable for this study's purpose is the finding that victims who had practiced high precaution after the incidents abandoned their fear no more rapidly than victims who did not.

## PUBLIC POLICY IMPLICATIONS

### Self-Help is Insufficient

From these findings, the policy of promoting self-help preventive measures independently of other crime-prevention tactics would have to be judged as an insufficient solution to the problems of victimization and fear. There was evidence that victims were more fearful than nonvictims and that victims were more vulnerable to future crime than nonvictims. There was no evidence, however, that precaution prevented victimization or that more cautious victims fared better in the long run than did less cautious victims.

The self-help preventive measures studied here were all taken at the individual or household level: locking car doors, leaving lights on, and so forth. It is important to note that these self-help measures were assessed as they varied naturally within general and victim populations. Possibly, such measures would have been more effective for the participating households had they been implemented under the guidance of a crime prevention specialist. No data were available in this study to address this possibility. Generally, however, when the use of precautionary measures has been associated with a reduction in crime rates, their use represented only one aspect of a more comprehensive intervention which incorporated additional strategies for preventing victimization (Cirel et al., 1977). Furthermore, Heal (1983) notes that much of the research now suggests that, at least as far as burglary is concerned, the importance of physical security may be of less concern to burglars than is traditionally supposed. More important considerations to them, according to Heal, are whether or not the building is occupied, the chance of being observed, and the extent of potential rewards. Perhaps Waller (1976) was correct to claim that preventive measures such as locking doors and windows are merely "security illusions."

On the other hand, Kidder and Cohn (1979) argued that strictly individualized precautionary measures do little to promote a sense of security. They may make the home secure, but leave the locality full of danger. Rather than reduce the fear, they actually may remind the occupants of the danger that lurks outside. Alarms, locks, and the like simply make the threat of crime more salient. Johnson et al. (1978) and Norton and Courlander (1982) made similar observations, while noting that educational programs designed to increase caution may inadvertently increase fear.

We had expected victims to become less fearful if they practiced high precaution after the incidents. This expectation stemmed in part from Janoff-Bulman's (1979) distinction between "characterological self-blame" and "behavioral self-blame" and her assertion that only the former was detrimental to rape victims. We still view the act of assuming behavioral responsibility for one's vulnerability to crime as a constructive response for victims and would not rule out the possibility that professional interventions designed to promote precaution among victims could likewise help to reduce their fear. These results underscore the importance of Norton and Courlander's (1982) observation: If the reduction of fear is the goal of an intervention, information about the need for security measures must be coupled with the reassurance that the recommended behaviors do in fact reduce one's vulnerability to crime. Unfortunately, the present study does little to provide such reassurance.

#### Alternative Strategies

These findings suggest that public officials cannot rely on citizens' abilities to protect themselves and must consider more comprehensive approaches to crime prevention. Two strategies that appear to show promise are "community building" and "physical rebuilding," concepts that have been discussed for years in criminal justice (e.g., Henig & Maxfield, 1978; Jeffery, 1971). In general, these strategies attack the problems of victimization and fear at the neighborhood or community level rather than at the personal or household level.

The former strategy of "community building" refers to efforts, primarily police practices, that attempt to enhance social cohesion. Fear in particular seems to be lower where persons are concerned about others, are confident that others are concerned about them, or are simply acquainted with one another (Henig & Maxfield, 1978; Waller, 1976). Projects that promote a sense that the police care (Pate, Wycoff, Skogan, & Sherman, 1986) or that involve the police and residents in solving neighborhood problems (Cordner, 1986) appear to be effective descendants of the earlier "team-policing" concept designed to overcome police-resident isolation (Angell, 1960; National Advisory Commission on Criminal Justice Standards and Goals, 1976). Neighborhood Watch programs also could be considered an example of a community-initiated prevention program, although evidence of their effectiveness is lacking (Rosenbaum et al., 1985; 1986).

With regard to the latter strategy of "physical rebuilding": improving lighting, removing blind spots, establishing communal areas, and promoting the circulation of people all are strategies believed to reduce both actual crime and fear of crime in urban areas (Jeffery, 1971; Newman, 1972). People also respond with fear to signs of poverty and deterioration (e.g., abandoned housing); thus eliminating such symbols may be effective in reducing the perceived dangerousness of urban environments (Kidder & Cohn, 1979).

These strategies are not independent. Alterations of the physical environment may enhance social cohesion. Fowler and Mangione (1982) evaluated the impact on an urban neighborhood of physical changes such as cul-de-sacs and new traffic patterns and found that residents used the neighborhood more often, intervened on behalf of one another more often, and were more likely to perceive their neighbors as a resource. Although change could not be attributed to the intervention, fear of crime in this neighborhood was significantly lower than would be expected from city-wide trends.

#### **Implications for Future Research**

The study that has been described here has several advantages over most previous studies on this topic. Its longitudinal design (two interviews, one year apart) allowed measures of precaution to be taken before they could have been influenced by the crime. The sample was heterogenous in terms of socioeconomic status, age, and place of residence, and was generally representative of the adult population in Kentucky. Precautionary behavior could thus be assessed as it occurs naturally in the population. Victimization was examined both as a dichotomous variable (occurrence vs. non-occurrence) and as a continuous variable (wherein more severe crimes received higher values than less severe crimes). The fact that the effects of precaution through the use of self-help measures did not differ across these dependent variables should increase confidence in the validity of the findings. Most previous studies of precautionary measures have evaluated the effects of specific interventions where neighborhoods or groups such as older adults were targeted for promotional activities. Although the findings here should be more generalizable than those from confined interventions, they cannot be considered complete in themselves. For example, they do not address the important possibilities (1) that self-help measures are more effective for particular subgroups of the population such as inner-city dwellers; (2) that self-help

measures are more effective when used in combination with other crime prevention techniques; and (3) that self-help measures are more effective when implemented under the guidance of crime prevention specialists. Furthermore, the size of the sample and the frequency of crime were not sufficiently large to allow us to examine particular crime types. The finding that respondents who used these precautions experienced some type of property crime does not necessarily imply that burglar alarms do not prevent burglary or that locking cars does not prevent theft. Altogether, there is still much that needs to be learned about for whom, for what crimes, and under what conditions individuals' attempts to protect themselves are successful.

### Summary and Conclusions

As presently practiced by Kentuckians, self-initiated precautionary measures do little to alter the probabilities of being victimized in some way over a one-year interval of time. One possible explanation is that Kentuckians implement self-help measures poorly and need further guidance from crime-prevention specialists. On the other hand, policymakers may have overestimated the importance of individual-level precaution in reducing victimization and crime.

All in all, programs whose aim is solely to promote the use of self-help measures appear to show little promise of becoming a sufficient policy response to the issues of victimization and fear. Kidder and Cohn's (1979) criticism of this approach bears repeating: Campaigns to increase protective measures at the individual or household level are surely the easiest "crime prevention" programs to carry out. Compared to many other strategies, they take little time, money, or coordinated effort. But they do nothing to reduce the number of offenders or to change the acknowledged dangerousness of the environment.

We advise caution in interpreting these findings, particularly as they relate to the specific self-help measures. We are not recommending that people stop locking their doors! We are recommending that criminal justice officials thoughtfully and critically reevaluate their current crime prevention policies and priorities. These findings appear to justify, if not demand, the allocation of additional funds to design and implement comprehensive crime prevention strategies. The effectiveness of self-help measures may well be enhanced by professional instruction or supplementary tactics that are more

costly than present budgets allow. Clearly, further research evaluating the impact of existing, as well as any new, crime prevention programs is needed.

## REFERENCES

- American Psychological Association. (1984). Task force on the victims of crime and violence. (1984). Final report. Washington, DC: American Psychological Association.
- Angell, J. E. (1975). The democratic model needs a fair trial: Angell's response. Criminology, 12(4) 379-384.
- Bard, M., & Sangrey, D. (1986). The crime victims' book. Secaucus, NJ: Citadel Press.
- Brown, L. (1984). Strategies to reduce the fear of crime. The Police Chief, 51, 45-45.
- Bureau of Justice Statistics Annual Report Fiscal 1986. (1986). Washington, DC: U.S. Department of Justice, Bureau of Justice Statistics.
- Burgess, A., & Holmstrom, L. (1974). Rape trauma syndrome. American Journal of Psychiatry, 131, 981-986.
- Calhoun, K., Atkeson, B., & Resick, P. (1982). A longitudinal examination of fear reactions in victims of rape. Journal of Counseling Psychology, 29, 655-661.
- Cirel, P., Evans, P., McGillis, D., & Whitcomb, D. (1977). Community crime prevention: An exemplary project. Seattle, WA: National Institute of Law Enforcement and Criminal Justice. Washington, DC: U.S. Government Printing Office.
- Cook, R., Smith, B., & Harrell, A. (1987). Helping crime victims: Levels of trauma and effectiveness of services. Washington, DC: U.S. Department of Justice.
- Cordner, G. (1986). Fear of crime and the police: An evaluation of a fear-reduction strategy. Journal of Police Science and Administration, 14, 223-233.
- Duncan, J. T. (1980). Citizen crime prevention tactics. Washington, DC: U.S. Department of Justice, National Institute of Justice.
- Fattah, E. (1967). Toward a criminological classification of victims. International Criminal Police Review, 22, 163-169.
- Fowler, F., & Mangione, T. (1982). Neighborhood crime, fear, and social control: A second look at the Hartford program. Washington, DC: U.S. Department of Justice, National Institute of Justice.
- Harel, Z., & Broderick, K. (1980). Victimization and fear of crime among the urban aged. The Police Chief, 47, 34-36.
- Heal, K. (1983). The police, the public, and the prevention of crime. The Howard Journal of Penology and Crime Prevention, 22, 91-100.



- Henig, J., & Maxfield, M. (1978). Fear of crime: Strategies for intervention. Victimology: An International Journal, 3, 297-313.
- Hindelang, M., Gottfredson, M., & Garofalo, J. (1978). Victims of personal crime: An empirical foundation for a theory of personal victimization. Cambridge, MA: Ballinger Publishing Company.
- Janoff-Bulman, R. (1979). Characterological versus behavioral self-blame: Inquires into depression and rape. Journal of Personality and Social Pathology, 37, 1798-1809.
- Janoff-Bulman, R., & Frieze, I. (1983). A theoretical perspective for understanding reactions to victimization. Journal of Social Issues, 39, 1-17.
- Jeffery, C. R. (1971). Crime prevention through environmental design. Beverly Hills, CA: Sage Publications.
- Johnson, K. (1980). A multifaceted evaluation of the Monterey County burglary prevention unit. Fairfax, VA: International Training, Research, and Evaluation on Council.
- Johnson, K., Norris, F., & Burgess, L. (1986). Criminal victimization in Kentucky: A longitudinal study. Louisville: Urban Studies Center, Kentucky Criminal Justice Statistical Analysis Center, University of Louisville.
- Johnson, K., Norton, L., & Triganopolos. (1978). A second-year evaluation of the seniors against a fearful environment program. Upper Marlboro, MD: Prince Georges County Government Office of Budget and Planning.
- Kaplan, H. M., Palkovitz, L. E., & Pesce, E. J. (1978). Crime prevention through environmental design: Final report on residential demonstration, Minneapolis, Minnesota. Arlington, VA: Westinghouse Electric Corporation.
- Kelling, G., Pate, T., Dieckman, D., & Brown, C. (1974). The Kansas City preventive patrol experiment: A technical report. Washington, DC: Police Foundation.
- Kidder, L., & Cohn, E. (1979). Public views of crime and crime prevention. In I. H. Frieze, D. Bar-Tal, & J. Carroll (Eds.), New approaches to social problems. San Francisco: Jossey-Bass Inc.
- Kilpatrick, D., Veronen, L., & Resick, P. (1979). Assessment of the aftermath of rape: Changing patterns of fear. Journal of Behavioral Assessment, 1, 133-148.
- Lindquist, J., & Duke, J. (1982). The elderly victim at risk: Explaining the fear-victimization paradox. Criminology: An Interdisciplinary Journal, 20, 115-126.

- Lindsay, B., & McGillis, D. (1986). Citywide community crime prevention: An assessment of the Seattle program. In D. P. Rosenbaum (Ed.), Community crime prevention: Does it work? Beverly Hills, CA: Sage Publications.
- Lurigio, A. J., & Rosenbaum, D. P. (1986). Evaluation research in community crime prevention: A critical look at the field. In D.P. Rosenbaum (Ed.), Community crime prevention: Does it work? Beverly Hills, CA: Sage Publications.
- National Advisory Commission on Criminal Justice Standards and Goals. (1976). Task force on police. Washington, DC: Department of Justice.
- Newman, O. (1972). Defensible space: Crime prevention through urban design. New York: MacMillan Press.
- Norton, L., & Courlander, M. (1982). Fear of crime among the elderly--The role of crime prevention programs. Gerontologist, 22, 388-393.
- Pate, A. M., Wycoff, M. A., Skogan, W. G., & Sherman, L. A. (1986). Reducing fear of crime in Houston and Newark: A summary report. Washington, DC: U.S. Department of Justice, National Institute of Justice, Police Foundation.
- Pedhazur, E. (1982). Multiple regression in behavioral research. New York: Holt, Rinehart, and Winston.
- Police Foundation. (1981). The Newark foot patrol experiment. Washington, DC: Police Foundation.
- Research & Forecasts, Inc. (1980). The Figgie report on fear of crime: America afraid; Part I: The general public. Willoughby, OH: The Figgie Corporation.
- Rosenbaum, D. P., Lewis, D. A., & Grant, J. A. (1985). The impact of community crime prevention programs in Chicago: Can neighborhood organizations make a difference? Final Report, Vol. 1, to the Ford Foundation. Evanston, IL: Northwestern University, Center for Urban Affairs and Policy Research.
- Rosenbaum, D. P., Lewis, D. A., & Grant, J. A. (1986). Neighborhood-based crime prevention: Assessing the efficacy of community organizing in Chicago. In D. P. Rosenbaum (Ed.), Community crime prevention: Does it work? Beverly Hills, CA: Sage Publications.
- Skogan, W. (1977). Public policy and the fear of crime in large American cities. In J. A. Gardner (Ed.), Public law and public policy. New York: Praeger.
- Skogan, W., & Maxfield, M. (1981). Coping with crime: Individual and neighborhood reactions. Beverly Hills, CA: Sage Publications.
- U.S. Department of Justice. (1975). Burglary reduction program: Final report. Washington, DC: U.S. Department of Justice, Seattle Law and Justice Planning Office.

- U.S. Department of Justice. (1983). Report to the nation on crime and justice, The data. Washington, DC: U.S. Department of Justice, Bureau of Justice Statistics.
- U.S. Department of Justice. (1986). Bureau of Justice Statistics annual report, fiscal year 1986. Washington, DC: U.S. Department of Justice.
- U.S. Department of Justice. (1986). National Institute of Justice research program plan, fiscal year 1987. Washington, DC: U.S. Department of Justice.
- United States President's Task Force on Victims of Crime, Final Report. (1982). Washington, DC: Government Printing Office.
- Van Dijk, J., & Steinmetz, C. (1983). Victimization surveys: Beyond measuring the volume of crime. Victimology, 8, 291-309.
- Von Hentig, H. (1948). The criminal and his victim. New Haven: Yale University Press.
- Waksberg, J. (1978). Sampling methods for random-digit dialing. Journal of the American Statistical Association, 75, 40-46.
- Waller, I. (1976). Victim research, public policy, and criminal justice. Victimology, 1, 240-252.
- Whitaker, C. (1986). Crime prevention measures. Washington, DC: U.S. Department of Justice, Bureau of Justice Statistics.
- Wolfgang, M., & Ferracuti, F. (1976). The subculture violence: Toward an integrated theory in criminology. London: Tavistock Publications.
- Wolfgang, M., Figlio, R., Tracy, P., & Singer, S. (1985, June). The national survey of crime severity. U.S. Department of Justice, Bureau of Justice Statistics. NCJ-96017.

# APPENDICES

**APPENDIX A**

**CRIME INCIDENT BATTERY**

**URBAN STUDIES CENTER FEAR OF CRIME SCALE**

**URBAN STUDIES CENTER PRECAUTION INDEX**

## CRIME INCIDENT BATTERY

Each of the following questions had a one-year report period, and was followed by probes asking "In what month did this happen?" and "How many times?"

During the last 12 months . . .

1. Did anyone break into your apartment/home, garage, or another building on your property?
2. Did you find a door jammed, a lock forced, or any other signs of an ATTEMPTED break-in?
3. Did anyone steal or TRY TO STEAL A VEHICLE OR PART OF (it/any of them), such as battery, hubcaps, tape-deck, etc. from you or anyone else in your household?
4. Have people in your household had their pockets picked or purses snatched?
5. Did anyone TRY to rob you or anyone else in your household by using force or threatening to harm you?
6. Did anyone beat up, sexually attack, or hit you or anyone else in your household with something?
7. Were you or anyone else in your household knifed, shot at, or attacked with some other weapon by anyone at all?
8. Did anyone THREATEN to beat you up or attack you or anyone else in your household with a knife, gun, or some other weapon not including telephone threats?
9. Did anyone TRY to attack you or anyone else in your household in some other way?
10. Did anyone steal things that belonged to you or anyone else in your household from inside any car or truck, such as packages or clothing?
11. Was anything stolen from you or anyone else in your household while somewhere other than at home, for example, at work, in a theatre or restaurant, or while traveling?
12. Was anything (else) stolen from you or anyone else in your household?
13. Did you find any evidence that someone ATTEMPTED to steal something that belonged to you or anyone else in your household?

14. Did anything else happen during the last 6 months that you thought was serious enough to report to the police--such as a car accident involving a drunken driver, or something else you haven't mentioned yet?

a. What happened? \_\_\_\_\_

\_\_\_\_\_

b. During this/these incident(s), was a household member injured, attacked or threatened, or was something damaged or stolen or an attempt made to damage or steal something that belonged to him/her?

15. Did anything else happen during the last 6 months which you thought was a crime, but did NOT report to the police?

a. What happened? \_\_\_\_\_

\_\_\_\_\_

b. During this/these incident(s), was a household member attacked or threatened, or was something damaged or stolen or an attempt made to damage or steal something that belonged to him/her?

URBAN STUDIES CENTER FEAR OF CRIME SCALE

1. How safe do you feel walking alone in your neighborhood during the day?  
Would you say you feel . . .
  - Very safe
  - Somewhat safe
  - Somewhat unsafe, or
  - Very unsafe
2. How safe do you feel outside in your neighborhood at night?
  - Very safe
  - Somewhat safe
  - Somewhat unsafe
  - Very unsafe
3. How much does fear of crime prevent you from doing things you would like to do?
  - Very much
  - Somewhat
  - Rarely, or
  - Never (not at all)
4. When you leave your house or apartment, how often do you think about being robbed or physically assaulted?
  - Very often
  - Sometimes
  - Rarely, or
  - Never
5. When you leave your house or apartment, how often do you think about it being broken into or vandalized while you're away?
  - Very often
  - Sometimes
  - Rarely, or
  - Never
6. When you're in your home, how often do you feel afraid of being attacked or assaulted by someone that you know such as a relative, neighbor, or acquaintance?
  - Very often
  - Sometimes
  - Rarely, or
  - Never



## URBAN STUDIES CENTER PRECAUTION INDEX

These questions are preceded by the following introduction: "I want to remind you that this is a study by the University of Louisville and the State Attorney General, and we want to reassure you that your answers will be kept strictly confidential. . . . As I read from a list, tell me if, generally speaking, you take these precautions." Do you generally . . .

1. Keep the locks on your windows and doors in working order?  
Yes  
Yes partially<sup>a</sup>  
No
2. Lock vehicle doors when leaving them parked at home?  
Yes  
Yes partially<sup>a</sup>  
No
3. Lock vehicle when parked away from your home?  
Yes  
Yes partially<sup>a</sup>  
No
4. Have you engraved most of your valuable property with identification numbers?  
Yes  
Yes partially<sup>b</sup>  
No
5. Do you have antiburglary stickers or warning decals on the windows or doors of your home?  
Yes  
Yes partially<sup>b</sup>  
No
6. Do you usually leave the lights, radio, or TV on when you go out to make people think someone is home?  
Yes  
No
7. Do you usually ask for identification from home servicemen?  
Yes  
No
8. Do you have an operating burglar alarm system in your home or apartment?  
Yes  
No

<sup>a</sup>"Partially yes" recoded to equal "no."

<sup>b</sup>"Partially yes" recoded to equal "yes."

**APPENDIX B**

**DESCRIPTION OF SAMPLING DESIGN AND SURVEY PROCEDURES  
FOR WAVE ONE**

The Statewide Victimization Survey was a telephone survey of the households of Kentucky. This section of the report details the methods and procedures used.

The survey was conducted by trained interviewers of the Urban Studies Center from its telephone interviewing facility. Interviewers worked shifts which allowed most households to be reached within three calls, even though the Urban Studies Center policy makes at least five attempts to reach each number. Most of the interviewing was concentrated during evening and weekend hours (Table A-1).

Table A-1		
Number and Percent of Interviewer Hours by Time of Day and Day of the Week		
<u>Time Period</u>	<u>Hours</u>	<u>Percent of Hours</u>
Weekday mornings	60	17
Weekday afternoons	70	19
Weekday evenings	140	39
Weekends	90	25
Total	360	100

Whenever a telephone number rang with no answer, it was set aside to be tried during a different time period. Once attempts had been made in all four time periods, the fifth call could be at any time. If the telephone was answered at a residence, but either no adult household member was home, or the selected respondent was not available, the interviewer inquired about the best time to find the appropriate person home. Future contacts were then made around the suggested time. Every number was redialed until one of the following final results occurred:

- The interview was completed;
- The interview was refused at two separate times;
- The number was not in service or was a business number;
- There was no answer after five attempts;
- The selected respondent was not available during the interview period;
- Illness, language problem, or mental incapacity prevented an interview from being conducted.

## Geography Coverage

The respondent was selected to be representative of each of five regions within the Commonwealth of Kentucky as well as the Commonwealth as a whole. The five geographical regions with their associated Area Development Districts selected characteristics of those regions from the 1980 Census; the number of primary sample units (PSU's) within each region are shown in Table A-2.

Table A-2						
Regional Characteristics According to the 1980 Census and the Sample						
Region	1980 Census Population	1980 Census Households			Survey PSU's	
		Total	Phone	% of Ph	Number	Percent
Central (Lincoln Trail, Barren River, Lake Cumberland)	605,756	203,039	171,560	15.4	30	15.8
North Central (KIPDA, Northern Kentucky)	1,117,945	396,015	371,783	33.4	63	33.2
Northeast (Bluegrass, Buffalo Trace, FIVCO, Gateway)	308,990	282,549	248,931	22.3	42	22.1
Southeast (Big Sandy, Kentucky River, Cumberland Valley)	543,753	176,454	134,169	12.0	23	12.1
Western (Purchase, Pennyrile, Green River)	584,333	205,830	187,603	16.8	32	16.8
TOTAL	3,660,777	1,263,887	1,114,046	100.0	190	100.0

## The Sample

The sampling method was a two-stage cluster approach adapted for telephone interviewing, a form of Random Digit Dialing (RDD) (Waksberg, 1978). RDD is simply telephone interviewing using a series of randomly generated phone numbers. Such a method lowers field work costs yet maintains high quality data. RDD has the advantage of including in the sample those households with unlisted telephone numbers. This is especially important in

urban areas where one can expect a higher percentage of unlisted phone numbers than in rural areas.

The form of RDD employed involved a two-stage clustering method. The first stage involved computer generation of random numbers comprised of eight digits. The numbers were a composite of the three-digit area code, a three-digit prefix, and a two-digit random number ranging from 00 to 99. Figuratively, the first stage would appear as:

(AAA) PPP - NN

Where AAA was the area code, PPP was a random selection from among the prefixes serving the county or group of counties, and NN was a random number from the range 00-99.

The second stage consisted of the interviewer selecting a number from a list of all two-digit numbers ranging from 00-99. The list was randomly ordered for each first stage number. The second stage two-digit number was dialed after the first stage stem, thus creating the full digits necessary for the phone number.

The clustering aspect of the process involved the identification of the primary sampling unit (PSU). A member of the field staff dialed the first-stage stem plus the first second-stage number from the random digit listing. Whenever a residence was encountered, the first stage stem was considered a PSU and included in the sample. As many of the remaining 99 second stage numbers were dialed as needed to identify 33 eligible residences. If the first telephone number dialed reached a business or was not in service, the remaining numbers were excluded from the sample. In cases where the first call was unanswered, the number was redialed four additional times at various times of the day and various days of the week.

The third stage of the sample was based on national crime statistics, with a violent crime rate about six percent and a property crime rate about 24 percent. For efficiency of the sample, it was desired to complete approximately the same number of interviews in each of the following strata:

- Households experiencing violent crime during the previous 12 months;
- Households experiencing property crime but not a violent crime;
- Households experiencing no crime during the previous 12 months.

The initial target sample size for each of these strata was 300 completed interviews. Cost factors, however, indicated that 900 interviews would be practicable only if the national rates held up for Kentucky and screening was

100 percent efficient. The fall-back position was to complete all of the planned screening contacts regardless of the number of completed interviews in each strata.

In order to obtain 300 violent crime interviews with only six percent of the households having experienced this type of crime in a year, and assuming 80 percent of the eligible households would grant the interview, 6,250 households would need to be screened ( $300 / .06 / .80 = 6,250$ ). With this as the initial target, it was decided to use 190 Primary Sampling Units with 33 residential contacts per PSU ( $190 \times 33 = 6,270$ ). Within the cluster of 33 residential contacts, all households reporting on the screener that a violent crime had been experienced by a family member during the previous months were eligible for a complete interview. Since about four times as many households were expected to have experienced a property crime only than to have experienced a violent crime (24 vs 6 percent), about a fourth of the households reporting a property crime on the screener were eligible for the complete interview. Finally, about one in 11 households were expected to have experienced no crime as had experienced a violent crime (70 vs 6 percent), so one out of 11 households reporting no crime on the screener were eligible for interview. To ensure these ratios, each cluster of 33 residential contacts (each PSU) had labels preprinted as follows:

- 'ALL' was preprinted on three of the 33 labels to designate that the household was eligible for an interview regardless of the screener responses;
- 'PROPERTY' was preprinted on eight labels of the 33 to designate the household was eligible for the interview only if it had reported a property or a violent crime on the screener note--this should have been five labels to achieve the expected ratio, but the mistake worked in favor of the study;
- 'VIOLENT' was preprinted on 22 of the 33 labels to designate the households that were eligible for interview only if a violent crime had been reported in response to screener questions.

Following through the arithmetic of this sample plan, the study expected to have interviews with 301 victims of violent crimes, 400 victims of property crimes without violent crime, and 320 interviews with households experiencing no crime. The calculations for each preprinted label are:

- Label says 'ALL' (3 of 33):

$6,270 \times 3/33 = 570 @ 80\% = 456$  potential households  
 $456 @ 6\% = 27$  with a violent crime  
 $456 @ 24\% = 109$  with a property crime  
 $456 @ 70\% = 320$  with no crime.

- Label says 'PROPERTY' (8 OF 33):

$6,270 \times 8/33 = 1520 @ 80\% = 1216$  potential households  
 $1216 @ 6\% = 73$  with a violent crime  
 $1216 @ 24\% = 292$  with a property crime.

- Label says 'VIOLENT' (22 out of 33):

$6,270 \times 22/33 = 4180 @ 80\% = 3344$  potential households  
 $3344 @ 6\% = 201$  with a violent crime.

Summarizing from the above, and assuming crime reported on the screener would be as accurate as in the questionnaire where more questions were included, Table A-3 shows the expected number of completed questionnaires by type of crime experiences, according to the label statement at the third level of sampling.

Table A-3				
Expected Number of Household Interviews by Crime Experience and Label				
<u>Label</u>	<u>Crime Experience</u>			<u>Total</u>
	<u>Violent</u>	<u>Property</u>	<u>None</u>	
All	27	109	320	456
Property	73	292	0	365
Violent	200	0	0	200
TOTAL	300	401	320	1,021

The actual results of crime experience by label are shown in Table A-4. As can be seen when Table A-3 and A-4 are compared, the actual deviated quite a bit from the expected. This is due to three major differences between the actual and the expected: crime rate, screening efficiency and response rate.

Table A-4

## Actual Number of Household Interviews by Crime Experience and Label

<u>Label</u>	<u>Crime Experience</u>			<u>Total</u>
	<u>Violent</u>	<u>Property</u>	<u>None</u>	
All	20	58	277	355
Property	43	89	13*	145
Violent	51	6*	0	57
TOTAL	114	153	290	557

\*=Questionnaire respondent gave different information than the screener respondent (15 cases) and interviewer completed questionnaire in error (4 cases).

When both the expected and actual numbers of completed interviews are percentaged on the row or 'Label' totals, the differences between the expected and actual crime rates can be seen in Table A-5. Since the screener did not enter into the selection for households where an 'ALL' label was encountered, this row of Table A-5 demonstrates the differences most clearly. There was no difference in the expected and actual percent of households experiencing a violent crime (six percent each), but there was a substantial difference between the expected and actual property crime experience (24 vs. 16 percent), and the expected and actual percentage of households experiencing no type of crime during the previous 12 months. Among the group that were designated for interview, if they had experienced either a property or violent crime, a greater percentage than expected indicated they had experienced a violent crime. We expected a ratio of violent to property crime of 1:4 on the 'PROPERTY' label, but actually experienced a ratio of 1:2. Kentucky had a much lower rate of property crime than expected; the number of interviews conducted with households experiencing a property crime would have been even more underrepresented if we had not made a mistake and took every third property crime household than every fourth as planned.



Table A-5

Percent of Households by Expected and Actual Crime Experience  
According to Sampling Label Expected Actual

<u>Label</u>	<u>Violent</u>	<u>Property</u>	<u>None</u>	<u>Total</u>
		<u>Percent</u>		
All	6/6	24/16	70/78	100/100
Property	20/30	80/61	0/9	100/100
Violent	100/89	0/11	0/0	100/100

Table A-6 shows the expected and actual numbers of interviews percentaged on the column totals. This makes it easier to compare the expected and the actual efficiency of the screener in properly identifying households. It was expected that 67 percent of the households which had experienced a violent crime would be interviewed from the set of screened households with a 'VIOLENT' label. In actuality, only 45 percent of the households victimized by a violent crime were picked up in this group. The two screener questions on violent crime only identified 73 percent of the households that reported experiencing a violent crime during the later interview. Households who had experienced both violent crime and property crime were particularly susceptible to having that violence missed by the screener. It may very well be that the property crime was the salient crime, with only a minor form of violence accompanying it which was not thought of until the detailed probes during the complete interview.

A greater percentage of property crime was picked upon the 'ALL' labels than expected, indicating that the screener was not totally efficient for picking up property crime either. Other comparisons showed that 85 percent of households experiencing a property crime were correctly identified on the screener. This is a better rate than violent crime, but less than the 100 percent accuracy used in the initial calculations. It should be noted that there were a few cases where crime was reported on the screener but not reported during the main interview. Part of this was due to the interview respondent not always being the same as the screener respondent.

Table A-6

Percent of Households by Expected and Actual Sampling Labels  
According to Interview Reporting of Crime

<u>Label</u>	<u>Violent</u>	<u>Property</u>	<u>NonVictim</u>
		<u>Percent</u>	
All	9/18	27/38	100/96
Property	24/38	73/58	0/4
Violent	67/45	0/4	0/0
TOTAL	100/100	100/100	100/100

The overall response rate to the survey was lower than expected. In contrast to the 80 percent response used in planning this study, the actual response was 66 to 72 percent. The higher figure is the response rate if those telephone numbers which were not answered during five attempts are assumed to be nonresidences. The lower figure is the response rate if all numbers called were never answered and are assumed to be residences with occupants away or difficult to find.

The overall response rate has two major components: 1) the response to the screener; and 2) the response to the interview. The product of these two components produce the overall or total response rate. The screener response is the proportion of identified residences from whom screening information was obtained, whether or not the household had experienced a violent or property crime. The interview response is the proportion of households eligible for the complete interview and from whom a complete interview was obtained. The responses to the study are shown in Table A-7.

The screener response can be computed only as a range. This is due to the uncertainty of knowing whether the telephone numbers not answered in five attempts connect to a residence or not. Since the numbers were randomly generated, some of the numbers not answered during five attempts at different times of the day and different days of the week could be numbers connected to a telephone booth; numbers for which the phone seemed to be ringing but actually were not in service; numbers connected to vacation homes which are occupied infrequently. However, some were connected to residences at which no one was home during any of the five scheduled attempts. If all the 523

numbers not answered connected to residences, the screener response was 81 percent (5,037/6,225). On the other hand, if those numbers not answered in five attempts did not connect to residences, then the screener response was 80 percent (5,037/6,225-523). Therefore, the true screener response rate lies within the range of 81-88 percent.

Table A-7	
Number of Residential Numbers by Survey Results	
<u>Survey Results</u>	<u>Number</u>
Total possible residential numbers	6,225
Screener completed	5,037
Eligible for interview	682
Completed interviews	557
Terminated interviews	32
Interview refused after screening	54
Respondent not reached in five attempts	39
Household not eligible for interview	4,355
Screener not completed	1,188
Refused screener	665
Number not answered in five attempts	523

The interview response rate was 82 percent (557/682). Therefore, the overall response rate lies within the range of 66-72 percent ( $0.82 \times 0.81$  to  $0.82 \times 0.88$ ).

#### Weights

Different households had different probabilities of being interviewed, depending upon whether or not the screener respondent indicated that someone in the household had been the victim of a crime during the previous twelve months. Since the data were not to be analyzed separately within different screening strata, weights were applied to each case to adjust for the different probabilities of being included in the sample for the complete interview. The weights approximate the number of interviews that would have

been conducted if all households where the screener indicated no crime and property crime had been interviewed.

Interviewed households for whom the screener response indicated they were victims of a violent crime were always interviewed regardless of which label applied to the telephone number (3 "ALL", 8 "PROPERTY" and 22 "VIOLENT" out of 33 labels). They had a probability of selection of 1.0, with the inverse of this producing a weight of 1.0.

Interviewed households for whom the screener response indicated they were a victim of a property crime, but not a violent crime, were eligible for interview 11 times in each cluster of 33 (3 "ALL" and 8 "PROPERTY" out of 33 labels). Therefore, they had a selection probability of one in eleven with the inverse of this producing a weight of 1.0.

The actual and weighted numbers of interviews are shown in Table A-8. These weights are not dependent upon the answers made during the complete interview, but the ones during the screener; therefore, they do not have analytic meaning within themselves. However, weighted percentages or means do have meaning and are used throughout this report. For purposes of calculation standard errors of estimates (determining statistical significance), weighted figures are not always appropriate. For general purposes, the unweighted number of interviews are used as the appropriate sample size for calculating standard errors. The weighted number (3,843) is used for estimating the overall rates of victimization. This is due to the fact that over 5,000 households were screened, and the screener responses to victimization among those interviewed largely predicted victimization as reported on the main interview. More refined estimates of standard errors would require a complex approximation, such as balance half-sample replication procedures.

Table A-8		
Unweighted and Weighted Number of Households Interviewed by Response to Victimization Questions on the Screener		
<u>Screener response</u>	<u>Unweighted</u>	<u>Weighted</u>
Victim reported on screener	94	94
Property crime reported on screener	168	504
No crime reported on screener	295	3,245
Total	557	3,843

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