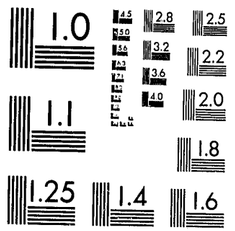

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MEASURING FEAR OF CRIME:

PERCEPTUAL, AFFECTIVE, AND BEHAVIOR COMPONENTS

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INTRODUCTION

This is the final report of a methodological study designed to develop and validate measures of "fear of crime." Our general approach to the problem was to apply standard techniques of scale construction to this topic area in a systematic and cumulative fashion. The purpose was to develop multi-item measures which are reliable and valid indicators of theoretically defined constructs. In this report, we present the final products of our efforts: a conceptual framework, the final scales, and appropriate documentation. While not the final word on the topic, the data presented herein represent the first comprehensive investigation of the measurement issues in this topic area.

The systematic development of an adequate operational measure of any construct requires an iterative process of theoretical, operational, and evaluative activities. Adequate theoretical development constitutes the foundation of measurement. Without the appropriate level of conceptual development, operational activities, however sophisticated, become misdirected and ineffective. One of the basic premises of this research was that however useful the concept "fear of crime" was as a popular and political device, it lacked the clarity and specificity required of a scientific construct. Thus, much of our energy was directed toward the conceptual development of the popular concept. Initially, this involved the review of existing conceptual efforts, the compilation and organization of existing measures, and in-depth interviews with urban residents concerning their views about crime and its impact on their lives. These efforts resulted in an initial framework which was presented at the Special National Workshop on Research Methodology and Criminal

Justice Program Evaluation (Baumer & Rosenbaum, 1980). Throughout the project, this initial framework has been continually tested and modified in order to be consistent with our empirical results. What is presented in this report is a revised conceptual framework which reflects these developments.

Operationalization, especially during the early stages of the project, was guided by several considerations. First, the initial pool of items had to include potential measures of the components of the conceptual framework. Second, theoretical distinctions offered by other authors were observed and representative items included. Finally, frequently employed items, such as the National Crime Survey "safety" question, were included for evaluative purposes. Actual items were derived from an extensive search of existing instruments, the focused interviews with community residents, and consultation with the members of our advisory board. In addition, whenever possible, previously established scales or sets of items with potential scalability were included. This process produced a pool of 90 items to be included in the initial data collection.

Evaluation of the potential measures proceeded in two stages. First, in order to reduce the initial set of 90 items to a more manageable level, data for a pilot study were collected in late March and early April of 1980. Since the purpose of this stage was primarily data reduction, analytic efforts focused on the elimination of items with low variance and little relationship to other items. Scale construction and evaluation at this stage centered on indicators of internal consistency: unidimensionality and alpha reliabilities. The results of this pilot study were very promising, as were those of a subsequent magnitude estimation study designed to produce ratio-scaled response formats for the final set of items. The results of both studies

were presented in the Interim Report for this project (Rosenbaum & Baumer, 1980).

The second evaluative step involved scale replication, refinement, and validation. Using additional data (described in the following section) collected in June and July, 1980, the reliability and unidimensionality of the preliminary scales was further documented and, when necessary, the indices were modified and refined. In addition, refined test/retest reliabilities were calculated using supplemental data, and the construct validity of the resultant scales determined. This report presents the final derived scales and documents their component characteristics.

Although measurement issues are relevant to those generally interested in "fear of crime" as an indicator of public opinion, they are of critical importance to those involved in community crime prevention programs and criminal justice program evaluators. Both the Department of Justice and the Department of Housing and Urban Development have mandated the reduction of both crime and "fear of crime" as primary goals of their crime prevention programs (LEAA, 1978; DHUD, 1979). If the program planner/practitioner is to develop an effective crime (and fear) reduction program, these policies demand of him/her a careful consideration of the nature, extent, and etiology of both program goals. Consequently, these professionals must be concerned with the reliability and validity of measures of these important programmatic constructs. Failure to develop impact variables conceptually and/or adequately operationalize them can result in apparent program failure as surely as failure to deliver the intervention (Boruch & Gomez, 1977; Green & Lewis, 1977).

The distribution of methodological attention in this area has been very uneven. Extensive efforts have been directed toward the conceptualization and

measurement of criminal incidents. Conceptually, at least, the incidence of crime is quite clear and involves acts which transgress legal proscriptions. Traditionally, crimes reported to the police were the only indicators of criminal activity available to either government officials or researchers. During the 1960's, however, the apparent increased crime rates, combined with the growing criticism of reported crime as a measure of the volume of crime, produced a new interest in alternative means of operationalizing criminal incidents. The resulting strategy was to survey citizens about criminal offenses committed against them. These "victimization" surveys were originally developed for the President's Commission on Law Enforcement and Administration of Justice (see Biderman et al., 1967; Reiss, 1967; Ennis, 1967) and have become a standard tool in the evaluation of crime prevention programs (cf. Kelling et al., 1974; Fowler et al., 1979; Schwartz et al., 1975). Evaluations of the reliability and validity of the measures produced in this way have been extensive and include: (1) reverse record checks (Kalish, 1974; LEAA, 1972; Sparks et al., 1977); (2) forward record checks (Schneider, 1977); and (3) estimates of test/retest reliability (Hindelang et al., 1978:230-233). These studies have demonstrated that victimization surveys produce reasonably valid and reliable estimates of victimization for most crimes, albeit at considerable cost. However, we might add that a detailed critique of these measures indicates that there appears to be considerable room for improvement, both conceptually and operationally (Skogan, 1978).

In contrast, little systematic effort has been directed toward the refinement of measures of fear of crime. As will be indicated below, there is a consensus among criminal justice researchers that "fear of crime," as popularly conceived, is a very broad construct which encompasses several

distinct components. However, attempts to delineate these components have not produced a convergence of opinion concerning their nature (cf., DuBow et al., 1978; Furstenberg, 1971). Correspondingly, with a few recent exceptions (Baumer, 1980; Normoyle, 1980; Skogan & Maxfield, 1980), researchers have demonstrated little interest in the development of standardized multi-item indices with known reliabilities and validities. For example, Furstenberg (1971) originally employed subjective risk of victimization as an indicator of an affective dimension of fear while, more recently, Fowler et al. (1979) have used similar questions as indicators of a cognitive measure of environmental danger. Finally, the commonalities of usage that do exist are primarily due to the wide availability of several sets of data with a limited number of "fear of crime" items (e.g., the National Crime Survey and the National Opinion Research Center's General Social Survey). Their research report will address these methodological issues in a systematic, cumulative fashion.

TOWARD A CONCEPTUAL FRAMEWORK

As suggested above, "fear of crime" has not been clearly defined in either popular or scientific usage. Close examination indicates that the term has been used in reference to feelings, beliefs, perceptions, opinions, and behaviors regarding crime. Thus, one of the most fundamental questions that has not been adequately addressed in previous research is--what is meant by the term "fear of crime?" More specifically, we ask if there are meaningful components of the general construct which may be conceptually and empirically distinguished? In this section, we will briefly review previous conceptualizations and examine their utility. Then, we will present a conceptual framework which organizes the topic area, is consistent with existing knowledge, and

adheres to the spirit of the popular notion.

Certainly, "fear of crime," as commonly conceived, is not fear of crime at all. Technically speaking, "fear" refers to an immediate, acute, emotional and physiological response to a particular stimulus event. While theories of emotions tend to include the components of subjective awareness, autonomic/visceral reactions, and expressive behaviors, these reactions are usually conceptualized as following immediately from a specific stimulus event and measurement is usually taken shortly thereafter (see Leventhal, 1974; Plutchik, 1980). Obviously, the "fear of crime" literature focuses on more distant, and for many respondents, less tangible criminal events and environmental conditions. Given these considerations, the reactions most commonly referred to as "fear of crime" are more closely related to anxiety than fear. Thus, in constructing an "index of anxiety," Biderman et al. (1967) would appear to be properly oriented semantically, if not operationally. However, as we will see below, the construct contains additional dimensions.

Since the initial studies in this area conducted for the President's Commission on Law Enforcement and Administration of Justice, researchers have regularly acknowledged the multidimensionality of "fear of crime" and the need to refine this construct. These attempts at conceptual specification, while generally noncumulative, do identify several distinct components of the topic.

A decade ago, Furstenberg (1971) demonstrated that the ranking of crime as a social issue was distinct from other, more direct measures of fear. Employing a subjective measure of personal risk as the alternative measure, he very convincingly demonstrated the discriminate validity of the two constructs. This analysis indicated "that the 'ranking' measure was more

indicative of a general concern about crime as an abstract threat to the social order." As such, it was more closely related to personal values and political considerations than the typical conceptualization of "fear of crime" should be. This was, indeed, a useful distinction which was later employed and substantiated by Conklin (1975) in his well known work. More recently, DuBow et al. (1978) have generalized the construct and made the value basis of this component explicit. In doing so, they grouped several similar operational measures under a broad category of crime related values. While concern about crime as a social problem is clearly part of the "crime problem" and may affect political action, the general consensus is that it is not intimately related to what is generally meant by "fear of crime."

Another common distinction hidden by the operational anarchy in the topic area is often made between perceptual or cognitive statements about the nature of the local crime problem, on the one hand, and feelings or emotions about the individual's personal situation, on the other hand. The former measures generally refer to subjective estimates of the extent of crime in the respondent's immediate environment. Conklin labelled this perceptions of crime and argued that under certain conditions these perceptions could contribute in a negative way to feelings of personal safety (1975:76-85). Although there is no general conceptual or operational consensus about the nature of this dimension, several other authors have delineated a similar construct. DuBow et al. identified a category of "judgments about the factual distribution of crime" (1978:8), which includes both a general referent about the extent of crime and a subjective estimate of personal risk. While the former clearly refers to a cognitive or perceptual process, the latter is more evaluative in the sense that in order to arrive at an assessment of personal risk, the

individual must evaluate the amount of crime in terms of personal threat or chances of victimization. Although their operationalization diverges considerably, both Fowler et al. (1979:109) and Sparks, Gunn, & Dodd (1977) also treat these cognitive and evaluative dimensions separately. Thus, there appears to be some convergence about the idea that information concerning the amount of crime in the local environment, variously referred to as "perceptions about crime," "judgments about the factual distribution of crime," or "cognitive perceptions," constitutes a distinct component of the fear of crime issue.

The second component of the distinction described above identifies a more personal or emotional dimension of the "fear of crime" issue. It is this component which most closely corresponds to the common conceptualization of that broader construct and toward which the majority of operational measures are directed. Drawing on Furstenberg's (1971) distinction, Conklin described this component of the topic as "feelings of personal safety" (1975:81-85). His research demonstrated that this component was not only conceptually but also empirically distinct from the perceptual dimension, a finding later substantiated by Baumer (1979). This dimension has subsequently been referred to as emotional reactions to crime (DuBow et al., 1978) and the affective component of residents' subjective responses to crime (Fowler et al., 1979).

Behavioral reactions designed to protect one from victimization constitute the fourth dimension of the "fear of crime" issue to be clearly distinguished in previous literature. Indeed, one might argue that this set of reactions constitutes the most critical of the four. Most arguments concerning the negative impact of crime and fear ultimately rest on some form of behavioral modification as the mechanism through which the social order is damaged

(cf., McIntyre, 1967). While perceptual and emotional reactions to crime may be of psychological import, their impact on the social order rests on some form of behavioral adaptation. There have been three basic measurement strategies in this area: the study of specific crime-related actions (Wilson, 1976; Rifai, 1976; Sundeen & Matthieu, 1976); the use of global questions concerning any behavioral changes (Garofalo, 1977; Hindelang et al., 1978); and the development of multi-item measures of types of behavioral response (Lavrakas, 1979; Baumer, 1980).

Within the area of behavioral reactions to crime, several authors have attempted to delineate specific subtypes of action or construct multi-item scales. Furstenberg (1972) distinguished between "avoidance" and "mobilization" measures--a distinction paralleled by Kleinman & David's (1972) "passive" and "aggressive" responses. More recently, DuBow et al. (1978) have described six types of behavioral response: avoidance, home protection, personal protection, insurance, communication, and participation. Other researchers have constructed scales concerned with either property (Lavrakas, 1979) or personal protection (Baumer, 1980).

In sum, although development has been slow, a few conceptual regularities can be identified within the "fear of crime" or the broader "reactions to crime" literature. We have identified above what would appear to be four conceptually distinct dimensions: (1) concern about crime as a social issue, (2) estimates of the nature and extent of (local) crime, (3) concern for personal safety, and (4) behavioral adaptations. Given this minimal convergence, future progress in this area is dependent upon three conditions: (1) the incorporation of this body of knowledge into a broader conceptual framework, (2) further conceptual clarification, (3) the consequent operational

standardization of relevant measures. The remainder of this report will be directed to these three objectives.

The conceptual regularities emerging within the "fear of crime" literature suggest the applicability of both attitude theory and stress theory. The potential utility of each will be discussed briefly. Some versions of attitude theory define constructs very similar to those identified above. This approach suggests that attitudes contain three distinct components: (1) the cognitive, which concerns knowledge of or beliefs about the attitude object, (2) the affective, which involves feelings about or evaluation of the attitude object, and (3) the conative, which concerns behavioral intentions (cf., Secord & Backman, 1964; Wagner, 1969; Zimbardo & Ebbesen, 1970). In terms of the trends identified above, "perceptions of crime" would correspond to the affective component and "behavioral adaptations" would correspond to the conative dimension of attitudes. Thus, we might view the "fear of crime" issue as essentially an attitudinal phenomenon.

Several considerations indicate that such a conceptualization would not be very productive. First, we must consider the problem of selecting an attitude object. Should it be crime, safety, neighborhood, environmental danger, victimization, or some other object? Given the nature of the existing literature, the answer is by no means clear. Second, the affective component is usually defined along a favorable/unfavorable or like/dislike dimension. Depending on the selected attitude object, this dimension would be more or less problematic in a study of "fear of crime." For example, the most troublesome situation would occur if we selected "crime" as the attitude object. For the general population, the affective component as defined above would approximate a constant; i.e., most people "dislike" or feel "unfavorable" about crime.

The other possible attitude objects offer potentially similar results. Third, the conative dimension refers specifically to behavioral intentions. However, in the topic area being considered, we are usually concerned with actual behaviors or more precisely, self-reports of behavior. Finally, recent developments in attitude theory have been toward a unidimensional view of attitudes. Fishbein persuasively argues that "[r]ather than viewing beliefs and behavioral intentions as part of attitude, I prefer to define them independently and to view them as phenomena that are related to attitudes. More specifically, I see beliefs and behavioral intentions as determinants or consequents of an individual's attitude" (1967:478-479). While none of these problems either individually or together poses insurmountable obstacles to the integration of the "fear of crime" literature and attitude theory, they do suggest that such a task would be difficult, at best.

A second perspective within which we might incorporate the "fear of crime" literature is stress theory. As developed by Lazarus (1966), stress situations involve three basic elements: the presence of a stimulus event, an assessment of the stimulus as threatening, and emotional and behavioral reactions designed to cope with danger. Within this framework, threat and the associated response do not derive directly from the situation, but rather, are the result of what Lazarus terms primary and secondary appraisal. Critical to this approach is a distinction between the simple perception of a stimulus situation and the assessment of this situation in personal terms:

> For threat to occur, an evaluation must be made of the situation, to the effect that a harm is signified....The appraisal of threat is not a simple perception of the elements of the situation, but a judgment, an inference in which the data are assimilated to a constellation of ideas and expectations....The mechanism by which the interplay between the properties of the individual and those of the situation can be understood is the cognitive process of appraisal, a judgment about the

> meaning or future significance of a situation based not merely on the stimulus, but on the psychological makeup (Lazarus, 1966:44).

The extent to which a given environmental cue will produce threat is dependent upon a complex process of interpretation and evaluation. Secondary appraisal involves a similar evaluative process directed toward an appropriate behavioral response which is based upon the primary appraisal of threat and interpretations of appropriate responses. Given this approach, it becomes clear that a given stimulus may evoke a variety of affective responses and an even broader variety of coping behaviors, depending upon the individual's assessment of the situation.

The conceptual trends emerging from the "fear of crime" literature are easily assimilated into this perspective with a consequent clarification of the substantive nature of each component. First, "perceptions of crime" can be seen as corresponding to the simple perception of the stimulus. These perceptions involve beliefs about both the extent and nature of crime in the local environment, as well as "signs of disorder" (see Skogan & Maxfield, 1981). The phenomena to be included would be perceptual and nonevaluative. This suggests that operational measures of this component should not include items which require an interpretation or evaluation of the personal significance of the environment. Thus, excluded from this category would be subjective estimates of risk (cf., Fowler et al., 1979) and questions involving the definition of crime as problematic (cf., Baumer, 1980; Skogan & Maxfield, 1981). This is not to say that these measures have no use, but only that they are inappropriate indicators of this class of phenomena.

Second, "concern for personal safety" or the "affective dimension" can be viewed as the emotional product of the appraisal of threat. This involves an assessment and definition of the situation in terms of the threat to

personal safety or welfare. While this assessment may be based in part upon cold perceptions, it is primarily a function of social definitions, prior learning, and individual characteristics. Included in this category would be all types of assessments which involve the personalization of threat, such as, estimates of risk (Furstenberg, 1971), feelings of personal safety (Hindelang et al., 1978), or worry about victimization (Fowler et al., 1979).

Finally, behavioral adaptations may be viewed as actions designed to cope with the defined threat. Because coping behavior is also the result of an assessment process, one should not expect a one-to-one correspondence between behavior and emotional responses. It should also be noted that neither the definition of threat nor coping behavior need be accurate, from an objective point of view. This category of actions would contain a wide variety of goal behaviors intended to reduce the threat of victimization.

The above discussion suggested that the "fear of crime" literature may be usefully viewed as illuminating the various components of a stress reaction. From this perspective, crime represents a potential environmental stressor. Its significance is evaluated in terms of the amount of threat, and personal reactions are viewed as strategies designed to cope with, or reduce the threat. From this view, perceptions of crime and behavioral adaptations are defined as determinants or consequences of assessments of personal safety. While the three are interrelated, they represent theoretically distinct constructs. In addition, the processes of assessment and evaluation dictate less than a simple one-to-one correspondence between the three.

SUMMARY

In this section, we have presented a brief overview of the goals and procedures of the project, a synthesis of previous "fear of crime" conceptualizations, and suggested that the focus of this literature can profitably be incorporated into a general framework provided by stress theory. Within this perspective, perceptions of crime, feelings of personal safety, and behavioral adaptations may be viewed as environmental perceptions, assessments of threat, and coping behaviors, respectively. This incorporation orders and organizes the existing literature while concurrently drawing the "fear of crime" literature into an existing theoretical framework.

The specification and conceptual clarity offered by this reformulation also has implications for practitioners. Stress theory implies that the causal dynamics for the three components are different. No one condition determines all three. Thus, a given program may have a differential impact on the various components. In order to design an effective "fear prevention" program, the causal dynamics and interrelations between the three must be carefully delineated, lest the program be misdirected.

PROCEDURES

In this project we employed a comprehensive approach to the development of measures of "fear of crime." Although much attention has been directed to the "fear of crime" issue, few authors have been concerned with the systematic development of measures which meet commonly defined standards of reliability and validity. The procedures employed may be divided into five basic activities:

1. Identification of the variable domain
2. Data reduction and initial scale development
3. Development of optional response formats
4. Scale refinement: further tests of reliability and validity
5. The development of a conceptual framework

Below we describe the activities related to each of these tasks. Several have been addressed elsewhere (see Baumer and Rosenbaum, 1980; Rosenbaum and Baumer, 1980), and will be discussed only briefly in this report. Since item four is presented for the first time in this report, the data collection and analytic tasks will be addressed in somewhat more detail than the others.

Identification of the Variable Domain. The first major task was to identify the domain of existing measures in order to define the topic area referred to here as "fear of crime." This process involved an extensive search of survey items concerning public opinion, attitudes, feelings, perceptions, and behavioral reactions pertinent to crime. The search covered published articles, unpublished project reports, and other documentation on public opinion polls, criminal justice research studies, and criminal justice program evalutions. Particularly useful in this search was a computerized file of questionnaires and interview

schedules developed by the Northwestern University Reactions to Crime Project (NIJ grant 78-NI-AX-0057), as well as computerized searches on public opinion and crime prevention program evaluations, conducted for us by the National Criminal Justice Reference Service. As a result, over 500 items in this topic were identified, although many of these items were common items or simply minor variations on a common question. These items were then sorted and grouped according to content areas. In this way the domain of existing "fear of crime" measures was identified.

In order to identify the coverage of existing measures, to establish the appropriateness of the derived categories, and possibly, to develop new measures we also conducted focused interviews with an availability sample of twenty urban residents. The purpose of these in-depth, open-ended interviews was to determine how people think about crime in their own neighborhood and its effect on the respondents without the restrictions imposed by structured questions or response formats. These interviews avoided the misrepresentations that are due to forcing respondents to answer in unfamiliar ways or comment on uncommon events. By asking them simply to "talk about what it's like to live in the city," the salience and character of the phenomenon called fear of crime remains undistorted. These interviews produced a few new items but generally supported the notion that many of the promising measures from previous studies did not misrepresent or distort the ways in which people think about crime in their neighborhood.

From this large pool of items it was necessary to identify a subset of representative items which might be investigated within the constraints of the project. This was accomplished through four alternative procedures. First, when available, objective data concerning the reliability and/or validity of the measures was considered. This approach was considered the ideal standard,

but the underdeveloped nature of the area produced little information on the existing measures. The second review involved a more subjective estimate of the principal investigators in terms of applicability to the identified topic areas, face validity, and actual or estimated response rates and frequency distributions. Items which "failed" in one or more of these areas were deleted. Third, items with extensive prior usage were included regardless of the subjective evaluation of their utility. Finally, the members of the advisory board were asked to evaluate and comment on a preliminary reduced pool of items for possible inclusion in the initial data collection effort. This final process resulted in the addition of two sets of items and the deletion or modification of several questions.

Data Reduction and Initial Scale Development. After identifying the above subset of potential items, a pilot study was conducted in order to further reduce the number of individual items and identify potential scales. The pilot instrument was prepared in the form of a self-administered questionnaire, requiring approximately 20-30 minutes to complete. The majority of the 275 respondents were undergraduates enrolled in social science classes in three major universities in the Chicago area.

The preliminary instrument included approximately 200 data points. Many of these items were designed to measure neighborhood and personal characteristics or were scales of other constructs useful for testing discriminant validity. Ninety items served as our central measures of fear-related constructs.

Analysis of the pilot data focused on the dual goals of data reduction and the identification of sets of items with desirable scale characteristics. The preliminary instrument contained a large pool of new and existing measures that were promising on both theoretical and methodological grounds. The main

objective of the pilot study analyses was to identify a smaller, more parsimonious set of items that could be used at the next stage of testing as part of a revised instrument.

Scale construction and refinement is a highly interactive enterprise, involving an iterative process of analysis, evaluation, revision, and reanalysis. Our initial goal was to develop unidimensional indicators of the components of fear with known reliabilities. Thus, our analysis plan focused on conducting tests of unidimensionality and internal consistency.

Items thought to be indicators of a common construct were initially analyzed together. The primary analytic tool at this stage was factor analysis. A single factor solution, using Kaiser's criterion was taken as evidence of unidimensionality. Items producing communalities of less than 0.3 were deleted and the remaining items reanalyzed. If at this stage a multifactor solution was obtained, the items loading significantly on each factor were then analyzed separately until a single factor structure was obtained. Of course, there are other methods of defining unidimensionality, the most prominent of which are Guttman scaling (Gorden, 1977) and most recently Rasch modelling (Andrich, 1978). Where the item characteristics suggested the potential applicability, these other approaches were employed.[1]

For those scales initially defined through the factor analytic approach, reliability estimates were calculated as estimates of each scale's internal consistency. Essentially, internal consistency refers to how well the items "hang together" and consistently measure individual differences that exist

[1]The Rasch modelling was performed by Ben Wright, Geoffrey Masters and their associates at the University of Chicago and generall produced results parallel to the Guttman analysis.

between respondents, rather than variance due to item wording and other sources of error. The internal consistency of each scale was assessed by computing the alpha coefficient (Cronbach, 1951; Novick & Lewis, 1967; Nunnally & Durham, 1975), which measures the average covariation of all items in the scale simultaneously. Our analytic goal here was to optimize reliability by balancing the desire for maximum internal consistency with our desire for concise indices.

The above analysis of the pilot data identified several potentially useful indices and further reduced the number of items. Five possible scales composed of 19 items were derived from these data. Details for the analysis and potential scales were presented in the interim report for this project (Rosenbaum and Baumer, 1980) and are summarized in the results section of this report.

The Development of Optimal Response Formats. There are two components to any structured survey questions -- the question itself (content; focus) and the answers or response options that are attached to it. The latter half was the focus of a special study which we conducted to determine the most appropriate response formats for the fear-related questions being studied. Rather than arbitrarily select a set of response options (which has been the usual practice), a magnitude estimation study was undertaken to identify response scales which (1) approximated a ratio scale, (2) had an optimum number of response alternatives as determined by both practical and statistical factors, and (3) demonstrated reasonable stability across items.

Several procedural steps were necessary to develop the desired response scales. First, various tasks were directed at identifying lists of response modifiers that would be most appropriate for study. We returned to the pilot instrument and preliminary results to determine which types of questions were most likely to appear on the revised fear or crime instrument. Given the variable domain represented in the pilot instrument and some preliminary analyses, we

concluded that the magnitude estimation study should be limited to an assessment of two types of adverb modifiers -- those which modify expressions of intensity and those which modify expressions of frequency. The magnitude estimation literature and the fear of crime literature were re-examined to identify specific adverb modifiers for both intensity and frequency adjectives. In the final analysis, 14 intensive adverbs were selected for inclusion in the magnitude estimation study, ranging in intensity from "not at all" to "very, very." In addition, six expressions of frequency were selected, ranging from "always" to "never."

The second task was directed at constructing the magnitude estimation instrument so that certain methodological standards were achieved. The instrument was a self-administered questionnaire that contained 54 items (excluding demographic questions) -- 42 pertaining to expressions of intensity (14 modifiers x three questions) and 12 pertaining to expressions of frequency (six questions paired with six estimates of actual frequency, i.e., 6 + 6 = 12). The order of of presentation was varied for adjectives and adverb modifiers to control for possible order effects. This was achieved such that virtually every respondent completed a different form of the questionnaire.

This instrument was completed by 204 respondents most of whom were undergraduates at two universities in the Chicago area. Comparisons for the intensity modifiers were anchored by assigning a value of 50 to "somewhat." The respondents were then asked to assign numerical values to the remaining thirteen when compared to this standard. For the frequency modifiers the respondents were first asked a question concerning how often they engaged in certain protective behaviors, with the frequency modifiers as possible answers. Then, they were asked to estimate what percentage of the time they meant by their answer.

The results of this phase of the research were used to identify response

alternatives which met the characteristics described above. These response alternatives were then matched with the scale items recommended by the initial analysis and the modified questions included in the final instrument. As with the previous section, details of this study were presented in the interim report (Rosenbaum and Baumer, 1980).

Scale Refinement: Further Tests of Reliability and Validity. In order to complete scale development, additional data were collected during June and July of 1980. This set of activities was directed toward three critical areas: (1) the internal consistency of the preliminary scales when applied to the general urban population, (2) the temporal stability of these measures, and (3) the validity of the derived measures. The procedures related to each of these areas are discussed briefly below.

The principal data collection effort at this stage focused on the performance of the preliminary scales in the general population. The preliminary data were collected by means of an availability sample of college students. While this sample was adequate for initial analysis, the potential sources of bias (age, income, education, place of residence) suggested possible limited external validity and required application in a more generalizeable sample. The sample for this stage of data collection was drawn from the metropolitan Chicago area. For reasons to be described later in this section, the geographic area was limited to an area in the city of Chicago that we may loosely call Wicker Park and the adjacent suburb of Evanston.

Data were obtained by means of telephone interviews with 315 residents selected by random digit dialing procedures. Only residential numbers were defined as eligible, with businesses and group quarters excluded. In addition, due to budgetary constraints, the interviews were conducted only in English. This restriction constituted no problem in the Evanston sample, but for the Wicker Park

area non-English speaking households (mostly Spanish) constituted approximately 25 percent of the known eligible households (completed interview, breakoffs, refusals, and non-English). Within each household the respondent was selected by means of Trodahl-Carter selection matrices rotated to produce a natural distribution (Trodahl and Carter, 1964; see Appendix A). Only household residents 19 years or older were eligible for selection. Items retained from the pilot instrument were modified to include the modified response formats produced by the magnitude estimation study.

Table 1 presents the final disposition of all numbers called. The distributions for the two sampling areas are generally similar, with three exceptions. First, the proportion of numbers which were clearly disconnected or not in service was higher in Evanston (26%) than Wicker Park (18.6%). Second, the proportion of total numbers with no English speaking respondent was considerably higher in Wicker Park (12.7%) than Evanston (0.7%).

Third, the proportion of numbers which eventually produced a completed interview was higher in Evanston (29.9%) than in Wicker Park (23.3%). This final difference is predominantly due to the higher proportion of non-English households in this latter area.

The final disposition of eligible households is presented in Table 2. Refusals varied around 29 percent, while the total proportion of completed interviews was 54.9 percent. This latter figure was considerably higher in Evanston (66.8%) and lower in Wicker Park (46.2%). As suggested above, the difference in completions rates is due to the greater number of non-English households in Wicker Park (25.2%) than Evanston (1.6%). If non-English households are defined as ineligible as was operationally the case, the completion rates in Evanston (67.9%) and Wicker Park (61.8%) are relatively similar and reflect general current completion rates for telephone interviews. Although

Table 1. Final Status of Telephone Numbers Dialed in Chicago and Evanston

Final Disposition	Evanston	Wicker Park (Chicago)	Total
Disconnects/Not in Service	140 (26%)	123 (18.6%)	263 (21.9%)
No Answer-three calls	93 (17.2%)	130 (19.7%)	223 (18.6%)
Business	40 (7.4%)	51 (7.7%)	91 (7.6%)
No English speaking resident	4 (0.7%)	84 (12.7%)	88 (7.3%)
Refusal	73 (13.5%)	94 (14.2%)	167 (13.9%)
Breakoff/Uncompleted	3 (0.6%)	1 (0.2%)	4 (0.3%)
Miscellaneous[A]	25 (4.6%)	23 (3.5%)	48 (4.0%)
Completed Interviews	161 (29.9%)	154 (23.3%)	315 (26.3%)
Totals	529 (100%)	660 (100%)	1199 (100%)

[A]Includes institutional numbers (hospitals), households with no eligible respondent (all under 19), and households where the usual residents were on vacation and someone was staying there or calls were being forwarded.

Table 2. Final Disposition of Eligible Households[A]

Disposition	Evanston	Wicker Park	Total
Completed interview	161 (66.8%)	154 (46.2%)	315 (54.9%)
Refusal	73 (30.3%)	94 (28.2%)	167 (29.1%)
Breakoff	3 (1.2%)	1 (0.3%)	4 (0.7%)
Non-English	4 (1.6%)	84 (25.2%)	88 (15.3%)
Total	241 (100%)	333 (100%)	574 (100%)

[A]Includes all numbers identified as households. Although some non-English numbers could be businesses, or ineligible households, for purposes of this analysis all are assumed to be potentially eligible households.

refusal rates are higher than those reported by Steeh (1981) they are considerably lower than those reported in an earlier survey on a similar type (Skogan, 1980).

Since the purpose of this stage of the research was to establish the external validity of the preliminary results, the analysis paralleled that performed on the pilot data. The principal tools were factor analysis and alpha reliabilities. As discussed in the results section of this report some preliminary scales were verified while others were modified.

The second set of activities were directed toward establishing the temporal stability of the derived measures as a further test of reliability. Temporal stability is typically assessed by readministration of the measure to the same respondents a second time and then computing test/retest correlations. Unfortunately, these correlations are the product of two sources, instability (unreliability) of the measure and actual change, which typically cannot be distinguished. However, if three points rather than two, are employed Heise (1969) has described an analytic procedure which allows for the calculation of both stability coefficients and the reliability of the measure free of actual change.

In this research the three-point strategy suggested by Heise (1969) was employed. As part of the original interview all respondents were asked if they would be willing to be reinterviewed "in a few weeks." Only those who consented were defined as eligible for retesting. In order to control for one source of anticipated variation, it was decided to restrict this sample to one of the two geographic locations. Thirty-four (34) of the Evanston respondents were then reinterviewed two additional times at approximately two week intervals. The interval schedule for this phase of data collection was a short form of the original interview (Appendix B).

The third set of activities focused on determining the validity of the derived measures. These procedures focused first on questions of construct validity and then turned to discriminant validity. Attention focused on anticipated antecedent and consequent correlates of the major constructs. These correlates were identified in part from the theoretically defined nature of the measures and in part from previously identified correlates of other measures of "fear of crime." This latter source of hypotheses is often referred to as known groups validation (Crano and Brewer, 1973). Discriminant validity in the present case was defined by both a factor analytic approach and the identification of a unique "profile" of correlates, that is, in order to be distinct the constructs must be related to different sets of variables.

These validation efforts served to structure the data collection in several critical ways. First, ecological variations in crime are reflected in similar variation in levels of "fear" and related constructs. Hence, the principal data collection effort was targeted on two geographic areas with variable rates of violent crime.

Second, both theoretical and empirical evidence suggested that certain types of crime victims should report higher levels of "fear." In order to test this expectation samples of recent robbery/assault and burglary victims were also interviewed. An attempt was made to contact 143 such victims recorded in police records in Evanston. From these, interviews with 48 burglary and 35 robbery/assault were obtained. Twelve victims declined to be interviewed, 22 could not be contacted, one failed to complete the interview and 25 were dropped for a variety of reasons (e.g., denied that they had been victimized; "didn't want anything to do with the police"). All comparisons of these victims with the general sample were restricted to Evanston residents.

Development of a Conceptual Framework. Throughout the project we were concerned with conceptual development of the area. In this sense, each of the activities described above contributed in some way to conceptualization. The principal goal was the integration, if possible, of the topic area into an existing theoretical framework, which both illuminated an understanding of the phenomena involved and, was congruent with both the conceptual structure of residents and the empirical results of our data collection efforts.

RESULTS

Perceptions of Crime

As described earlier in this report, this class of phenomena concerns knowledge or beliefs about the extent and nature of crime. Our early conceptualization of this area included environmental cues which might be used by residents as indicators of crime or crime potential--what have been termed "signs of disorder" (Skogan & Maxfield, 1981) or "signs of crime" (Stinchcombe et al., 1978). Essentially, this dimension was directed toward knowledge, beliefs, or perceptions about the local environment which might serve as stress stimuli.

Summary of preliminary results. After carefully considering many possible measures for this area, 11 questions concerning the extent and nature of crime and crime related conditions (signs of crime) were included in the pilot instrument. Six of these asked the respondents about their beliefs concerning the extent and nature of local crime conditions, while five focused on environmental conditions or behavioral activities which might be employed as signs of crime. The six neighborhood crime items queried about: robbery, assault, sexual assault, residential burglary, auto theft, and a general estimate of the local crime rate. The environmental cue items focused on visible signs of vandalism, the presence of "run down" buildings, strangers "just hanging around," small children playing outside, and the attention given to lawns in the neighborhood. The first set of items was drawn from previously developed items which asked the respondents to evaluate each crime

in terms of whether or not it was a "big problem"(e.g., Fowler et al., 1979; Skogan & Maxfield, 1980). However, in order to remove the evaluative component from these questions, they were reworded to ask simply about estimates of frequency. The "environmental cues" items were developed specifically for this study in response to findings of the projects cited above and substantiated by our own focused interviews, which suggested that these cues and not actual beliefs about crime might be the threat producing stimuli.

Factor analysis of the pilot data indicated that these 11 items were, in fact, unidimensional, thereby confirming the belief that the "signs of crime" are intimately related to beliefs about the extent and nature of criminal activity. Nine of the 11 produced significant factor loadings (communalities $\geq .3$) and when combined to form an additive index, demonstrated an alpha reliability of .894. Since data reduction was the purpose of this analytic step, an attempt was made to reduce the number of component items without significantly affecting the reliability of the index. The result was a three-item scale which produced an alpha reliability of .863 and included:

1. Think about robbery in your neighborhood; that is, taking things like money, purses, or wallets from people on the street. Does this happen very often, pretty often, not too often, or almost never?

2. Besides robbery, how about people being assaulted or beaten up on the street in your neighborhood? Does this happen very often, pretty often, not too often, or almost never?

3. In general, how would you describe your neighborhood in terms of crime; that is, considering all types of crime? Would you describe the crime rate in your neighborhood as very high, higher than average, about average, lower than average?

These three items were retained for the second stage data collection (reported below) as a potentially acceptable measure of "perception of crime." A detailed description of the initial analysis of these variables is presented

in Rosenbaum & Baumer (1980).

Replications, refinement, and further examination of preliminary index. In this section, we present a more detailed examination of the scale characteristics based on data obtained from the telephone survey of residents of two urban neighborhoods described earlier. We first repeat the initial analysis to establish the basic reliability and unidimensionality of the index. Next, we present refined test/retest reliability coefficients as suggested by Heise (1969). Finally, the theoretical nature of the index is discussed and the construct validity examined.

In response to the results of the magnitude estimation study conducted as part of this project (see Rosenbaum & Baumer, 1980), a minor change in question wording was made. The response categories were modified in order to approximate a ratio scale response format. The new responses were: never, sometimes, quite often, and very often. This modification was designed to improve both the individual items and composite scale characteristics.

Tables 3 and 4 reproduce the essential features of the analysis reported above. The factor analysis reported in Table 3 demonstrates the unidimensionality of these three items. All three items have reasonably similar loadings and the single factor accounted for 71.3 percent of their variance. The alpha coefficient of .801 for the index in these data is somewhat lower, but compares favorably to that obtained in the pilot study (.863). Table 4 shows that all three items demonstrate moderately high item-total correlations and the deletion of any one would reduce the reliability considerably below the three-item figure.

In addition to measures of internal consistency, we obtained data which would allow calculation of test/retest coefficients. These data were

Table 3

Factor Analysis of "Perceptions of Crime" Items (N = 301)[A]

Item	Factor Loading[B]
Frequency of Robbery	.752
Frequency of Assault	.785
Overall Crime Rate	.728

[A]Urban neighborhood samples only.

[B]This single factor accounted for 71.3 percent of the variance in the items.

Table 4

Item-Total Correlations and Subscale Reliability Coefficients For "Perceptions of Crime" Items (N = 299)[A]

Item	Item-Total Correlation	Alpha Reliability If Items Deleted
Frequency of Robbery	.643	.731
Frequency of Assault	.661	.713
Overall Crime Rate	.636	.741

[A]Urban neighborhood samples only.

collected at two additional points and the three item index, described above, constructed for each session. The simple test/retest correlations for these scales are presented in Table 5. All three coefficients are above 0.7. However, the T_2-T_3 coefficient is somewhat higher than the T_1-T_2 coefficient, indicating the possibility of a learning effect. The use of the same interview schedule for T_2 and T_3 would reinforce this interpretation.

Unfortunately, test/retest correlations are subject to temporal instability, as well as measurement error. By employing three data points, Heise (1969), drawing on Coleman (1968), has developed a means of separating temporal instability and reliability. The stability coefficients presented in Table 5 suggest that the index is considerably more stable than the simple test/retest correlation would indicate. The corrected reliability coefficient of .84 is also somewhat higher, indicating the impact of instability on the original coefficients. These revised measures argue for the viability of the constructed three-item perceptions of crime scale.

The validity of the constructed index was examined next. In addition to being reliable, an acceptable measure must also "behave" in a theoretically predictable way. Below, we first discuss the nature of the construct in both theoretical and operational terms. Next, a series of hypotheses are derived and tested. Finally, the validity of the measure is discussed in terms of the correspondence between the theoretical expectations and empirical results.

As originally discussed above, this construct corresponds to simple perceptions of the environment and is devoid of any evaluative component. As such, it is a measure of neighborhood reputation, information, or belief about the extent of crime in the local environment. Although the actual operationalization differs considerably, Conklin (1975) argues that this construct

Table 5

Test/Retest Correlations and Stability Coefficients

"Perceptions of Crime Scale" (N = 34)

	T_2	T_3
T_1	.72 (.85)[A]	.73 (.85)
T_2		.84 (1.0)

[A]Stability coefficients in parenthesis.

is most appropriately considered as an indicator of the criminal environment of an area. This latter construct is defined "as consisting of the myths, legends, ideas, and views about crime in a given social setting," which are affected by information obtained from a variety of sources (Conklin, 1975:20). As such, perceptions of crime should be more affected by ecological variations in objective and reputational crime rates and the extent of various informational inputs than by personal characteristics.

In operational terms, the derived scale focuses on a particular aspect of this criminal environment. As noted earlier, the 11 initial items asked about a wide variety of information ranging from "strangers hanging around" and vandalism, to beliefs about the levels of five of the eight Uniform Crime Report Part I offenses (rape, robbery, assault, residential burglary, and auto theft). Nine of the 11 loaded significantly onto a single factor, supporting the hypothesis of a single underlying construct. However, "street crimes" dominated this factor such that the derived scale included only those three items which asked about robbery, assault, and the general crime rate. In passing, we might observe that the close identification of the general crime rate with robbery and assault indicates that when people speak of the "crime rate," they most generally are speaking of violent crimes. In practical terms, then, we would expect the scale to be more sensitive to variations in levels of violent crime (or access to information about those levels) than for similar variation in the number of property offenses.

Given the above discussion, we can propose several hypotheses about the correlates of the "perceptions of crime" index. First, it should be sensitive to ecological variations in crime rates. This variation can be approximated in this study by the two sampling areas: a moderately high crime area of

Chicago (Wicker Park, loosely defined) and the moderately low crime suburb of Evanston. Neither are extremely high or low, but the index should be sensitive enough to demonstrate a significant difference in perceived levels of crime. Second, the personal characteristics of sex and age are two of the best predictors of traditional measures of fear of crime (Baumer, 1978). However, the nonevaluative character of the present measure would lead us to expect little or no impact of these two characteristics. Third, the perceptual nature of the measure would suggest that relevant informational and experiential variables will be related to it. Specifically, we would hypothesize that recent robbery and assault victims will perceive more crime than nonvictims, while recent burglary victims will not score higher than nonvictims on this perception of crime scale. This hypothesis derives from the operational focus of the scale on violent rather than property offenses. Finally, the nature of violent crime is such that, unless neutralized in some way, we would expect it to be translated into a perceived threat to both the individual and significant others. We will focus on the relationship between perceptions of crime and individual threat later; however, in order to measure perceived threat to significant others, we asked the parents of children between the ages of five and 18 how worried they were that their child would be robbed or assaulted while out alone in the immediate neighborhood. We hypothesized a positive relationship between perceptions of crime and worry about their children.

The first hypothesis stated that the differences in the criminal environment of these urban neighborhood and the suburban area should be reflected in the perceptions of crime scale. Table 6 demonstrates that, as expected, the urban residents did score significantly higher ($p < .01$) on this scale than

Table 6

Analysis of Variance and Means for Effect of Place of Residence on Perceptions of Crime

Source	Sum of Squares	Degrees of Freedom	Mean Squares	F-Ratio
Between groups	24.01	1	24.01	56.03*
Within groups	133.25	311	.43	
Total	157.26	312		

Means

Group	Mean Percentage of Crime	Standard Deviation	N
Evanston	1.61	.50	160
Chicago	2.16	.79	153
Total	1.88	.71	313

*$p < .01$

did the suburban residents. Hence, the two populations were perceiving different criminal environments.

The second hypothesis suggested that the two variables most strongly related to traditional measures of fear (feelings of safety), sex and age, would not be related to the perceptions of crime scale. The data presented in Table 7 support this hypothesis. Neither sex nor age was related to the index. This is similar to the results reported by Conklin (1975).

The third hypothesis suggested that recent robbery and assault victims should perceive more crime than nonvictims. A related hypothesis was that recent burglary victims would perceive no more crime than nonvictims. As indicated earlier, both victim samples were drawn from the City of Evanston. In order to control for ecological artifacts, only the Evanston general sample, with victims removed, was employed as a comparison. The results of these comparisons are presented in Table 8. Those results confirm these hypotheses. The robbery/assault victims perceived significantly more crime but the burglary victims perceived no more crime than nonvictims.

While these differential effects could be due to demographic variations between the robbery/assault and burglary samples, much of this variation has been controlled by restricting all respondents to the City of Evanston.

The final hypothesis specified that perceptions of crime should affect parents' concern for the safety of their children. We asked parents how worried they were about their children being robbed or assaulted in the immediate neighborhood. Table 9 presents the impact of perceptions of crime on these variables. As can be seen, both are significantly affected by perceptions of crime. This latter variable tends to be evaluated as a threat to children as reported by parents' worry about their safety.

Table 7

One Way Analysis of Variance and Means for Effect of Sex and Age on Perceptions of Crime

Source	Sum of Squares	Degrees of Freedom	Mean Squares	F-Ratio
Sex				
Between groups	0.04	1	0.04	0.08*
Within groups	152.66	309	0.49	
Total	152.70	310		
Age[A]				
Between groups	4.03	5	0.81	1.6*
Within groups	153.08	303	0.50	
Total	157.11	308		

Means

Group	Mean	Standard Deviation	N
Sex			
Male	1.86	.66	155
Female	1.89	.74	156
Total	1.87	.70	311
Age			
16-24	1.87	.64	47
25-34	2.00	.77	92
35-44	1.69	.68	55
45-54	1.84	.69	41
55-64	1.98	.71	43
65-85	1.82	.68	31
Total	1.88	.71	309

*$p > .05$

[A]Age was categorized: 16-24, 25-34, 35-44, 45-54, 55-64, 65-85

Table 8

One Way Analysis of Variance and Means for Effect of Robbery/Assault and Burglary Victimization on Perceptions of Crime

Source	Sum of Squares	Degrees of Freedom	Mean Squares	F-Ratio
Robbery/Assault				
Between groups	3.77	1	3.77	14.86*
Within groups	46.98	185	.25	
Total	50.75	186		
Burglary				
Between groups	.05	1	0.05	0.26
Within groups	42.00	198	0.21	
Total	42.05	199		

Means

Group	Mean	Standard Deviation	N
Robbery/Assault			
Nonvictims	1.57	.45	152
Victims	1.93	.68	35
Total	1.64	.52	187
Burglary			
Nonvictims	1.57	.45	152
Victims	1.61	.48	48
Total	1.58	.46	200

*$p < .01$

Table 9

One Way Analysis of Variance and Means for Effect of Perceptions of Crime on Worry About Children's Safety

Source	Sum of Squares	Degrees of Freedom	Mean Squares	F-Ratio
Worry About Robbery				
Between groups	20.73	2	10.37	9.16 *
Within groups	115.40	102	1.13	
Total	136.13	104		
Worry About Assault				
Between groups	22.84	2	11.42	9.74 *
Within groups	121.90	104	1.17	
Total	144.75	106		

Means

Groups	Means	Standard Deviation	N
Perceptions of Crime			
Worry About Robbery			
Low (1-1.5)	1.94	1.10	34
Medium (1.51-2.5)	2.51	1.02	49
High (2.51-4)	3.18	1.10	22
Total	2.47	1.14	105
Worry About Assault			
Low (1-1.5)	1.97	1.06	34
Medium (1.51-2.5)	2.50	1.13	50
High (2.51-4)	3.26	1.01	23
Total	2.50	1.17	107

*p < .01

Summary. A perception of crime scale with an alpha reliability of 0.80 was constructed from three items:

1. What about robbery--that is, taking things like money, purses, or wallets from people on the street. Does this happen in your neighborhood? Never, sometimes, quite often, or very often?

2. Besides robbery, what about people being assaulted or beaten up on the street? Does this happen in your neighborhood...(same categories as above)?

3. Thinking about all types of crime, would you describe the crime rate in your neighborhood as very high, higher than average, about average, or lower than average?

The test/retest correlations were all over 0.7 for this scale and the corrected reliability coefficient was 0.84. All hypotheses concerning the validity of the scale as a measure of perceptions of crime were supported. It was related to place of residence, prior robbery or assault victimization, and worry about the safety of one's children; it was not related to sex or age, traditionally the most powerful predictors of "fear," or prior experience as a burglary victim. Thus, this index appears to be a reliable and valid measure of perceptions of crime as a simple, nonevaluative measure of beliefs about the amount of crime in the local environment.

Concern for Personal Safety

Concern for personal safety represents an affective or emotional response to environmental stimuli--in the present case, perceptions of criem broadly interpreted to include a wide range of information. The nature of the affective response may be viewed as a result of an evaluative process which Lazarus calls "secondary appraisal," while the intensity of the response signifies the degree of threat (1966:320-321). The process of secondary appraisal involves the "personalization of threat," that is, the environmental stimuli are assessed for their relevance to the individual, and the situation is evaluated in terms of the personal resources of the individual as compared to the nature of the perceived threat. While perceptions of crime are primarily determined by informational, experiential, and sensory facorts, the affective response to these perceptions is also determined by social defini tons, prior learning,, the estimated relative power of the threatening agent, and beliefs concerning the individual's ability to resist. This suggests that for any given threatening situation, a number of affective reactions are possible. What we and previous researchers have focused on is one category of affect whether we call if fear, anxiety, concern, or worry. Given the potency of the stimulus being referenced (criminal violence) and the significant nature of the motive being threatened (personal safety), this type of response would appear to be both the most frequent and, for a policy orientation, the most important of potential emotional reactions to the threat of criminal victimization.

Review of preliminary results. The initial pilot instrument contained 19 items thought to be potential indicators of this construct. This initial group included items concerning both emotional states (i.e., how worried, safe, afraid, or concerned they were about being victimized) and evaluative conditions

(i.e., subjective estimates of risk defined by asking for the "likelihood" and "chances" of becoming a victim), as well as the often used National Crime Survey and Gallup/NORC General Social Survey items. These questions focused on burglary, robbery, assault, and in several cases, general street crime.

The initial factor analysis produced a two-factor solution. These two factors were clearly distinguished by type of crime with all 13 robbery/assault/street crime items defining one factor, and the remaining six burglary items defining the other. This indicated that the respondents were differentiating their evaluative/affective responses based on the nature of the stimulus referent. Pursuant to these initial results, both sets of items were then analyzed separately.

The independent analysis of the robbery/assault items indicated that they were, indeed, unidimensional, with all 13 demonstrating significant (and generally very similar) factor loadings. When an additive index was constructed from all 13 items, an alpha reliability of .955 was obtained. The similarity of the factor loadings provided no clear-cut direction for the construction of an acceptably reliable, yet more parsimonious version of this construct. In an attempt to maintain the face validity of the construct, as originally conceived (i.e., an affective/evaluative response to environmental threat), the two "afraid" items were selected as being the most central of the affective items and the two "likely" items were selected as being the most central of the evaluative items. Taken together, these four questions formed an additive index with an alpha reliability of .941--only slightly below that for the full 13 item scale.

When analyzed separately, the six burglary items also remained unidimensional. An alpha coefficient of .90 was obtained for the additive index

constructed from all six of these items. Further analysis revealed no unequivocally superior subscales. Of the six items, only the "safe from burglary" item did not contribute much to the variance subscales. After considering various alternatives, a three-item index of concern for personal safety was retained for further analysis. This scale demonstrated an alpha reliability of .85 and included the items asking the respondents: (1) how afraid they were of being burglarized, (2) how likely they thought it was that they will be burglarized, and (3) how concerned they were about the possibility of being burglarized.

Replication, refinement, and further investigation of preliminary index. Given the results of the preliminary analysis, nine of the original 19 items were retained for phase two of the study. These included the seven (three "afraid," three "likely," and one "concern") recommended above for retention, as well as the additional two "concern" items (about robbery and assault). The latter were included to maintain the sets and because of the apparent equivalency of their contribution with the "likely" items, to the "robbery/assault" index.

The initial analysis of these items proceeded essentially as before, with all nine analyzed together and separate analyses to be performed only if necessary. This analysis was by no means as clear-cut as that for the pilot data. When an orthogonal factor solution was derived, the factor analysis, presented in part A of Table 10, produced a two-factor solution. This solution was characterized by several shared loadings and no clearly definable pattern of factor loadings. These loadings were clarified by the oblique solution reported in Part B of Table 10. This solution reduced the number of variables with shared loadings to one: "how afraid of burglary." However,

Table 10

Factor Analysis of Nine "Concern for Personal Safety" Items: General Population (N = 300)

Item	Factor Loading: Factor I	Factor II
A. Orthogonal Solution		
Concern about robbery	.657	.420
Concern about burglary	.351	.599
Concern about assault	.696	.418
Likelihood of robbery	.362	.640
Likelihood of assault	.431	.638
Likelihood of burglary	.143	.769
Afraid of robbery	.859	.282
Afraid of burglary	.427	.480
Afraid of assault	.865	.266
B. Oblique Solution[A]		
Concern about robbery	.621	.217
Concern about burglary	.165	.576
Concern about assault	.670	.197
Likelihood of robbery	.160	.622
Likelihood of assault	.245	.588
Likelihood of burglary	.168	.880
Afraid of robbery	.932	-.044
Afraid of burglary	.311	.396
Afraid of assault	.946	-.066

[A]Factor pattern matrix. The correlation coefficient between these two factors was .65.

the substantive definition of each factor in terms of significant loadings is no longer totally crime related. The first factor tends to be crime specific and is predominantly defined by the four items asking how concerned or afraid the respondents were about being robbed or assaulted in their own neighborhood. However, the pattern of loadings on the second factor indicates no clearly definable identity. The three burglary items do load significantly on this factor, but the other two evaluative questions (likelihood of robbery; assault) also demonstrate significant loadings.

The above results lead us to a reconsideration of the analysis of the pilot data. Since these nine items were not analyzed separately for the pilot study, we next tested the ability of those data to support the above results. A solution similar to and supportive of that presented above would suggest that the subjective probability estimates ("how likely") are closely related to but distinct from emotional responses, while a unique solution would be more problematic. Although we do not present the results here, they were similar to those reported above, with the solution dominated by shared loadings.

Given this similarity of results, we proceeded with the present analysis. Since the purpose of the present section is to construct an index of affective responses or "concern for personal safety" and the subjective probability items showed a tendency to form a separate dimension, we eliminated all three of these from further consideration. While this procedure is supportive of the present task, it should be noted that these three items could be used to construct a scale of subjective risk of victimization.

The factor analysis of the remaining six items, presented in Table 11, indicated that these items were unidimensional. The single factor was dominated

Table 11

Factor Analysis of Six "Concern for Personal Safety" Items: General Population (N = 309)

Item	Factor Loadings[A]
Concern about robbery	.799
Concern about burglary	.605
Concern about assault	.823
Afraid of being robbed	.844
Afraid of being burglarized	.626
Afraid of being assaulted	.844

[A]This factor accounted for 64.3 percent of the variance in the six items.

by the four robbery and assault items, with the two burglary items demonstrating significant, but somewhat lower, loadings. There was some tendency for the "afraid" items to be more central than the "concern" items, but this trend is not strong.

Alpha reliabilities for this set of items were very high. As suggested above, the four robbery/assault items formed an additive scale, with a strong alpha coefficient (.90). Addition of the two "burglary" items (afraid, concerned) actually suppressed this coefficient somewhat (.89). As shown in Table 12, all item-total correlations for the four-item scale were high and relatively consistent. Although additional analysis not presented here indicated that the deletion of any one of the four items would only reduce the alpha reliability to the .87-.88 range, the balance across affective and crime dimensions provided by the four-item scale outweighs the economy afforded by the deletion of a single item.

Simple test/retest correlations for the recommended index were all relatively high, ranging from .86 to .92 (Table 13). Also reported in Table 13 are the derived stability coefficients for this index. The strength of these coefficients suggests that we are measuring a very stable construct. The refined reliability coefficient for this scale was .949, again indicating that most of the scale variance is attributable to individual rather than error sources. Thus, by all measures, these four items produce an internally consistent, highly reliable index of "concern for personal safety."

We next turn to the question of <u>validity</u>. As originally conceived in the introduction to this report, this construct represented a particular emotional reaction to the threat of crime. Although many types of emotional reaction such as anger, hostility, fear, or anxiety are possible, the nature

Table 12

Item-Total Correlation for Four-Item "Concern for Personal Safety" Scale

(N = 310)

Item	Item-Total Correlation
Concern about robbery	.748
Concern about assault	.790
Afraid of robbery	.790
Afraid of assault	.787

Table 13

Test-Retest Correlations and Stability Coefficients

for "Concern for Personal Safety" Scale (N = 34)

	T_2	T_3
T_1	.896 (.944)[A]	.865 (.911)
T_2		.917 (.966)

[A]Stability coefficients in parentheses.

of the threat posed by crime suggests that the most common reaction might be fear or anxiety. This is not to deny that the other responses exist or are unimportant. The active behavioral reactions described by Furstenberg (1972) or Marx & Archer (1976) may well correspond to these more aggressive emotional reactions. It was initially suggested that these emotional reactions were produced by ajoint consideration of environmental, experiential, and personal characteristics. In addition, if affective states are viewed as action tendencies (Lazarus, 1966), certain behavioral adaptations should follow. Finally, the operational characteristics of the final recommended index, restricting the objects of the questions to violent personal crime, suggests that the relevant antecedent and consequent variables should be crime specific. These expectations will be developed further below.

Several expectations about this scale may be presented. First, it should be related to environmental differences. This may be measured objectively by place of residence and subjectively by the perceptions of crime scale. Due to the higher rate of violent crime, it may be hypothesized that residents of the Chicago area will be more concerned about their safety than residents of Evanston. Similarly, those who perceive more crime should be more concerned than those who perceive less crime. Second, like the perceptions of crime scale, prior robbery victims should feel less safe than non-victims, while prior experience as a burglary victim should make no difference in this measure. Third, unlike the perceptions of crime, the evaluative nature of the current index suggests that the personal characteristics of age and sex should be closely related to concern for personal safety. Finally, behavior designed to protect, insulate, or avoid personal victimization should be a consequence of this affective interpretation of danger, while behavior

directed at protection of property should not.

Table 14 presents the impact which objective and subjective environmental crime conditions have on the feelings of safety scale. As anticipated, the respondents from the Chicago area reported feeling significantly less safe than did the Evanston respondents. Similarly, those who perceived more crime felt less safe than those who perceived less. Clearly, both objective and subjective crime conditions are important antecedents of concern for personal safety.

The second set of expectations concerned prior victimization. It was hypothesized that victims of violent personal crimes would report being more concerned about their safety, while burglary victims would be no more concerned than the general population. Table 15 shows that these expectations were met. Only prior robbery or assault victims were more fearful than the general population. Indeed, inspection of the subgropu means indicates that the mean fear score was lower for the burglary victims than the general population.

In terms of anticipated antecedent variables, the principal difference between the perceptions of crime and the feelings of safety scales concerned personal characteristics. While the former was not related to either sex or age, it was hypothesized that the latter should be closely related to both of these characteristics. Table 16 substantiates this expectation. Women reported being more concerned about their safety, as did the elderly respondents. It should be noted that, as is often the case, the principle source of variation from age was between those under and over age 65 (cf., Baumer, 1978).

Finally, we hypothesized that appropriate behavioral reactions should be a consequence of eeling unsafe. Specifically, we expected a positive correlation between the fear scale and those behaviors which are directed toward

Table 14

One-Way Analysis of Variance for Effect of Place of Residence and Perceptions of Crime on Concern for Personal Safety

Source	Sum of Squares	Degrees of Freedom	Mean Squares	F-Ratio
A. Place of Residence				
Between groups	17.58	1	17.58	22.47*
Within groups	244.94	313	.78	
Total	262.52	314		
B. Perceptions of Crime				
Between groups	73.48	2	36.74	46.49*
Within groups	244.97	310	.79	
Total	318.45	312		

Means

Group	Mean	Standard Deviation	N
Place of Residence			
Evanston	1.97	.81	161
Chicago	2.44	.96	154
Total	2.20	.91	315
Perceptions of Crime			
Low (1-1.5)	1.95	.86	106
Medium (1.51-2.5)	2.36	.97	157
High (2.51-4)	3.42	.64	50
Total	2.39	1.01	313

*p < .01

Table 15

One-Way Analysis of Variance for Effect of Prior Victimization on "Feelings of Safety" Scale

Source	Sum of Squares	Degrees of Freedom	Mean Squares	F-Ratio
A. Robbery/Assault				
Between groups	11.60	1	11.60	12.33*
Within groups	175.01	186	.94	
Total	186.62	187		
B. Burglary				
Between groups	0.40	1	0.40	0.52
Within groups	154.33	199	0.78	
Total	154.73	200		

Means

Group	Mean	Standard Deviation	N
Robbery/Assault			
Nonvictims	2.10	.88	153
Victims	2.74	1.29	35
Total	2.22	1.00	188
Burglary			
Nonvictims	2.10	.88	153
Victims	2.00	.88	48
Total	2.08	.88	201

*p < .01

Table 16

One-Way Analysis of Variance for Effect of Sex and Age on the Concern for Personal Safety Scale

Source	Sum of Squares	Degrees of Freedom	Mean Squares	F-Ratio
A. Sex				
Between groups	32.95	1	32.95	44.65*
Within groups	229.48	311	0.74	
Total	262.43	312		
B. Age				
Between groups	19.03	5	3.81	5.84*
Within groups	239.15	304	0.79	
Total	258.17	309		

Means

Group	Mean	Standard Deviation	N
Sex			
Male	1.87	.82	156
Female	2.52	.90	157
Total	2.20	.92	313
Age			
16-24	2.03	.80	47
25-34	2.15	.89	93
35-44	2.00	.84	55
45-54	2.16	.95	41
55-64	2.28	.95	43
65-85	2.90	.92	31
Total	2.20	.91	310

*$p < .01$

street crime, but no correlation between measures most directly related to the protection of personal property. Given the large set of behavioral items being considered here, we present only correlation coefficients rather than the individual analysis of variance tables. Table 17 presents the zero-order correlations between the concern for personal safety scale and the 15 reported behaviors. As predicted, all nine of the personal protection variables (items one through nine) were significantly related to this index, with correlations ranging from .18 to .55. In contrast, only one of the five property-directed actions was significantly related to this index. A low positive relationship was observed between the fear of crime scale and reports that the respondents "closed and locked all of the windows" the last time they left their homes. With this one exception, personal protective measures were related to this scale, while behaviors directed at the protection of property were not.

In sum, the final concern for personal safety scale was considerably different from that derived in the preliminary analysis of the pilot data (see Rosenbaum & Baumer, 1980). Both of the "burglary" items, which formed a separate scale in that initial presentation, and the probability (how likely) questions were eliminated in the final analysis. The result was a single additive scale composed of four items:

1. When you are walking alone in your neighborhood at night, how concerned are you that someone will take something from you by force or threat? Would you say that you are not at all concerned, somewhat concerned, quite concerned, or very concerned?

2. When you are walking alone in your neighborhood at night, how concerned are you that someone will harm you? Are you... (See #1)?

3. When you are walking alone in your neighborhood at night, how afraid are you that someone will take something from you by force or threat? Are you not at all afraid, somewhat afraid, quite afraid, or very afraid?

Table 17

Bivariate Correlations of Selected Behavioral Responses With

Concern for Personal Safety Scale

Behavioral Adaptation	Fear of Crime Scale
1. When you go out alone at night in your neighborhood, how often do you try to avoid certain areas?	.552*
2. How often do you try to avoid certain types of people when you go out alone at night in your neighborhood?	.493*
3. When you go out alone at night in your neighborhood, how often do you avoid carrying too much cash?	.252*
4. How often do you walk only on certain streets when you go out alone at night?	.444*
5. And how often do you avoid talking to strangers when you go out alone at night?	.352*
6. When you are home alone at night, how often do you keep all of the doors locked?	.239*
7. How about the windows--when you are home alone at night do you keep all of the windows locked?	.281*
8. When you are home alone at night, how often do you draw the curtains or pull the shades on the windows?	.184*
9. When you are home alone at night, how often do you open the door without knowing who is there?	-.238*
10. Think of the last time you went out at night. Did you leave a light on?	.049
11. The last time your family went away for more than a day or so, did you or did someone in your family ask a neighbor to watch your home?	.052
12. The last time no one was home, did your family close and lock all of the windows?	.179*
13. Do you have "dead bolt" locks on the doors to your house or apartment?	-.041
14. Do you have bars on any of the windows to your house or apartment?	.107
15. Do you have a "burglar bar" on any of your doors?	.067

*$p < .01$

4. When you are walking alone in your neighborhood at night, how afraid are you that someone will take something from you by force or threat? Are you not at all afraid, somewhat afraid, quite afraid, or very afraid?

These items combined to produce a scale with very desirable characteristics. The additive index produced an alpha reliability of .90, while item-total correlations were all between .7 and .8. Analysis of the test/retest correlations indicated these were all above .86. The three stability coefficients were above .90 and the refined reliability was .95.

In terms of validity, the scale met both theoretically and operationally derived expectations. Theoretically, this dimension was viewed as a particular emotional response to a subjectively defined threatening situation. As such, it involved an evaluation of the immediate criminal environment in terms of personal danger. In practical terms, this scale should be related to the perceptions of crime index and similarly affected by objective environmental differences. However, given the evaluative nature of this dimension, personal characteristics should be intimately related to these affective responses, while the perceptions of crime scale was not. Both of these theoretically derived expectations were confirmed.

If affective responses are viewed as action tendencies, then we would also expect appropriate behavioral reactions to be a consequence of concern for personal safety. Operationally, the affective dimension focused on violent personal crime. Thus, the behavioral adaptations directed at personal protection should be related to the scale, while those directed at the protection of personal property should not be related to this dimension. With one exception, the data also supported these expectations.

In terms of their derived correlates, the final scale of concern for personal safety was distinct from the perceptions of crime scale. While

personal characteristics were intimately related to the former, they demonstrated no impact on the latter. The principal difference between the two scales is the evaluative nature of the affective dimension. This evaluation is produced by an interaction of environmental conditions and personal characteristics. It is one thing to develop beliefs about the amount of crime in one's neighborhood and quite another to define this situation as a threat to personal safety.

Behavioral Adaptaions

This section is concerned with crime-related behavioral adaptations -- those actions which people take to protect themselves or their property from harm. Like the affective reactions discussed in the previous section, these behaviors are reactions to threatening situations designed to reduce that threat. However, unlike the affective component people may employ a wide variety of behavioral strategies to cope with the threat of crime. These actions may or may not be objectively effective -- and need not be situationally responsive. Given the usual absence of contrary evidence and their characteristic resistance to such evidence, even amulets, superstitions, and personal rituals can be viewed as subjectively effective coping strategies. However, this research has focused only on those actions which would appear to be potentiall effective in reducing the threat of victimization and which are relatively common.

Developing indices of behavioral adaptations is considerably more problematic than for attitudinal data. Attitude theory suggests that statements about the attitude object will either cluster together or vary in intensity. Behaviors may exhibit those same characteristics but also may be interchangeable. That is, rather than engage in a group or series of actions, people may supplant one or more actions with another (i.e., engaging in A makes B unnecessary or redundant). This possibility implies that the standard techniques of scale construction, especially the isolation of a common factor, may not be applicable to some type of behavior. Thus, behavioral indices are often simple counts of the number of actions taken or the frequency of the activity. Our approach in this study was first to apply the standard techniques employed in the previous sections; then, if necessary, consider other analytic alternatives.

Summary of Preliminary Results. From the wide variety of potential activities, respondents to the pilot study were about 38 separate activities.

These items were divided among five areas: personal protective behaviors employed when out alone (12), security measures taken when at home (5), objects designed to protect against the loss of property (6), general home security policies (9), and specific home protection strategies employed the last time the respondent went out (6). Each of these areas was based on either theoretical or empirical considerations. For example, scales of personal protective behaviors and home security have been constructed by Baumer (1980) and Lavrakas (1979) and even used as item sources for this research.

Each of the five sets of variables was initially analyzed separately and potential scales identified. Then, in order to establish the unique identity of the various components, the selected subset of items was analyzed jointly. This first stage of analysis reduced the set of "personal protective" behavior to five items. These items asked how often they (the respondents): (1) avoid certain areas, (2) avoid certain types of people, (3) avoid carrying too much cash, (4) walk only on certain streets, and (5) avoid talking to strangers in their neighborhood. These five items were unidimensional and combined to form an additive scale with an alpha reliability of 0.75. This is very similar to the alpha coefficient of 0.7 obtained by Baumer (1980: 41-42) for a slightly different set of items. Given the item content of this scale, it will subsequently be referred to as the "avoidance of street crime" scale.

The second set of behavioral items focused on security strategies which may be employed when at home. The analysis of the pilot data reduced the six original items to four: (1) locking the doors, (2) keeping the windows locked, (3) drawing the curtains, and (4) identifying visitors before opening the door. Although a three item scale (with item four deleted) produced a moderately reliable index (α = .674), all four (α = .675) were retained for further analysis. Since this index is directed more toward home invasion than burglary, it will

subsequently be referred to as the protection against home invasion scale.

The remaining three areas produced only marginally acceptable scales. Three of the "security object" items -- (1) dead bolt locks, (2) bars on the windows, (3) "burglar bar" on door -- formed a scale with an alpha reliability of only 0.41, and were retained for phase two. The standard analytic procedures employed above failed to identify an acceptable additive index of the general home security policy items. Following the lead of Lavrakas (1979), an attempt was made to construct a Guttman scale from these items. This approach, too, produced only a minimally acceptable scale. No items from this group were retained. Finally, respondents were asked about the security measures employed the last time they went out. Although they were only moderately related, three items were retained for further analysis: (1) leaving a light on, (2) asking a neighbor to watch their home, and (3) closing and locking the windows.

In summary, fifteen of the original 38 items were retained for further analysis. Of the five variable areas, only the two -- avoidance of street crime and protection against home invasion -- involving personal safety formed scales with acceptably high reliabilities. Items from the remaining three areas formed only marginally acceptable scales.

Replication, Refinement, and Further Investigation of Preliminary Results. As a result of the analyses summarized above, fifteen items representing four principal areas were included in the second phase of data collection. Because these activities contain four subtypes, the presentation of results will differ somewhat from the previous sections. First, the internal characteristics -- unidimensionality, alpha reliability, test/rest coefficients -- of each potential index will be examined. Next, if internally consistent scales can be identified, the validity of the derived indices will be investigated.

We first will report the results of the five items which asked the residents

about activities related to the avoidance of street crime. Of the twelve items originally included in the pilot study, five demonstrated potential scalability. These were predominantly actions concerned with the avoidance of trouble -- walking only on certain streets, avoiding certain parts of the neighborhood, limiting the amount of cash carried when out, avoiding certain types of people, and avoiding talking to strangers. TABLE 18 presents the results of the factor analysis of these five items. As with the preliminary results, they were found to be unidimensional. Two of the items, "restriction of cash" and "avoidance of conversation with strangers," produced somewhat lower factor loadings than the others, indicating a marginality to the central construct. When the reliability of alternative indices was investigated, the marginality of these two items was confirmed. They actually suppress the reliability of the constructed indices. When all five items are included, the additive scale produced an alpha reliability of .785, however, when the two marginal items are deleted, the coefficient for the resulting three item scale is .802 -- a substantial improvement given the smaller number of items. The item-total correlations for this three item index, presented in TABLE 19, are all moderately high and of approximately the same magnitude.

Thus, the evidence would suggest that a viable index may be constructed from three items: avoidance of certain areas, avoidance of certain types of people, walking only on certain streets. The content of these items confirms the interpretation that although they do represent a protective strategy, the nature of the general response is one of avoidance rather than active protection. This is consistent with the findings of earlier studies (Furstenberg, 1972; Baumer, 1980) and supportive of suggestions made by Hindelang, et. al., that behavioral adaptations represent subtle adjustments in activities rather than major changes in behavioral policies (1978: 224). In terms of the present

TABLE 18. FACTOR ANALYSIS OF FIVE AVOIDANCE OF STREET CRIME ITEMS (N=295)

ITEM	FACTOR LOADING[A]
When you go out at night in your neighborhood, how often do you try to avoid certain areas?	.781
How often do you try to avoid certain types of people when you go out alone in your neighborhood?	.718
When you go out alone in your neighborhood, how often do you avoid carrying too much cash?	.506
How often do you walk only on certain streets when you go out alone at night in your neighborhood?	.715
How often do you avoid talking to strangers when you go out alone at night in your neighborhood?	.544

[A] This single factor accounted for 54.3 percent of the variance in these five items.

TABLE 19. ITEM TOTAL CORRELATIONS FOR AVOIDANCE OF STREET CRIME INDEX (N=296)

ITEM	ITEM-TOTAL CORRELATIONS
Avoid certain areas	.700
Avoid certain types of people	.645
Walk only on certain streets	.602

study, people tend not to adjust what they do, but rather, how they do it. As noted earlier, the yalidity of this index of avoidance behavior will be addressed later in this section.

The next set of items to be analyzed are best described as protection against home invasions. Of the five items in this area originally included in the pilot instrument four were retained: keeping all of the doors locked, keeping all of the windows locked, drawing the curtains at night, and not opening the door unless they knew who was there. While all of these items concern security, they are more directed toward protection from home invasions than the protection of property.

Analysis of the telephone survey data confirmed the results obtained from the pilot study. As shown in TABLE 20, these items were again unidimensional. However, the factor loadings were not high, communalities were low to moderate, and the derived factor accounted for only 46 percent of the variance in the items, indicating a "loosely" defined construct. This is reflected in the similarly modest alpha reliability of .587, and item-total correlations (TABLE 21). Thus, these four items define a common dimension and form a scale with marginally acceptable internal consistency. However, the question to be investigated below is whether this pattern of activity demonstrates a theoretically predictable pattern of correlates.

Test-retest correlations, stability coefficients and refined reliabilities, were next calculated for the above index. TABLE 22 shows that the test-retest correlations are all very strong as are the derived stability coefficients. Similarly, the associated reliability coefficient was .826. These data suggest that security measures taken when at home constitute a patterned, stable set of activities directed at the prevention of home invasion.

The final two sets of behavioral items included in the telephone survey

TABLE 20. FACTOR ANALYSIS OF PROTECTION AGAINST HOME INVASION STRATEGIES (N=309)

ITEM	FACTOR LOADING[A]
When you are home alone at night, how often do you keep all of the doors locked?	.655
How about the windows -- when you are home alone at night, do you keep all of the windows locked never, sometimes, quite often, always?	.499
When you are home alone at night, how often do you draw the curtains or pull the shades?	.396
When you are home alone at night, how often do you open the door without knowing who is there?	.585

[A] This single factor accounted for 46.4 percent of the variance in the items.

TABLE 21. ITEM-TOTAL CORRELATIONS FOR PROTECTION AGAINST HOME INVASION INDEX

ITEM	ITEM-TOTAL CORRELATION
Keep doors locked	.431
Keep windows locked	.391
Draw curtains or pull shades	.326
Don't open door without knowing who is there	.386

TABLE 22. TEST-RETEST CORRELATIONS AND STABILITY COEFFICIENTS FOR PROTECTION AGAINST HOME INVASION INDEX (N=34)

	T_2	T_3
T_1	.773 (.936)[A]	.728 (.942)
T_2		.778 (.942)

[A] Stability coefficients in parentheses.

concerned strategies designed to secure one's home when away and the possession of security hardware. The former included leaving a light on, asking the neighbors to watch the premises and locking all of the windows; the latter concerned dead bolt locks, bars on the windows and a burglar bar on the door. These items were included in this phase of data collection on the hypothesis that the failure to identify an acceptable scale was an artifact of the pilot study sample. Unfortunately, this was not the case. Neither set of items was closely related enough to produce an internally consistent index, nor did the frequency distribution indicate that a Guttman scale was a possibility. Although these items constitute important behavioral adaptations to the threat of crime, they do not demonstrate a strong pattern of interrelationships.

Validation of Behavioral Indices

In order to test the validity of the two recommended scales, both their theoretical and operational nature must be considered. Theoretically, both are strategies designed to cope with the threat of crime. This means they should be related to beliefs about the environment (the perceptions of crime scale), affective reactions to a perceived threat (the concern for personal safety scale), individual traits related to vulnerability (sex, age), and prior crime-related experiences (victimization) as they serve to structure beliefs and perceptions. Conceptually, concern for personal safety is more directly linked to behavioral adaptations than perceptions of crime and, thus, should be more closely related to these actions.

The operationalization of each index provides us with potentially discriminating expectations. The avoidance of street crime scale is explicitly concerned with actions designed to avoid violent street crimes (i.e., avoiding certain streets, types of people, and conversation with strangers) while the protection against home invasion index is directed at security measures designed to prevent

access to one's home (i.e., locking doors, locking windows, drawing curtains, and opening the door only to acquaintances).

Both the perceptions of crime and concern for personal safety scales are explicitly linked to street crime. Thus, to the extent that the behavioral adaptations being measured herein are responses to different stimuli (i.e., street crime vs. home invasions) it may be hypothesized that the avoidance of street crime scale will be more closely related to both the perceptions of crime and concern for personal safety scales than to the protection against home invasion index. Following from the above hypothesis, it may also be anticipated that robbery/assault and burglary victims will respond in behaviorally different ways, with the former being more likely to engage in avoidance of street crime activities and the latter being more likely to secure their home from another intrusion. These hypotheses are tested below.

The impact of the perceptions of crime scale on the two behavior indices is compared in TABLE 23. This table demonstrates that avoidance of street crime is significantly affected by perceptions of crime but protection from home invasion is not. These results confirm our operationally derived expectations of differential strength of this relationship, but do not confirm the theoretical expectation that both types of action would be significantly affected by the perceived danger of the area. This latter finding does not negate the applicability of the stress model as an organizing framework but it does suggest that protection from home invasion measures are either responsive to a different set of environmental stimuli or are more habitual and therefore predominantly related to personal background and characteristics.

The second set of expectations concerned the impact of the concern for personal safety scale. It was hypothesized that both behavioral types should be related to this affective response but its operational focus on street crime

suggests that its impact should be greatest on the avoidance measure. These expectations are confirmed by the data presented in TABLE 24. Both are significantly related to the concern for personal safety scale with this variable having the greatest impact on the avoidance of street crime measure. The finding that avoidance of street crime is related to both perceptions of the amount of street crime and concern for personal safety supports the view taken here that such behaviors are adaptive strategies directly linked to the subjective beliefs about the objective threat in one's neighborhood and the evaluation of that threat in personal terms. Protection from home invasion, on the other hand, is related to concern for personal safety but not to beliefs about the magnitude of the local crime problem. This indicates that they may be adaptive behaviors but the modifications are directed to a somewhat different set of conditions.

We next hypothesized that the personal characteristics of sex and age should be significantly related to both behavioral indices with the magnitude of the relationship being similar. The results presented in TABLE 25 confirm these expectations about sex differences in the behavioral scales. Women are more likely than men to engage in both avoidance and home security activities. Although women perceive no more crime than men, they are more concerned with their own safety and are more likely to follow through with protective action.

Neither scale was affected much by age when that variable was categorized as in the preceding analyses (see Tables 5 and 14). However, there was some tendency for those 65 or older to score higher on the protection against home invasion scale and for those 55 or older to score higher on the avoidance of street crime scale. This effect is relatively standard in both the "fear of crime" literature (see Baumer, 1978) and for behavioral responses (Baumer, 1980). When age was dichotomized to maximize the above noted variations, TABLE 25 shows

TABLE 23. ONE-WAY ANALYSIS OF VARIANCE FOR EFFECT OF PERCEPTIONS OF CRIME ON AVOIDANCE OF STREET CRIME AND PROTECTION AGAINST HOME INVASION

VARIABLE/ SOURCE	SUM OF SQUARES	DEGREES OF FREEDOM	MEAN SQUARE	F-RATIO
A. Avoidance of Street Crime:				
Between Groups	36.2	2	18.12	19.1*
Within Groups	294.7	310	.95	
Total	330.9	312		
B. Protection Against Home Invasion:				
Between Groups	2.44	2	1.22	2.7
Within Groups	138.8	310	.45	
Total	141.2	312		

MEANS

GROUP	MEAN FOR:	STANDARD DEVIATION	N
Perceptions of Crime:	Avoidance of Street Crime		
Low (1-1.5)	2.00	.94	106
Medium (1.51-2.5)	2.43	1.02	157
High (2.51-4)	3.03	.90	50
Total	2.38	1.03	313
	Protection Against Home Invasion		
Low (1-1.5)	3.25	.63	106
Medium (1.51-2.5)	3.16	.70	157
High (2.51-4)	3.42	.64	50
Total	3.24	.67	313

* $p < .01$

TABLE 24. ONE-WAY ANALYSIS OF VARIANCE FOR EFFECT OF CONCERN FOR PERSONAL SAFETY ON AVOIDANCE OF STREET CRIME AND PROTECTION AGAINST HOME INVASION

VARIABLE/ SOURCE	SUM OF SQUARES	DEGREES OF FREEDOM	MEAN SQUARE	F-RATIO
A. Avoidance of Street Crime:				
Between groups	117.4	3	39.14	56.3*
Within groups	216.2	311	.70	
Total	333.6	314		
B. Protection Against Home Invasion:				
Between groups	18.3	3	6.11	15.1*
Within groups	125.9	311	.40	
Total	144.2	314		

MEANS

GROUP	MEAN FOR:	STANDARD DEVIATION	N
Concern for Personal Safety:	Avoidance of Street Crime		
Low (1-1.3)	1.49	.65	67
Low Medium (1.4-2.1)	2.19	.91	115
High Medium (2.2-3.1)	2.81	.92	76
High (3.2-4)	3.28	.75	57
Total	2.39	1.03	315
	Protection Against Home Invasion		
Low (1-1.3)	2.81	.74	67
Low Medium (1.4-2.1)	2.23	.68	115
High Medium (2.2-3.1)	3.37	.54	76
High (3.2-4)	3.54	.52	57
Total	3.23	.68	315

* $p < .01$

TABLE 25. ONE-WAY ANALYSIS OF VARIANCE FOR THE EFFECT OF SEX ON AVOIDANCE OF STREET CRIME AND PROTECTION AGAINST HOME INVASION

VARIABLE/ SOURCE	SUM OF SQUARES	DEGREES OF FREEDOM	MEAN SQUARE	F-RATIO
A. Avoidance of Street Crime:				
Between Groups	29.0	1	29.0	29.6*
Within Groups	304.6	311	.98	
Total	333.6	312		
B. Protection Against Home Invasion:				
Between Groups	14.9	1	14.9	35.9*
Within Groups	128.8	311	.4	
Total	143.7	312		

MEANS

GROUPS	MEAN FOR:	STANDARD DEVIATION	N
	Avoidance of Street Crime		
Male	2.08	.98	156
Female	2.69	1.00	157
Total	2.39	1.03	313
	Protection Against Home Invasion		
Male	3.01	.76	156
Female	3.45	.51	157
Total	3.23	.68	313

* $p < .01$

that respondents over 55 years old do score significantly higher in the avoidance of street crime scale. However, no significant differences were observed for the protection against home invasion scale. Age was related to avoidance behavior but not to personal security.

We next investigated the impact of prior victimization on current behavioral adaptations. It was hypothesized that robbery/assault victims might score higher than nonvictims on the avoidance of street crime scale but should score no higher on the protection against home invasion index. The results presented in TABLE 27 do not support these expectations. Robbery/assault victims cannot be distinguished from nonvictims for either scale. Thus, although the robbery/assault victim studied here both perceive more crime in their neighborhood and are more concerned for their own safety, they do not translate these phenomena into the two types of behavioral adaptation being investigated.

Finally, it was hypothesized that, because of prior invasion of their home, victims might score higher on the protection against home invasion scale but not on the avoidance of street crime index. TABLE 28 shows that, as with robbery/assault, burglary victims cannot be distinguished from nonvictims for either of the behavioral measures. Thus, neither robbery/assault nor burglary appears to be translated into increased levels of protective behaviors of the sort being investigated here.

Summary of Behavioral Analysis. In this section we have investigated the potential viability of four indices of behavioral response to crime. The fifteen items were derived from recommendations produced by the initial analysis of a larger pool of questions. Of the four areas, two produced only marginal results in the pilot study but were included in the final data collection effort on the possibility that the increased variance in the general population

TABLE 26. ONE-WAY ANALYSIS OF VARIANCE FOR EFFECT OF AGE ON AVOIDANCE OF STREET CRIME AND PROTECTION AGAINST HOME INVASION

VARIABLE/ SOURCE	SUM OF SQUARES	DEGREES OF FREEDOM	MEAN SQUARE	F-RATIO
A. Avoidance of Street Crime:				
Between Groups	8.1	1	8.1	7.7*
Within Groups	321.3	308	1.0	
Total	329.3	309		
B. Protection Against Home Invasion:				
Between Groups	1.3	1	1.3	2.8
Within Groups	141.2	308	0.5	
Total	142.5	309		

MEANS

GROUP	MEAN FOR:	STANDARD DEVIATION	N
Age		Avoidance of Street Crime	
16 - 54	2.30	.98	236
55 - 85	2.68	1.15	74
Total	2.39	1.03	310
		Protection Against Home Invasion	
16 - 54	3.19	.68	236
55 - 85	3.34	.67	74
Total	3.23	.18	310

* $p < .01$

TABLE 27. ONE-WAY ANALYSIS OF VARIANCE FOR EFFECT OF ROBBERY/ASSAULT ON AVOIDANCE OF STREET CRIME AND PROTECTION AGAINST HOME INVASION

VARIABLE/ SOURCE/	SUM OF SQUARES	DEGREES OF FREEDOM	MEAN SQUARE	F-RATIO
A. Avoidance of Street Crime:				
Between Groups	0.6	1	0.6	0.59
Within Groups	201.2	186	1.1	
Total	201.8	187		
B. Protection Against Home Invasion:				
Between Groups	0.0	1	0.0	0.0
Within Groups	91.2	186	0.5	
Total	91.2	187		

MEANS

GROUP	MEAN FOR:	STANDARD DEVIATION	N
		Avoidance of Street Crime	
Nonvictim	2.26	1.06	153
Robbery/Assault Victim	2.41	.93	35
Total	2.29	1.04	188
		Protection Against Home Invasion	
Nonvictim	3.09	.71	153
Robbery/Assault Victim	3.10	.67	35
Total	3.09	.70	188

TABLE 28. ONE-WAY ANALYSIS OF VARIANCE FOR EFFECT OF BURGLARY ON AVOIDANCE OF STREET CRIME AND PROTECTION AGAINST HOME INVASION

VARIABLE/ SOURCE	SUM OF SQUARES	DEGREES OF FREEDOM	MEAN SQUARE	F-RATIO
A. Avoidance of Street Crime:				
Between Groups	0.4	1	0.4	0.4
Within Groups	214.2	198	1.1	
Total	214.7	199		
B. Protection Against Home Invasion:				
Between Groups	0.3	1	0.3	0.75
Within Groups	87.9	199	0.4	
Total	88.3	200		

MEANS

GROUP	MEAN FOR:	STANDARD DEVIATION	N
	Avoidance of Street Crime		
Nonvictim	2.26	1.06	153
Burglary Victim	2.15	.96	47
Total	2.23	1.04	200
	Protection Against Home Invasion		
Nonvictim	3.09	.71	153
Burglary Victim	3.19	.50	48
Total	3.11	.66	201

would allow more satisfactory results. However, this did not prove to be the case. Neither the items asking about security measures taken when one was away nor those concerning the possession of security hardware proved scalable. This is not to indicate that they are either unimportant or ineffective responses, but only that the items included here do not form scales with desirable characteristics.

A third set of items, those concerning protection against home invasion, formed an additive scale with marginal internal consistency. The factor analysis indicated a unidimensional structure, but commonalities were low, the alpha reliability (.58) was modest, and corresponding item-total correlations were low. Low reliability (within limits) is not a fatal problem in itself, we in the social sciences employ measures with low -- and often unknown -- reliabilities regularly. The problem is that the instability of an unreliable measure dilutes relationships with other constructs, thereby affecting its validity. If the relationships are robust enough to survive this dilution and still demonstrate a predictable pattern, we often retain the measure in lieu of future developments. Unfortunately, this index did not meet this latter standard. While it was related to the concern for personal safety scale and sex as predicted, it was not related to perception of crime, age, or prior victimization. Thus, the validity of the scale is also questionable. Taken together, the above results suggest that security measures taken when at home are most closely a consequence of socialization, cultural definitions and habit. This interpretation finds support in the lack of relationship with environmental and experiential variables and would also account for the moderate intercorrelations of the four activities. As such, security measures taken when at home do not form an acceptable scale of behavioral adaptations.

The final area of behavioral adaptation to be investigated involved

strategies designed to avoid street crimes (robbery or assault). Five items were initially analyzed. This analysis indicated that two of these were only marginally related to the other three and when included in an additive scale, actually suppressed the alpha reliability of the index. The final scale with an alpha reliability of .802 included three items:

1. When you go out at night in your neighborhood, how often do you try to avoid certain areas? Do you do this never, sometimes, quite often, or always?

2. How often do you try to avoid certain types of people when you go out alone in your neighborhood? Do you do this...?

3. How often do you walk only on certain streets when you go out alone at night in your neighborhood? Would you say you do this...?

With one exception, the correlates of this index were as predicted. It was related to the perceptions of crime and concern for personal safety scales, as well as sex and age. However, the anticipated effect of being a robbery/assault victim did not derive. This is particularly interesting in view of the findings, presented earlier, that robbery/assault victims both perceive more crime in their neighborhood and are more concerned for their own safety. It may be that the type of strategies being investigated here are abandoned as ineffectual after a robbery or assault and substituted with other more drastic or subjectively effective means such as not going out at night or carrying a weapon. In short, this scale of avoidance of street crime is an internally consistent, reliable and apparently valid measure of behavioral adaptation.

Discriminant Validity of Derived Indices

The discriminant validity of the three final scales was investigated next. In order to have practical utility, these scales must be not only internally consistent and demonstrate a predictable pattern of correlates, they must also be distinguishable from each other, that is, show discriminant validity. Two criteria were employed for this study. First, when factor analyzed together the three scales should maintain both their unidimensionality and separate identities. Second, each index must demonstrate a unique pattern of correlates.

The factor analysis of the ten final items was supportive of the three dimensional hypothesis. Because of the anticipated relationships between the derived factors, an oblique solution (correlated factors) was obtained. Since the number of factors extracted by Kaiser's criterion when using less than 20 items tends to be conservative, the third factor (eigenvalue = .985) was included in the final solution.[2] These results are presented in Table 29. The first factor is defined by the concern for personal safety items; the second, by the perceptions of crime items; and the third, by the avoidance of street crime items. As anticipated, all three factors are moderately correlated with the strongest of these correlations being between the concern for personal safety and avoidance of street crime factors.

The second test of discriminant validity concerned the pattern of correlates for each set of items. The identification of separate factors is a necessary but not sufficient condition for the retention of distinct variates. In order to be empirically useful each scale must measure something unique, as

[2]It may be noted that Cattell's scree test (1966) which is a more appropriate indicator of the number of factors with a small number of items, would also indicate a three factor solution.

TABLE 29. FACTOR ANALYSIS OF TEN ITEMS RECOMMENDED FOR FINAL SCALES (N = 286)[A]

ITEMS[B]	CONCERN FOR PERSONAL SAFETY	PERCEPTIONS OF CRIME	AVOIDANCE OF STREET CRIME
Concern about robbery	.511	.171	.228
Concern about assault	.591	.033	.271
Afraid of robbery	.908	.006	- .037
Afraid of assault	.959	- .018	- .065
Frequency of local robbery	.114	.675	.023
Frequency of local assault	- .069	.845	- .048
Estimate of local crime rate	.008	.702	.039
Avoid certain areas	.015	.033	.809
Avoid certain people	.027	.051	.694
Walk only on certain streets	- .016	- .044	.704

A Factor pattern matrix for oblique solution. The three factors accounted for 51, 13.3, and 9.9 percent of the variance respectively. Factor pattern correlations were: $F_1F_2 = .53$; $F_1F_3 = .64$; $F_2F_3 = .48$.

B See Appendix A or the Summary/Conclusions for exact question wording.

indicated by its correlates. These relationships were identified above in establishing the construct validity of each scale. However, here we review those same results comparatively. Table 30 summarizes the relationships of the three scales to the principal variables investigated earlier. The most apparent differences are related to the perceptions of crime scale. While the other two scales were related to both sex and age, perceptions of crime was related to neither of these personal characteristics. In addition, it is responsive to ecological variations and prior robbery, as well as conducive to a consequent concern for personal safety and behavioral modifications. These findings are supportive of the nonevaluative definition of this scale. It appears to be a measure of beliefs about the amount of crime in the respondents' neighborhood devoid of any evaluation or interpretation of the significance of these beliefs.

Within the framework of stress theory, both concern for personal safety and avoidance of street crime may be viewed as the consequences of an assessment of the environment in terms of a threat to personal safety. As such, they are simply affective and behavioral manifestations of the same interpretive process, with the former preceding and guiding the latter. This similarity is reflected in their correlates. With the exception of prior robbery victimization, both exhibit the same pattern of significant correlates. As indicated earlier, this differential impact of robbery may be due to the adoption of <u>different</u> behavioral strategies by robbery victims. An additional effect not apparent in Table 30 concerns the strength of the relationships between concern for personal safety, avoidance of street crime and the remaining variables. In every case concern for personal safety was more closely related to the other variables than the avoidance of street crime scale, thereby supporting the theoretically more central and proximate position of the former variable.

TABLE 30. SUMMARY OF CORRELATES OF THREE DERIVED SCALES

CORRELATES	PERCEPTIONS OF CRIME	CONCERN FOR PERSONAL SAFETY	AVOIDANCE OF STREET CRIME
1. Prior robbery Victimization	+	+	0
2. Prior burglary Victimization	0	0	0
3. Sex	0	+	+
4. Age	0	+	+
5. Place of residence	+	+	+
6. Perceptions of Crime Scale	N.A.	+	+
7. Concern for personal safety scale	+	N.A.	+
8. Avoidance of street crime scale	+	+	N.A.

Summary

This project was designed to identify and develcp reliable and valid measures of the major constructs surrounding the fear of crime issue. Although this topic has been of general concern in the United States and Europe since the mid-sixties (c.f. Baumer, 1978; Van Dijk, 1978), there have been few attempts to develop in a systematic fashion measures which meet even minimum standards of reliability and validity. The typical study has attempted to measure fear of crime directly through the use of a single item with an unknown reliability and questionable face validity (c.f., Clemente and Kleiman, 1977; Hindelang, et. al., 1978). The purpose of this project was to place the fear of crime issue within a broader theoretical framework, identify principal components of the issue, develop multi-item measures of these components, and document the scale characteristics.

The procedural plan was a comprehensive measurement plan well grounded in standard psychometric procedures. Initial efforts focused on conceptualization and identification of the variable universe. These activities involved a review of the existing literature, focused interviews with community residents, and a comprehensive search for "fear of crime survey questions." The result was a large set of potential measures and preliminary conceptualization of the topic (Baumer and Rosenbaum, 1980). Subsequent work concerned theoretical integration into a broader framework, and data reduction. Although the conceptual distinctions initially outlined fit roughly into attitude theory, this framework posed many problems for a parsimonious integration. Stress theory provided a more amiable fit to the data and was employed as the guiding conceptual framework for the project. Data reduction was guided by a concern for unidimensionality, internal consistency, stability over time, and validity.

As a result three scales of related constructs were developed. The first

concerned beliefs about the amount of crime in the respondents' immediate neighborhood. As such, this index was designed to be distinctly nonevaluative. That is, it is a measure of perceived volume of criminal activity (predominately street crime) within the area. Although others have focused on a similar construct, their measures have traditionally involved judgments concerning the amount of crime (Fowler, et. al., 1979; Lavrakas, Baumer, and Skogan, 1978) or a subjective comparison with other parts of the city (Hindelang, et. al., 1978). While the approach employed here asks simply for beliefs about an objective condition, those other measures combine both beliefs about the objective circumstances and individual values and judgments making the interpretation less than clear. The final measure was labelled Perceptions of Crime and contained three items:

> We are interested in your opinions about how often various crimes occur in your neighborhood, that is, the few blocks around your house or apartment.
>
> 1. What about robbery, that is taking things like money, purses, or wallets from people on the streets? Does this happen in your neighborhood never, sometimes, quite often, or very often?
>
> 2. Besides robbery, what about people being assaulted or beaten up on the street? Does this happen in your neighborhood never, sometimes, quite often or very often?
>
> 3. Thinking about all types of crime, would you describe the crime rate in your neighborhood as very high, higher than average, about average, or lower than average?

The second scale was designed to measure the affective component of the fear of crime issue. In contrast to the perceptions of crime scale, this measure was distinctly evaluative, that is, the result of a process in which the subjectively assessed amount of crime in the local environment is evaluated in terms of personal significance for the respondent. If this evaluative process results in an assessment of a threat to personal safety, then an appropriate affective response should follow. It is this component which most closely corresponds to

what is commonly referred to as fear of crime. A four-item scale of concern for personal safety was finally recommended:

> 1. When you are walking alone in your neighborhood at night, how concerned are you that someone will take something from you by force or by threat? Would you say that you are not at all concerned, somewhat concerned, quite concerned, or very concerned?
>
> 2. When you are walking alone in your neighborhood at night, how concerned are you that someone will harm you? Are you not at all concerned, somewhat concerned, quite concerned, or very concerned?
>
> 3. When you are walking alone in your neighborhood at night, how afraid are you that someone will take something from you by force or threat? Are you not at all afraid, somewhat afraid, quite afraid, or very afraid?
>
> 4. When you are walking alone in your neighborhood at night, how afraid are you that someone will harm you? Are you not at all afraid, somewhat afraid, quite afraid or very afraid?

The final area concerned behavioral adaptation to the threat of crime. Although a large set of items were originally considered and four sets included in the final analysis, only one scale met the standards set for the project. This index asked about easily implemented strategies which people may employ to avoid becoming the victim of a street crime and generally concerned what Baumer (1980) has called personal protective measures or what Hindelang, et. al., call the "subtle adjustments in behavior" (1978: 224). This avoidance of street crime scale was composed of three items:

> 1. When you go out alone at night in your neighborhood, how often do you try to avoid certain areas? Do you do this never, sometimes, quite often or always?
>
> 2. How often do you try to avoid certain types of people when you go out alone at night in your neighborhood? Do you do this never, sometimes, quite often or always?
>
> 3. How often do you walk only on certain streets when you go out alone at night in your neighborhood? Would you say you do this never, sometimes, quite often or always?

These three scales should prove to be very useful to researchers in the area of community crime prevention and public opinion. They are both internally consistent and represent distinct but interrelated phenomena. Although this trichotomous distinction has occasionally been mentioned in the previous literature, this study represents the first empirical research explicitly directed at the development of such measures. Both the integration of the "fear of crime" issue with the broader theoretical framework of stress theory and the development of standardized scales for the principal components represent a major development in this field.

REFERENCES

Andrich, D.
1978 "A rating formulation for ordered response categories." Psychometrika 43:561-573.

Baumer, Terry L.
1978 "Research on fear of crime in the United States." Victimology: An International Journal 3:254-264.

1979 "The dimensions of fear of crime." Northwestern University, Center for Urban Affairs, Working Paper M3-F.

1980 Personal Protective Behaviors and the Threat of Crime: A Comparative Analysis. Ph.D. dissertation, Department of Sociology, Loyola University of Chicago.

Baumer, Terry L. and Dennis P. Rosenbaum
1980 "Measuring 'fear of crime'." Paper presented to Special National Workshop on Research Methodology and Criminal Justice Program Evaluation, Baltimore, Maryland, March 17-19.

Biderman, Albert D., Louise A. Johnson, Jennie McIntyre, and Adrianne W. Weir
1967 Report on a Pilot Study in the District of Columbia on Victimization and Attitudes Toward Law Enforcement, Field Surveys I. The President's Commission on Law Enforcement and Administration of Justice. Washington: U.S. Government Printing Office.

Boruch, Robert F. and Hernando Gomez
1977 "Sensitivity, bias and theory in impact evaluation." Professional Psychology, November: 441-434.

Cattell, R.B.
1966 Handbook of Multivariate Experimental Psychology. Chicago: Rand McNally.

Clemente, Frank and Michael B. Kleiman
1977 "Fear of crime in the United States: a multivariate analysis." Social Forces 56:519-531.

Coleman, James S.
1968 "The mathematical study of change." Pp. 428-478 in Hubert M. Blalock and Anne B. Blalock (eds.), Methodology in Social Research. New York: McGraw-Hill.

Conklin, John E.
1975 The Impact of Crime. New York: Macmillan Publishing Co.

Cronbach, Lee J.
1951 "Coefficient alpha and the internal structure of tests." Psychometrika 16:297-334.

U.S. Department of Housing and Urban Development
1979 Urban Initiatives Anti-Crime Program: Guidebook. Washington: U.S. Department of Housing and Urban Development.

DuBow, Frederic, Edward McCabe, and Gail Kaplan
1978 Reactions to Crime: A Critical Review of the Literature. Reactions to Crime Project, Center for Urban Affairs, Northwestern University.

Ennis, Phillip H.
1967 Criminal Victimization in the United States: A Report of a National Survey, Field Surveys II. President's Commission on Law Enforcement and Administration of Justice. Washington: U.S. Government Printing Office.

Fishbein, Martin
1967 "Attitude and the prediction of behavior." Pp. 477-492 in Martin Fishbein (ed.) Attitude Theory and Measurement. New York: John Wiley and Sons.

Fowler, Floyd J., Jr., Mary Ellen McCalla, and Thomas W. Mangione
1979 Reducing Residential Crime and Fear: The Hartford Neighborhood Crime Prevention Program. Washington: U.S. Government Printing Office (027-000-00877-1).

Furstenberg, Frank, Jr.
1971 "Public Reactions to Crime in the Streets." The American Scholar, 11:601-610.

1972 "Fear of crime and its effects on citizen behaviors." in Albert Biderman (ed.), Crime and Justice: A Symposium. New York: Nailburg.

Garofalo, James
1977 "Fear of crime in large American cities." Analytic report SD-VAD-19, The Application of Victimization Survey Results Project, Criminal Justice Research Center, Albany, New York.

Gorden, Raymond
1977 Unidimensional Scaling of Social Variables: Concepts and Procedures, New York: The Free Press.

Green, Lawrence W. and Frances M. Lewis
1977 "Issues in relating evaluation to theory, policy and practice in health education." Paper presented at an invitational conference sponsored by the University of Maine and the Kellogg Foundation at Kingfield, Maine (unpublished).

Heise, David R.
1969 "Separating reliability and stability in test-retest correlation." American Sociological Review 34:93-101.

Hindelang, Michael, Michael Gottfredson, and James Garofalo
1978 The Victims of Personal Crime: An Empirical Foundation for a Theory of Personal Victimization. Cambridge, Massachusetts: Ballinger.

Kalish, Carol
1974 Crimes and Victims: A Report on the Dayton-San Jose Pilot Survey of Victimization. Washington, D.C., National Criminal Justice and Statistics Service, Law Enforcement Assistance Administration.

Kelling, George, Tony Pate, Duane Dieckman and Charles Brown
1974 The Kansas City Prevention Patrol Experiment. Washington, D.C.: The Police Foundation.

Kleinman, Paula H. and Debora S. David
1972 "Protection against crime in a ghetto community." The Addiction and Treatment Corporation Evaluation Team, Columbia University School of Social Work (unpublished).

Lavrakas, Paul J.
1979 "The Measurement of Property Protection Behavior." The Bellringer: A Periodic Review of Criminal Justice Evaluation 12:11-13.

Lavrakas, Paul J., Terry L. Baumer and Wesley G. Skogan
1978 "Measuring Citizens' concern for crime." The Bellringer 8:8-9.

Law Enforcement Assistance Administration
1972 San Jose Methods Test of Known Crime Victims. Statistics Technical Report No. 1, National Institute of Law Enforcement and Criminal Justice, Washington, D.C.: U.S. Government Printing Office.

1978 LEAA Two-Year Evaluation Plan. (FY '79 - FY '80). Office of Planning and Management, Law Enforcement Assistance Administration.

Lazarus, Richard S.
1966 Psychological Stress and the Coping Process. New York: McGraw-Hill.

Leventhal, Howard
1974 "Emotions: A Basic Problem for Social Psychology." Pp. 1-51 in Charlan Nemeth Social Psychology: Classic and Contemporary Integrations. Chicago: Rand McNally.

Marx, Gary T. and Dane Archer
1976 "Community police patrols and vigilantism." Pp. 129-157 in H. Jan Rosenbaum and Peter C. Ledenberg (eds.) Vigilante Politics. Philadelphia: University of Pennsylvania Press.

McIntyre, Jennie
1967 "Public attitudes toward crime and law enforcement." The Annals of the American Academy of Political and Social Science 374: 34-46.

Normoyle, Janice
1980 "Locus of Control, Territoriality and Feelings of Safety in Elderly Urban Women." Paper to be presented to the Annual Meeting of the Midwest Psychological Association, St. Louis, Missouri, May.

Novick, M. R. and C. Lewis
1967 "Coefficient alpha and the reliability of composite measurements." Psychometrika 32:1-13.

Nunnally, Jim C. and Robert L. Durham
1975 "Validity, reliability, and special problems of measurement in evaluation research." Pp. 289-352 in Elmer L. Strueuing and Marcia Guttentag (eds.) Handbook of Evaluation Research, Volume I. Beverly Hills: Sage.

Plutchik, Robert
1980 "A Language for the Emotions." Psychology Today 13:68-78.

Reiss, Albert J., Jr.
1967 Studies in Crime and Law Enforcement in Major Metropolitan Areas. President's Commission on Law Enforcement and Administration of Justice, Field Surveys III, Volume 1, Washington, D.C.: U.S. Government Printing Office.

Rifai, Marlene A. Young
1976 Older Americans' Crime Prevention Research Project: Final Report. Multnomah County Division of Public Safety, Portland, Oregon.

Rosenbaum, Dennis P. and Terry L. Baumer
1980 Interim Report: Measuring Fear of Crime. Westinghouse Evaluation Institute report submitted to the Office of Research and Evaluation Methods, National Institute of Justice, U.S. Department of Justice (grant number 79-NI-AX-0124).

Schneider, Anne L.
1977 "The Portland Forward Records Check of Crime Victims." Eugene, Oregon: The Oregon Research Institute (unpublished).

Schwartz, Alfred I., Sumner Clarren, Thomas Fischgrund, Eric Hollins, and Paul Nalley
1975 Evaluation of Cincinnati's Community Sector Team Policing Program: A Progress Report. Washington, D.C.: The Urban Institute.

1980 "The Center for Urban Affairs random digit dialing telephone survey." Pp. 174-225 in Albert Hunter and Michael Maxfield (eds.) Volume IV: Methodological Overview of Reactions to Crime Project. Northwestern University, Center for Urban Affairs. Report submitted to National Institute of Justice, U.S. Department of Justice.

Skogan, Wesley G. and Michael G. Maxfield
1981 Coping With Crime: Individual and Neighborhood Reactions. Beverly Hills: Sage.

Sparks, Richard F., Hazel G. Genn, David J. Dodd
1977 Surveying Victims: A Study of the Measurement of Criminal Victimization, Perceptions of Crime, and Attitudes to Criminal Justice. New York: John Wiley.

Steeh, Charlotte G.
1981 "Trends in nonresponse rates, 1952-1979." Public Opinion Quarterly 45:40-57.

Stinchcombe, Arthur, Carol Heimer, Rebecca Adams Iliff, Kim Scheppele, Tom W. Smith, and D. Garth Taylor
1978 Crime and Punishment in Public Opinion: 1948-1974. Chicago: National Opinion Research Center.

Sundeen, Richard A. and James T. Mathieu
1976 "The urban elderly: environments of fear." Pp. 51-66 in Jack Goldsmith and Sharon Goldsmith (eds.), Crime and the Elderly. Cambridge, Mass.: Ballinger.

Trodahl, Verling C. and Roy E. Carter, Jr.
1964 "Random selection of respondents within households in phone surveys." Journal of Marketing Research 1:71-76.

Van Dijk, J.J.M.
1978 "Public attitudes toward crime in the Netherlands." Victimology: An International Journal 3:265-273.

Wagner, R. V.
1969 "The study of attitude change: An introduction." Pp. 1-18 in R. V. Wagner and J. J. Sherwood (eds.). The Study of Attitude Change. Belmont, California: Brooks/Cole.

Wilson, L. A., II
1976 Private and Collective Choice Behavior in the Provision of Personal Security from Criminal Victimization. Ph.D. Dissertation, Department of Political Science, University of Oregon.

Zimbardo, P. and E. B. Ebbesen
1970 Influencing Attitudes and Changing Behavior. Reading, Mass.: Addison-Wesley.

CONTINUED

1 OF 2

APPENDIX A

CALL RECORD
Westinghouse Evaluation Institute
Measuring "Fear of Crime" Study

(TELEPHONE NUMBER)

	First Call	Second Call	Third Call	Fourth Call	Fifth Call	Sixth Call	Seventh Call	Eighth Call	Ninth Call
Day									
Date (Month/Day)									
Time									
Completed Interview	1	1	1	1	1	1	1	1	1
No Answer/Busy	2	2	2	2	2	2	2	2	2
Disconnected/Not in Service	3								
Eligible Respondent Not Available/Call Back: Name_____	4 Day/Time _____	4 Day/Time _____	4 Day/Time _____	4 Day/Time _____	4 Day/Time _____	4 Day/Time _____	4 Day/Time _____	4 Day/Time _____	4 Day/Time _____
Eligible Refusal	5	5	5	5	5	5	5	5	5
Household Refusal	6	6	6	6	6	6	6	6	6
Business	7	7	7	7	7	7	7	7	7
No English Respondent	8	8	8	8	8	8	8	8	8
Breakoff at Quex # _____	9	9	9	9	9	9	9	9	9
Other_____	10	10	10	10	10	10	10	10	10
	12-20	21-29	30-38	39-47	48-56	57-65	66-74 80-1	4-12	13-21
1-3 Sequential ID									
4 Sample type									
5-11 Telephone #								1-3 ID	80-2

1-3 SEQ. ID
4 SAMPLE TYPE
5-11 TELEPHONE #

WESTINGHOUSE EVALUATION INSTITUTE

Measuring Fear of Crime Telephone Survey

Hello, is this _____
(phone #)

My name is _____ and I am calling from the Evaluation Institute in Evanston. (We are doing a survey, sponsored by the Department of Justice, of people's concerns and opinions about crime and safety in their neighborhood.)

(We are doing a survey of people in your neighborhood, sponsored by the Department of Justice, to find out what the residents themselves think about crime and their own safety in their neighborhood.)

In order to determine whom to interview in your household, I need to know... -12
Including yourself, how many persons 19 years of age or older currently live in this household? _____ (CIRCLE IN COL. A)
And, how many of these persons are men? _____ (CIRCLE IN ROW B) -13

Row B Number of men in household	COLUMN A Number of Adults in Household			
	1	2	3	4 or more
0	Woman	Oldest Woman	Youngest Woman	Youngest Woman
1	Man	Man	Man	Oldest Woman
2		Oldest Man	Youngest Man	Youngest Man
3			Youngest Man	Oldest Man
4 or more				Oldest Man

VERSION 1

The intersection of Col A and Row B determines the sex and age of the respondent to be interviewed.

For this survey I would like to speak to the (verbal label indicated on grid) currently living at home, in your household. Is he/she at home?

Yes . . . . . 1 Continue with Q. 1 with selected respondent
No . . . . . 2 Arrange call-back

WESTINGHOUSE EVALUATION INSTITUTE

Measuring Fear of Crime Telephone Survey

1-3 SEQ. ID
4 SAMPLE TYPE
5-11 TELEPHONE #

Hello, is this _____
(phone #)

My name is _____ and I am calling from the Evaluation Institute in Evanston. (We are doing a survey, sponsored by the Department of Justice, of people's concerns and opinions about crime and safety in their neighborhoods.)

(We are doing a survey of people in your neighborhood, sponsored by the Department of Justice to find out what the residents themselves think about crime and their own safety in their neighborhood.)

In order to determine whom to interview in your household, I need to know... -12
Including yourself, how many persons 19 years of age or older currently live in this household? _____ (CIRCLE IN COL. A)
And, how many of these persons are men? _____ (CIRCLE IN ROW B) -13

Row B Number of men in household	COLUMN A Number of Adults in Household			
	1	2	3	4 or more
0	Woman	Youngest Woman	Youngest Woman	Oldest Woman
1	Man	Man	Oldest Woman	Man
2		Oldest Man	Woman	Oldest Woman
3			Youngest Man	Woman/Oldest Woman
4 or more				Oldest Man

VERSION 2

The intersection of Col A and Row B determines the sex and age of the respondent to be interviewed.

For this survey, I would like to speak to the (verbal label indicated on grid) currently living at home, in your household. Is he/she at home?

Yes . . . . . 1 Continue with Q. 1 with selected respondent
No . . . . . 2 Arrange call-back

WESTINGHOUSE EVALUATION INSTITUTE

Measuring Fear of Crime Telephone Survey

1-3 SEQ. ID
4 SAMPLE TYPE
5-11 TELEPHONE #

Hello, is this _____
(phone #)

My name is _____ and I am calling from the Evaluation Institute in Evanston. (We are doing a survey, sponsored by the Department of Justice, of people's concerns and opinions about crime and safety in their neighborhood.)

(We are doing a survey of people in your neighborhood, sponsored by the Department of Justice, to find out what the residents themselves think about crime and their own safety in their neighborhood.)

In order to determine whom to interview in your household, I need to know... -12
Including yourself, how many persons 19 years of age or older currently live in this household? _____ (CIRCLE IN COL. A)
And, how many of these persons are men? _____ (CIRCLE IN ROW B) -13

Row B Number of men in household	COLUMN A Number of Adults in Household			
	1	2	3	4 or more
0	Woman	Youngest Woman	Oldest Woman	Oldest Woman
1	Man	Woman	Man	Youngest Woman
2		Youngest Man	Oldest Man	Oldest Man
3			Oldest Man	Youngest Man
4 or more				Youngest Man

VERSION 3

The intersection of Col A and Row B determines the sex and age of the respondent to be interviewed.

For this survey, I would like to speak to the (verbal label indicated on grid) currently living at home, in your household. Is he/she at home?

Yes . . . . . 1 Continue with Q. 1 with selected respondent

No . . . . . 2 Arrange call-back

WESTINGHOUSE EVALUATION INSTITUTE

Measuring Fear of Crime Telephone Survey

1-3 SEQ. ID
4 SAMPLE TYPE
5-11 TELEPHONE #

Hello, is this _____
(phone #)

My name is _____ and I am calling from the Evaluation Institute in Evanston. (We are doing a survey, sponsored by the Department of Justice, of people's concerns and opinions about crime and safety in their neighborhood.)

(We are doing a survey of people in your neighborhood, sponsored by the Department of Justice, to find out what the residents themselves think about crime and their own safety in their neighborhood.)

In order to determine whom to interview in your household, I need to know... -12
Including yourself, how many persons 19 years of age or older currently live in this household? _____ (CIRCLE IN COL. A)
And, how many of these persons are men? _____ (CIRCLE IN ROW B) -13

Row B Number of men in household	COLUMN A Number of Adults in Household			
	1	2	3	4 or more
0	Woman	Oldest Woman	Oldest Woman	Youngest Woman
1	Man	Woman	Youngest Woman	Man
2		Youngest Man	Woman	Youngest Woman
3			Oldest Man	Woman/Youngest Woman
4 or more				Youngest Man

VERSION 4

The intersection of Col A and Row B determines the sex and age of the respondent to be interviewed.

For this survey, I would like to speak to the (verbal label indicated on grid) currently living at home, in your household. Is he/she at home?

Yes . . . . . 1 Continue with Q. 1 with selected respondent

No . . . . . 2 Arrange call-back

CD 1

TIME START: _____

First, we are interested in your opinions about how often various crimes occur in your neighborhood; that is, the few blocks right around your house or apartment.

1. In your opinion, how often does burglary--that is, breaking into people's homes to steal something--happen in your neighborhood? Would you say that it happens...

Never 1
Sometimes 2
Quite often 3
Very often 4
(DK/NA) 9

-14

2. What about robbery--that is, taking things like money, purses, or wallets from people on the street. Does this happen in your neighborhood...

Never 1
Sometimes 2
Quite often 3
Very often 4
(DK/NA) 9

-15

3. Besides robbery, what about people being assaulted or beaten up on the street? Does this happen in your neighborhood...

Never 1
Sometimes 2
Quite often 3
Very often 4
(DK/NA) 9

-16

4. Thinking about all types of crime, would you describe the crime rate in your neighborhood as...

Very high 4
Higher than average 3
About average 2
Lower than average 1
(DK/NA) 9

-17

CD 1

5. When you are walking alone in your neighborhood at night, how concerned are you that someone will take something from you by force or by threat? Would you say that you are...

Not at all concerned 1
Somewhat concerned 2
Quite concerned 3
Very concerned 4
(DK/NA) 9

-19

(NEVER GO OUT ALONE- 1
ASK QUEX 5, "IF YOU DID GO OUT...")

-20

6. How concerned are you that someone will break into your house or apartment when no one is at home? Are you...

Not at all concerned 1
Somewhat concerned 2
Quite concerned 3
Very concerned 4
(DK/NA) 9

-21

7. When you are walking alone in your neighborhood at night, how concerned are you that someone will harm you? Are you...

Not at all concerned 1
Somewhat concerned 2
Quite concerned 3
Very concerned 4
(DK/NA) 9

-22

8. When you go out alone at night in your neighborhood, how often do you try to avoid certain areas?

Never 1
Sometimes 2
Quite often 3
Always 4
(DK/NA) 9

-23

9. How often do you try to avoid certain types of people when you go out alone at night in your neighborhood? Do you do this...

Never 1
Sometimes 2
Quite often 3
Always 4
(DK/NA) 9

-24

CD 1

10. When you go out alone at night in your neighborhood, how often do you avoid carrying too much cash? Would you say you do this...

Never 1
Sometimes 2
Quite often 3
Always 4
(DK/NA) 9

-25

11. How often do you walk only on certain streets when you go out alone at night in your neighborhood? Would you say you do this...

Never 1
Sometimes 2
Quite often 3
Always 4
(DK/NA) 9

-26

12. And how often do you avoid talking to strangers when you go out alone at night in your neighborhood? Do you do this...

Never 1
Sometimes 2
Quite often 3
Always 4
(DK/NA) 9

-27

13. When you are walking alone in your neighborhood at night, how likely is it that someone will take something from you on the street by force or threat? Do you think it is...

Not at all likely 1
Somewhat likely 2
Quite likely 3
Very likely 4
(DK/NA) 9

-28

14. Walking alone in your neighborhood at night, how likely is it that someone will harm you on the street? Would you say it is...

Not at all likely 1
Somewhat likely 2
Quite likely 3
Very likely 4
(DK/NA) 9

-29

CD 1

15. In the next year, how likely do you think it is that someone will break into your home when no one is home? Would you say it is...

Not at all likely 1
Somewhat likely 2
Quite likely 3
Very likely 4
(DK/NA) 9

-30

Now I am going to mention some of the things that people do to protect themselves or their homes and I would like you to tell me how often you do each of these things.

16. When you are home alone at night, how often do you keep all of the doors locked? Do you do this...

Never 1
Sometimes 2
Quite often 3
Always 4
(DK/NA) 9

-31

17. How about the windows--when you are home alone at night, do you keep all of the windows locked?...

Never 1
Sometimes 2
Quite often 3
Always 4
(DK/NA) 9

-32

18. When you are home alone at night, how often do you draw the curtains or pull the shades on the windows? Do you do this...

Never 1
Sometimes 2
Quite often 3
Always 4
(DK/NA) 9

-33

19. When you are home alone at night, how often do you open the door without knowing who is there? Do you do this...

Never 1
Sometimes 2
Quite often 3
Always 4
(DK/NA) 9

-34

20. Think of the last time you went out at night. Did you leave a light on?

No 1
Yes . . . . 2 -35
(DK/NA) . . 9

21. The last time your family went away for more than a day or so, did you or did someone in your family ask a neighbor to watch your home?

No 1
Yes . . . . 2 -36
(DK/NA) . . 9

22. The last time no one was home, did your family close and lock all of the windows?

No 1
Yes . . . . 2 -37
(DK/NA) . . 9

23. Do you have "dead bolt" locks on the doors to your house or apartment?

No 1
Yes . . . . 2 -38
(DK/NA) . . 9

24. Do you have bars on any of the windows to your house or apartment?

No 1
Yes . . . . 2 -39
(DK/NA) . . 9

25. Do you have a "burglar bar" on any of your doors?

No 1
Yes . . . . 2 -40
(DK/NA) . . 9

26. In the last year, that is, since last July 4th, has your home been burglarized? That is, has anyone broken in and stolen something from your home?

No (Go TO 29). 1
Yes . . . . . 2 -41
(DK/NA) . . . 9

27. When did this happen? (DO NOT READ CATEGORIES)

June 1980 01
May 1980 02
April 1980 03
March 1980 04
February 1980 05
January 1980 06
December 1979 . . . . . 07 -42
November 1979 08
October 1979 09
September 1979 10
August 1979 11
July 1979 12
(DK/NA) 99

28. Did this happen in your present home or someplace else?

Present home 1
Someplace else . . . . . 2 -43
(DK/NA) 9

28A. How much do you blame yourself for what happened? Do you feel that you are to blame...

Not at all 1
Some 2
A lot . . . . . 3 -44
Almost entirely 4
(DK/NA) 9

29. In the past year, since last July 4th, has someone <u>taken anything</u> from you by using force such as a stick-up, mugging, or threat?

No (GO TO 32) . 1
Yes . . . . . 2 -45
(DK/NA) 3

30. When did this happen? (DO NOT READ CATEGORIES)

June 1980 01
May 1980 02
April 1980 03
March 1980 04
February 1980 05
January 1980 06
December 1979 . . . . . 07 -46
November 1979 08
October 1979 09
September 1979 10
August 1979 11
July 1979 12
(DK/NA) 99

CD 1

7

31. Did this happen in your present neighborhood, another neighborhood in (EVANSTON, CHICAGO), or in another city?

Present neighborhood 1
Another neighborhood 2
Another city 3
(DK/NA) 9

-47

31A. How much do you blame yourself for what happened? Do you feel that you are to blame...

Not at all 1
Some 2
A lot 3
Almost entirely 4
(DK/NA) 9

-48

32. Did anything else happen to you during the past year which you thought was a crime but that we haven't talked about yet?

No (GO TO 36) . 1
Yes 2
(DK/NA) 9

-49

33. What was that?

_____

_____

34. When did this happen? (DO NOT READ CATEGORIES)

June 1980 01
May 1980 02
April 1980 03
March 1980 04
February 1980 05
January 1980 06
December 1979 07
November 1979 08
October 1979 09
September 1979 10
August 1979 11
July 1979 12
(DK/NA) 99

-50

CARD 1-80

CD 2

1-3 SEQ ID

8

35. Where did this happen?

Present neighborhood 1
Another neighborhood, same city 2
Another city 3
(DK/NA) 9

-4

36. How difficult is it for you to tell a stranger in your neighborhood from someone who lives there? Do you find it...

Very difficult 1
Quite difficult 2
Somewhat difficult 3
Not at all difficult 4
(DK/NA) 9

-5

37. How well do you know the people who live on your block? Do you...

Recognize their faces 1
Talk to some of them 2
Talk to many of them 3
Know many of them on a first name basis. 4
Visit some of them socially 5
(DK/NA) 9

-6

38. If a stranger was trying to open a window or door to your home when no one was home, how likely is it that one of your neighbors would call the police? Would you say that it would be...

Not at all likely 1
Somewhat likely 2
Quite likely 3
Very likely 4
(DK/NA) 9

-7

39. How friendly are the people who live in your neighborhood? Are they...

Not at all friendly 1
Somewhat friendly 2
Quite friendly 3
Very friendly 4
(DK/NA) 9

-8

CD 2

40. When you are walking alone in your neighborhood at night, how afraid are you that someone will take something from you by force or threat? Are you...

Not at all afraid 1
Somewhat afraid 2
Quite afraid 3
Very afraid 4
(DK/NA) 9

-9

41. How afraid are you that someone will break into your home when no one is there? Are you...

Not at all afraid 1
Somewhat afraid 2
Quite afraid 3
Very afraid 4
(DK/NA) 9

-10

42. When you are walking alone in your neighborhood at night, how afraid are you that someone will harm you? Are you...

Not at all afraid 1
Somewhat afraid 2
Quite afraid 3
Very afraid 4
(DK/NA) 9

-11

43. How uneasy would you feel if a male stranger stopped you on the street at night to ask for a cigarette? Would you feel...

Not at all uneasy 1
Somewhat uneasy 2
Quite uneasy 3
Very uneasy 4
(DK/NA) 9

-12

44. How uneasy would you feel if a male stranger knocked on the window of your car while you were driving alone at night? Would you feel...

Not at all uneasy 1
Somewhat uneasy 2
Quite uneasy 3
Very uneasy 4
(DK/NA) 9

-13

CD 2

45. How uneasy would you feel if you were walking alone at night and heard footsteps behind you? Would you feel...

Not at all uneasy 1
Somewhat uneasy 2
Quite uneasy 3
Very uneasy 4
(DK/NA) 9

-14

46. How about if you were riding alone on a bus and noticed that a man sitting near you was talking to himself and sounded very angry? Would you feel...

Not at all uneasy 1
Somewhat uneasy 2
Quite uneasy 3
Very uneasy 4
(DK/NA) 9

-15

47. And how uneasy would you feel if you were about to walk past a group of four teenage boys who were just hanging around on a street corner? Would you feel...

Not at all uneasy 1
Somewhat uneasy 2
Quite uneasy 3
Very uneasy 4
(DK/NA) 9

-16

48. How many children between the ages of 5 and 18 live with you in your home?

(IF NONE, CODE "00" AND GO TO 52)

Code exact number . . . . ____
(DK/NA) 99

-17-18

49. How worried are you that your child will be deliberately harmed by someone while he or she is outside without you in your neighborhood? Are you...

Not at all worried 1
Somewhat worried 2
Quite worried 3
Very worried 4
(DK/NA) 9

-19

CD 2

50. How worried are you that someone will take something from your child by force or threat while he or she is outside without you in your neighborhood? Are you...

Not at all worried 1
Somewhat worried 2
Quite worried 3
Very worried 4
(DK/NA) 9

-20

51. How worried are you when your child is late getting home and hasn't called you? Are you...

Not at all worried 1
Somewhat worried 2
Quite worried 3
Very worried 4
(DK/NA) 9

-21

Finally, for statistical purposes, we have a few more questions about you and your neighborhood.

52. How many years have you lived in your present neighborhood?

Number of years . . . . . ____
(DK/NA) 99

-22-23

53. Do you live in a single family house, a two-flat, a building with less than 7 units, or a larger building with 7 or more units?

Single family (CODE "1" in #54; GO TO 55). . . 1
Two-flat 2
Less than 7 units 3
7 or more units 4
(DK/NA) 9

-24

54. What floor do you live on?

Code exact response
(basement or garden = 0) . . . ____
(DK/NA) 99

-25-26

CD 2

55. Do you or does your family rent your home or do you own it?

Rent 1
Own 2
(DK/NA) 9

-27

56. May I ask how old you were at your last birthday?

Age in years . . . . . ____
(DK/NA) 99

-28-29

57. For statistical purposes, we would also like to know what racial group you belong to. Are you Black, White, Asian, or something else?

Black 1
White 2
Asian 3

Other _____ 4
(DK/NA) 9

-30

58. (CODE RESPONDENT'S SEX)

Male . . . 1
Female . . 2
(DK/NA) . . 9

-31

59. Including yourself, how many people live in your house or apartment?

Total number of people . . . ____
(DK/NA) 99

-32-33

60. What is your current marital status? (DON'T READ)

Single 1
Single/living with someone . 2
Married 3
Separated 4
Divorced 5
Widowed 6
(DK/NA) 9

-34

CD 2

61. How would you describe you or your family's social class? Would you say that you are...

Upper class	1
Middle class	2
Working class	3
Lower class	4
(DK/NA)	9

-35

62. What was the approximate annual income from employment and from all other sources for all members of your household, before taxes, last year in 1979? Was it $15,000 or more, or less than that?

IF LESS

Was it less than $10,000?	No (Stop)	4
	Yes	
Was it less than $8,000?	No (Stop)	3
	Yes	
Was it less than $5,000?	No (Stop)	2
	Yes	

IF MORE

Was it more than $20,000?	No (Stop)	5
	Yes	
Was it more than $25,000?	No (Stop)	6
	Yes	
Was it more than $30,000?	No (Stop)	7
	Yes	8
(DK/NA)		9

-36

63. Now I have one final question. For statistical purposes, we will be re-interviewing people in a few weeks. Would you be willing to be interviewed again in a few weeks?

No	1
Yes	2
Maybe	3
(NA)	9

-37

That concludes our interview; thank you very much for your time. Are there any questions that I may answer for you?

Interviewer: _____

Time Stop: _____

APPENDIX B

Measuring Fear of Crime Telephone Survey
Test/Retest Instrument

Hello, is the _____?

May I speak to _____?

_____, this is _____ calling from the Evaluation Institute in Evanston. A few weeks ago we interviewed you about crime in your neighborhood, and at that time you said that you would be willing to be interviewed again. Could we do that now? (It would only take about 5 minutes this time.)

Additional Explanation:

Besides being about crime, this is also a study of how people answer different questions about the same topic. The reason we are calling back is to find out how people's answers change from one time to another. It's not a test! People just tend to answer some questions more consistently than others and we are interested in knowing which questions are consistent.

Seq. ID _____ 1-3
Sample Type 2 4
Telephone # _____ 5-11

Time Start: _____

First, I would like to know a few things about your neighborhood.

1. How friendly are the people who live in your neighborhood? Are they...

Not at all friendly 1
Somewhat friendly 2
Quite friendly 3
Very friendly 4
(DK/NA) 9

-12

2. Do most of the people in your neighborhood rent their homes or do they own them?

Most people rent 1
Most people own 2

-13

3. Is there a commercial area in your neighborhood; that is, the few blocks right around your house or apartment? (For example, various stores, businesses, night clubs, or anything of this sort?)

No 1
Yes 2

-14

4. How afraid are you that someone will break into your home when no one is there? Are you...

Not at all afraid 1
Somewhat afraid 2
Quite afraid 3
Very afraid 4
(DK/NA) 9

-15

5. When you are walking alone in your neighborhood at night, how afraid are you that someone will take something from you by force or threat? Are you...

Not at all afraid 1
Somewhat afraid 2
Quite afraid 3
Very afraid 4
(DK/NA) 9

-16

(NEVER GO OUT ALONE-- 1
ASK QUEX 5, "IF YOU DID GO OUT...")

-17

6. When you are walking alone in your neighborhood at night, how afraid are you that someone will harm you? Are you...

Not at all afraid 1
Somewhat afraid 2
Quite afraid 3
Very afraid 4
(DK/NA) 9

-18

Now I am going to mention some of the things that people do to protect themselves or their homes and I would like you to tell me how often you do each of these things.

7. When you are home alone at night, how often do you keep all of the doors locked? Do you do this...

Never 1
Sometimes 2
Quite often 3
Always 4
(DK/NA) 9

-19

8. How about the windows--when you are home alone at night, do you keep all of the windows locked?...

Never 1
Sometimes 2
Quite often 3
Always 4
(DK/NA) 9

-20

9. When you are home alone at night, how often do you draw the curtains or pull the shades on the windows? Do you do this...

Never 1
Sometimes 2
Quite often 3
Always 4
(DK/NA) 9

-21

10. When you are home alone at night, how often do you open the door without knowing who is there? Do you do this...

Never 1
Sometimes 2
Quite often 3
Always 4
(DK/NA) 9

-22

11. When you are walking alone in your neighborhood at night, how likely is it that someone will take something from you on the street by force or threat? Do you think it is...

Not at all likely 1
Somewhat likely 2
Quite likely 3
Very likely 4
(DK/NA) 9

-23

12. Walking alone in your neighborhood at night, how likely is it that someone will harm you on the street? Would you say it is...

Not at all likely 1
Somewhat likely 2
Quite likely 3
Very likely 4
(DK/NA) 9

-24

13. In the next year, how likely do you think it is that someone will break into your home when no one is home? Would you say it is...

Not at all likely 1
Somewhat likely 2
Quite likely 3
Very likely 4
(DK/NA) 9

-25

14. In your opinion, how often does burglary--that is, breaking into people's homes to steal something--happen in your neighborhood? Would you say that it happens...

Never 1
Sometimes 2
Quite often 3
Very often 4
(DK/NA) 9

-26

15. What about robbery--that is, taking things like money, purses, or wallets from people on the street. Does this happen in your neighborhood...

Never 1
Sometimes 2
Quite often 3
Very often 4
(DK/NA) 9

-27

16. Besides robbery, what about people being assaulted or beaten up on the street? Does this happen in your neighborhood...

Never	1	-28
Sometimes	2	
Quite often	3	
Very often	4	
(DK/NA)	9	

17. Overall, how would you rate the (Evanston, Chicago) police department? Would you say the police department is...

Excellent	4	-29
Good	3	
Average	2	
Poor	1	
(DK/NA)	9	

18. How safe would you feel riding a bus or the "El" during the day in your neighborhood? Would you feel...

Very safe	1	-30
Quite safe	2	
Somewhat safe	3	
Not at all safe	4	
(DK/NA)	9	

19. When you are walking alone in your neighborhood at night, how concerned are you that someone will take something from you by force or by threat? Would you say that you are...

Not at all concerned	1	-31
Somewhat concerned	2	
Quite concerned	3	
Very concerned	4	
(DK/NA)	9	

20. How concerned are you that someone will break into your house or apartment when no one is at home? Are you...

Not at all concerned	1	-32
Somewhat concerned	2	
Quite concerned	3	
Very concerned	4	
(DK/NA)	9	

21. When you are walking alone in your neighborhood at night, how concerned are you that someone will harm you? Are you...

Not at all concerned	1	-33
Somewhat concerned	2	
Quite concerned	3	
Very concerned	4	
(DK/NA)	9	

22. How uneasy would you feel if you were walking alone at night and heard footsteps behind you? Would you feel...

Not at all uneasy	1	-34
Somewhat uneasy	2	
Quite uneasy	3	
Very uneasy	4	
(DK/NA)	9	

23. How uneasy would you feel if a male stranger stopped you on the street at night to ask for a cigarette? Would you feel...

Not at all uneasy	1	-35
Somewhat uneasy	2	
Quite uneasy	3	
Very uneasy	4	
(DK/NA)	9	

24. How uneasy would you feel if a male stranger knocked on the window of your car while you were driving alone at night? Would you feel...

Not at all uneasy	1	-36
Somewhat uneasy	2	
Quite uneasy	3	
Very uneasy	4	
(DK/NA)	9	

25. Thinking about all types of crime, would you describe the crime rate in your neighborhood as...

Very high	1	-37
Higher than average	2	
About average	3	
Lower than average	4	
(DK/NA)	9	

26. Now, I have one last question. In a few weeks we will need to interview a few people one last time. Would you be willing to be interviewed one more time?

No 1
Yes 2
Maybe 3

-38

END