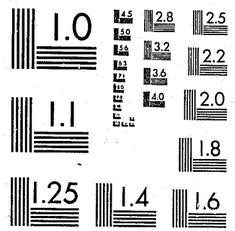

COORDINATED COMMUNITY POLICING: THE NEWARK EXPERIENCE

TECHNICAL REPORT

by

Antony M. Pate and Wesley G. Skogan

with the assistance of Mary Ann Wycoff and Sampson Annan

Final Draft Report
to the National Institute of Justice
The Honorable James K. Stewart, Director

July 12, 1985

Police Foundation
Hubert Williams,
President

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Coordinated Community Policing

Table of Contents

-continued-

APPENDICES:

List of Tables

List of Tables
(continued)

List of Tables
(continued)

Coordinated Community Policing

List of Figures

ACKNOWLEDGEMENTS

This technical report describes the attempt by the Newark Police Department and other Newark public and private agencies to reduce the fear of crime by the implementation of several coordinated strategies; in addition, the report presents the results of the evaluation conducted by the Police Foundation, of that effort. As Appendix A describes, the program was developed by a task force of several persons working cooperatively. The members of the task force, listed on the following page, were actively involved in the planning and execution of the program. Without their creativity and cooperation there would have been no program to evaluate.

Once the program was designed, the responsibility for implementing the program was given to the members of the West District fear reduction staff, whose members are shown on the attached list. Their dedicated work, under the guidance of Captain George Dickschied, constituted the basis for this report. We express our special appreciation to Hubert Williams, then the Newark Police Director and now the President of the Police Foundation, for his cooperation and assistance. His leadership set the stage for the success of the entire project. His willingness to experiment has, once again, set an example for other police administrators to follow.

We also want to thank Captain Joseph Santiago, the Fear Reduction Program Coordinator, and Maria Cardiellos, the Assistant Coordinator, for their untiring devotion to this project event under the most difficult circumstances. Without their advice and assistance, and that of Lieutenant John Dough who joined their ranks later, neither the program nor its evaluation would have been possible.

NEWARK FEAR REDUCTION TASK FORCE

Newark Police Department

Hubert Williams, Director

Charles Zizza, Chief

Captain Joseph Santiago, Coordinator
Maria Cardiellos, Asst. Coordinator

Deputy Chiefs:
- John Cross
- Arnold Evans
- George Hemmer
- Thomas O'Reilly

Captains:
- Peter J. Basalo
- George Dickscheid
- Charles Knox
- Michael O'Connor
- Joseph Rox

Lieutenants:
- John Kossup
- John Dough
- Harold Gibson
- Frank Peake
- Vincent Peszynski
- Robert Rankin
- Kenneth Wilson
- Jack Yablonski

Sergeants:
- David Dziebela
- Ernest Newby
- John Reid
- Andrew Turner

Detectives:
- Joseph Bongo
- Allan Howard

Crime Analyst:
- Megan Ambrosio

Board of Education

Carl Sharif, President
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Gladys Hillman Jones, Deputy Supt.
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Dorothy Gould, Asst. Exec. Supt.
Elizabeth Ruffalo, Curriculum Dir.
Jill Goodman, Admin. Supervisor
Dr. Lorenzo Grant, Admin. Supervisor
Ruth Hazelwood, Admin. Supervisor
Dr. James Barrett, Principal

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Robert D. Lipscher, Admin. Director
John Mason, Staff Attorney

Essex County Courts

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Hon. Paul T. Murphy, Presiding Judge

Essex County Probation Department

Nicholas Fiore, Chief Probation Officer
Jude Del Preore, Coordinator JCC

Newark Municipal Courts

Hon. Better J. Lester, Presiding Judge

Graduate School of Criminal Justice Rutgers University

Professors:
- Frieda Adler
- Anne Campbell
- John J. Gibbs
- Gerhard Mueller
- David Twain

City of Newark, New Jersey

Honorable Kenneth A. Gibson, Mayor
Barbara Sachs, Aide to the Mayor

WEST DISTRICT FEAR REDUCTION STAFF

George Dickschied, Captain

Police Community Service Center Staff

Sergeant Kenneth Williams
Police Officer Herbert Childs
Police Officer George Manzella

Directed Police-Citizen Contact Staff

Sergeant Kenneth Williams, Coordinator

Police Officers:

Arthur Alvarado	Robert Guiliano
Noreen Britte-Headen	Patrick Handrahan
Herbert Childs	Charles Kaiser
John Coppola	George Manzella
Daniel Daly	Jose Nunez
Joseph D'Angelo	Anthony Petrillo
Kevin George	Robert Schweitzer
Joseph Gillette	George Skrobick

John Valle

Neighborhood Police Newsletter Staff

Sergeant Ernest Newby, Editor
Detective William Caulfied, Assistant Editor
Detective Allan Howard, Graphics Artist

Directed Patrol Task Force

Lieutenants:
- John Dough
- Harold Gibson
- Robert Rankin

Sergeants:
- William Clark
- David Dzibela
- Ernest Newby

Police Officers:

Manual Costa	Kevin George
Wayne Dooley	Billy Murray
Rocco Malanga	Barry Sierra
Michael Petrillo	Charles Upshaw
Mark Riccardi	Leonard Cunningham
Robert Russo	Martin Goldman
John Cantalupo	Thomas Hill
Willie Floyd	Joseph Mauriello
Brian Gavin	Herman McDonald
Edward Hopkins	Domingo Rivera
Michael Kraynanski	Evelyn Catalano
Joseph Marzano	Bonita Johnson
Patrick Corcoran	Marsha Jones

William Zuzzio, the department's data processing coordinator rendered a valuable service in providing recorded crime data in ways not normally required. Detective Al Howard gave us advice and consolation when it was most needed.

Staff members of the Police Foundation and research consultants were involved in the design and execution of the program evaluation, or gave advice to those who did. They included:

Sam Annan, Survey Director
Mary Ann Wycoff, Houston Project Director
Elizabeth Enright, Process Evaluator
Douglas Irr, Research Assistant
Research Consultants:

David Bayley	Richard McCleary
Richard Berk	Albert J. Reiss, Jr.
George Kelling	Peter Rossi
Paul J. Lavrakas	Jerome Skolnick

Bonnie Fisher worked at Northwestern University preparing and analyzing the data. Virginia Burke performed the arduous task of producing the final report.

The project was supported by the National Institute of Justice. The staff of the Institute provided continuous encouragement and advice. Those actively involved in this project included James K. Stewart, Director, William Saulsbury, the original project monitor, and Larry Bennett and Gil Kerlikowske, who shared the monitor role as it neared completion.

The entire project, including the evaluation, was conducted under the direction of Lawrence Sherman, then the Vice President for Research of the Police Foundation. Patrick V. Murphy, then the President of the Police Foundation, was active in establishing the project and representing it to the policing community.

COORDINATED COMMUNITY POLICING

Introduction

The Newark Police Department's Fear Reduction Task Force, after studying the principal research on the fear of crime, decided to develop programs designed to address two of the major causes of that fear:

- A sense of distance between ordinary citizens and the police, and
- Social disorder and physical deterioration.

To deal with these problems, the task force decided to develop the following coordinated program components:

- A neighborhood community police center,
- A directed police-citizen contact program,
- A neighborhood police newsletter,
- Several programs designed to reduce social disorder, and
- Programs to reduce physical deterioration.

The rationales behind these program components and the hypotheses to be tested concerning their effects are presented below.

Increasing the Quantity and Quality of Police-Citizen Contacts

The mandate for the first urban police, in London in 1829, was to be "...in tune with the people, understanding the people, belonging to the people, and drawing its strength from the people" (Critchley, 1967, p.52). To achieve this, frequent contact and interaction with citizens were indispensable. To facilitate that contact, the earliest police officers were ordered to "...be civil and attentive to all persons, of every rank and class .... [and] not to interfere idly and unnecessarily...." (Reith, 1956, p. 140). Over the years, however, largely as an expected consequence of

well-intentioned reforms, the distance between citizens and the police has widened considerably.

American police, compared to the British, "...put more emphasis on control of the police by the popular will than by the law or administrative direction" (Richardson, 1974, p.16). As the American political system matured, however, responsiveness to the public often became perverted into favoritism and graft. According to many reformers, "...the corruption, incompetence, and inefficiency of the big-city police departments was fundamentally a function of political involvement in departmental affairs" (Fogelson, 1977, p.49). As a result of this reasoning, many critics concluded that "...the police could not be both democratic and efficient at the same time, that control by the popular will meant control by local politicians who perverted the police function to serve their own needs" (Richardson, op. cit., p. 17).

To insulate police departments from political interference, many reformers proposed that the police be organized according to a "military model." Applying this model, three basic reforms were suggested:

- Departmental operations should be centralized under the control of chiefs largely independent of external control,
- The function of the police should be narrowed to focus on crime prevention, and
- The quality of police personnel should be upgraded.

Each of these reforms, to the extent that they were adopted, produced notable improvements in the efficiency and effectiveness of the police. Such improvements, however, were achieved at some cost--often at the expense

of relations with the public. To achieve centralizaton, for example, local precinct stations were consolidated or closed completely. Atlhough leading to cost savings and increased managerial control, these changes created greater isolation between the police and the public. In addition, to reduce the opportunities for graft and corruption, patrol officers were rotated among beats rather than assigning them to one neighborhood over time. As a result, the familiar "cop on the beat" became just another nameless official in a uniform working in a community of strangers.

By eliminating such responsibilities as supervising elections, operating ambulances, inspecting boilers and censoring movies, the reformers made it possible for the police to devote more of their energies to reducing crime. However, by carrying the military analogy further--by positing a "war on crime"--these reforms had several unfortunate consequences. First, to the extent that aggressive tactics were encouraged, police were authorized to stop, question and, on occasion, search anyone who aroused their suspicion. As a result of this focus on crime prevention, many departments began to intervene in all sorts of situations which, in the absence of a complaint, they would previously have ignored. "By so doing--by arresting a taxpayer for gambling, citing a motorist for speeding, and ordering a few teenagers to keep moving--they generated a great deal of resentment" (Fogelson, op. cit., p. 242).

Combined with centralization, this focus on aggressive crime fighting created special problems in minority communities. By applying a common standard to nonviolent crimes--especially "moral offenses" such as gambling and drinking--the police attempted to enforce prevailing norms in

neighborhoods where they were not accepted. Due largely to their "war on crime" orientation, police came to be seen by many minorities as an "army of occupation" (Wilson, 1972, p. 51).

Even the improvement in the quality of police personnel, although it raised the level of education of new police officers, had some deleterious effects on members of minority communties--and, as a result, on their relations with police. By raising the educational requirements, eliminating the stipulation that officers live within the city for which they work, and requiring proof of no prior convictions, the reformers made it more difficult for members of minority groups to become police officers.

By the 1930s, complaints about police performance continued, but a new wave of police reformers came to the forefront, espousing a "professional model" to replace the military one. In fact, many of their prescriptions were quite similar to those of the earlier progressives. According to the new model, police officers were to become professionals and policing should be a profession. Thus, police officers were to meet high admission standards, receive extensive training, have access to the latest technology and possess a wide range of specialized skills. As before, many of these suggestions had notably beneficial effects--but significant negative ones as well.

The admission standards continued disproportionately to exclude minorities from membership in police departments. Training requirements, to the extent that they were based on test-taking skills, reinforced that bias, making relations with the increasingly minority big-city populations even more tenuous.

With the advent of motorized patrol, the area any officer could cover was greatly expanded and response time reduced. Concomitant with these advances, however, came further isolation from the citizens. With the installation of radio dispatching, 911 emergency telephone systems and computers, officers spent much of their time driving from call to call, emerging only to contact crime victims, arrest suspects or give traffic citations--hardly situations in which enduring trust and understanding can develop.

The creation of specialized units provided valuable new resources to police operations, but again at some cost. First, members of many of these units (planning and research, internal affairs, intelligence, crime analysis, records, training, crime laboratories and communications) did not have direct contact with citizens. Second, members of such units as detectives, missing persons and juveniles usually had contact with citizens only when they were in distraught states of mind. Finally, with so many officers assigned to special units, fewer were on patrol or otherwise directly involved in crime prevention.

The cumulative effect of these several changes over the years has been succinctly summarized by Henig (1984, pp. 5-6):

> By reducing social contact between police and citizens, and by limiting contact to emotionally charged situations in which crimes had occurred, these changes increased the likelihood that citizens and police would regard each other as strangers.

As a result, police officers assigned to an area may have little understanding of the priorities and concerns of people living or working there. This lack of information about neighborhoods can cause officers to

be unresponsive to important neighborhood problems and may, in turn, cause citizens to feel that police neither know nor care about them.

Since, as much recent research has shown, effective crime prevention and fear reduction must be primarily a joint effort between citizens and the police (Lavrakas and Herz, 1982; Rosenbaum, 1982; Waller, 1979; Yin, 1979), this reduction in mutual trust has had far-reaching consequences.

Recognizing the relevance of this analysis to their own city, the members of the Newark Fear Reduction Task Force decided to undertake a coordinated effort to reduce the distance which had developed between the police and the citizens they served.

Reducing the Signs of Crime

It has long been recognized that the level of fear of crime is affected by many factors other than the actual incidence of crime. In their 1967 report to the President's Commission on Law Enforcement, Biderman and his colleagues concluded that:

> "... attitudes of citizens regarding crime are less affected by their past victimization than by their ideas about what is going on in their community--fears about a weakening of social controls on which they feel their safety and the broader fabric of social life is ultimately dependent... the highly visible signs of what they regard as disorderly or disreputable behavior in their community-insobriety, untidiness, boisterousness." (Biderman et al., 1967: 160).

Similarly, Wilson, in his study of Boston, concluded that the failure of the community to control violations of "standards of right and seemly conduct" was a major cause of the "sense of urban unease." (Wilson, 1968).

Although few people actually experience or witness crimes, they associate the possibility of crime with certain aspects of their environment. Hunter (1978) found that fear in the urban neighborhoods was, above all, fear of social disorder, suggested by "incivilities." By disorders, he meant violations of the local normative order which may or may not be regarded seriously by the criminal justice system, but which greatly disturb the residents of areas which are plagued by them. Stinchcombe et al. (1978) speculated that these environmental cues came to serve as "signs of crime," early warning indicators of impending danger. Lewis and Maxfield (1980) found that concern about certain types of social and physical disorder--teenagers hanging out on the streets, drug use, abandoned or burned-out buildings, and vandalism--were closely related to concerns about crime. Lewis and Salem (1980) found that disorder signals a diminished capacity for local problem solving, gives residents a feeling of personal isolation and spreads the sense that no one will come to the rescue when they find themselves in trouble. Subsequent research has continued to show the relationship between disorder and fear (for a review see Skogan and Maxfield, 1981 and Greenberg et al., 1983).

A dynamic process has been shown to exist among social and physical disorder, crime and neighborhood change. At an individual level, Zimbardo and other social psychologists have shown that property left untended or unrepaired invites further destruction and physical disorder breeds social disorder and crime. At the neighborhood level, Kobrin and Schuerman (1982) have demonstrated a complex sequence in which neighborhood deterioration is followed by rising crime which in turn is followed by further deterioration.

As the deterioration continues, the composition of the neighborhoods changes, drawing even larger numbers of low income renters, unattached individuals, single-parent families and high proportions of children and youth. As the socioeconomic status of the neighborhood declines so too does the capacity of the population to maintain control over the conduct of its residents, especially youths. As a result, a neighborhood subculture tolerant of law violation develops. As this subculture grows, crime reaches a "saturation" point, leading to further deterioration. Those residents and merchants who can afford to do so move out of the area; those who remain are often prisoners in their own homes, immobilized by fear.

The evidence for the conclusion that "disorder is an engine of neighborhood destabilization and decline" (Skogan, 1983: 3) is compelling. What is not so clear, however, is what can be done to that engine. Kobrin and Schuerman reached the rather depressing conclusion that any neighborhood which has had a high level of crime over several years may be considered "lost" territory for purposes of effective crime reduction (Kobrin and Schuerman, 1982: 411). Wilson and Kelling, in a popular review of similar evidence, agree that crime prevention efforts should be focused on areas "at the tipping point--where the public order is deteriorating but not unreclaimable...." (Wilson and Kelling, 1982: 38).

Kobrin and Schuerman, although pointing out that the deterioration process is "linked to wider problems of policy and economy, whose solution transcends both the resources and the authority of local governments (pp. 416-417), nevertheless prescribe certain policy initiatives which might interrupt that process. Their first priority was the institution of

"vigorous local political control of zoning, planning, and building code requirements," supplemented by a set of social and educational services to assist low income families and children. Combined with these broad policy changes, however, were recommendations for law enforcement practices. They argued:

> It is likely that the emerging areas would have to be established as special police administrative districts with a higher than average ratio of police to population and an emphasis on foot patrolling. Needed would be relentless law enforcement by a police cadre devoted to developing the reality as well as the image of the "friendly neighborhood cop." (Kobrin and Schuerman, 1982: 415)

Based largely on a study of foot patrol conducted in Newark (Police Foundation, 1981), Wilson and Kelling reached a similar conclusion, arguing that police should emphasize their role in maintaining order by reinforcing the informal control mechanisms of the community itself, especially by means of foot patrol and the maintenance of standards on public transportation (Wilson and Kelling, 1982: 38).

Having made these recommendations, however, Kobrin and Schuerman added this sobering proviso:

> There is little reason to assume that these policy initiatives can be readily implemented. There is even less reason to assume that, if implemented, they might have substantial pay off in crime reduction, since they would leave untouched the major sources of metropolitan crime in the enduring high crime neighborhoods. (Kobrin and Schuerman, 1982: 415)

After reviewing this research and discussing its ramifications, the Newark Fear Reduction Task Force decided that, given the seriousness of the problems of fear, disorder and crime, it would be desirable to test the effects of attempting to reduce the social and physical "signs of crime."

The exact nature of that effort is described in the next section. The remainder of this section describes the basic hypotheses upon which the program, and its evaluation, were constructed.

Hypothesized Effects

The coordinated community policing efforts were designed to have the following hypothesized effects:

- Reduce the perceived area social disorder and physical deterioration problems,
- Reduce the fear of personal and property crime victimization in the area,
- Reduce the level of perceived area crime problems,
- Reduce the percentage of local residents and non-residential establishments victimized by crime,
- Reduce recorded crime,
- Increase the installation of household crime devices, without increasing the tendency to withdraw from all risks,
- Improve the evaluation of police services, and
- Improve satisfaction with the area.

Each of these hypotheses is discussed in greater detail below.

Perceived Area Social Disorder and Physical Deterioration Problems. It was expected that the program, especially the efforts to reduce the "signs of crime," would reduce levels of social disorder and physical deterioration, as reported by those residing in the area where the program is implemented.

Fear of Personal and Property Crime Victimization in the Area. The underlying rationale leads to the hypothesis that the program should lead to a decreased fear of victimization, that is, a reduced sense of vulnerability to becoming a victim of either personal or property crime.

Perceived Area Crime Problems. As Furstenberg (1971) pointed out, there is a significant difference between the fear of crime, an individual's assessment of his or her own risks of victimization, how much he or she personally is endangered by crime, and concern about crime, an individual's perception of the seriousness of crime as a public problem. Subsequent research (Baumer and Rosenbaum, 1982; Skogan and Maxfield, 1981) has supported the original conclusion that fear and concern are independent concepts.

The fear of crime, on the one hand, has a strong emotive content, is related to the local crime rate and personal victimization, is associated with anxiety and leads to the taking of steps to protect one's own safety. Concern about crime, on the other hand, is more of a cognitive issue, is related to media content as well as political and social attitudes, and can lead to both household and neighborhood anti-crime measures (Lavrakas 1981). It can still be expected, therefore, that the coordinated program should lead to a reduction in perceived area crime problems but this is a less tenable link than that hypothesized for fear of crime.

Victimization Experiences. To the extent that the coordinated program can effect the opportunities for and concern about committing crime, it should, in turn, lead to the reduction of victimization. Note, however, that variations in crime rates in small areas can be affected by outside events and persons, and that, in any event, crime rates may be very slow to

respond to changes in levels of disorder-- too slow to be captured in a one-year evaluation.

Recorded Crime. Although it has been clearly demonstrated that many crimes are never reported to the police--and that many of those reported are not recorded, or not recorded accurately, in official records--it can nevertheless be hypothesized that the Newark coordinated program would, by reducing crime, also reduce recorded crime.

Crime Prevention Activity. Given the apparent relationship between information, fear of crime and personal defensive behaviors (Lavrakas, et al, 1981), it is plausible to hypothesize that the program, by reducing fear, providing crime prevention advice and increasing confidence can lead to a reduction in such defensive behaviors as staying home after dark, walking only with an escort or purposefully avoiding other people on the street. In addition, by supplying crime prevention advice, it can be hypothesized that the program could have the effect of increasing the use of such household protective devices as window bars or extra lights.

Attitudes Toward the Police. It can be hypothesized that police efforts to reduce fear and disorder, whether they actually succeed or not, should indicate to area residents a higher level of caring, visibility, activity and availability of police in the neighborhood, thus leading to a perceived improvement in police service. It is also possible, however, that the tactics used by the police to reduce social disorder could lead to an increase in the perceived over-aggressiveness of police actions.

Satisfaction with Area. Finally, if police efforts are successful in reducing levels of disorder, fear of crime and even victimization, then residents could be expected to become more satisfied with their neighborhood as a place to live, and more committed to remaining there.

Summary

There is good reason to believe that increased social contact between police officers and citizens in dispassionate settings can lead to more effective crime prevention, reductions in fear and increased satisfaction with police service. In addition, prior research has demonstrated the links between social disorder and physical deterioration (the "signs of crime"), fear of crime, crime, and neighborhood deterioration. It appears reasonable, therefore, that the police, working with other agencies of government, might be able, by affecting disorder and deterioration, to have positive contributions to make toward the reduction of fear, more effective crime prevention and, finally, increased satisfaction with the police and the neighborhood.

As a result, the Newark Fear Reduction Task Force decided to institute a coordinated program designed both to increase the quantity and quality of police-community contacts and to reduce the "signs of crime." The Task Force sought to accomplish the following goals:

- Reduce perceptions of area social disorder and physical deterioration problems,
- Reduce the fear of personal and property crime victimization in the area,
- Reduce perceptions of area crime problems,
- Reduce victimization by crime,

- Reduce unnecessary defensive behaviors, and perhaps affect the installation of household protection devices,
- Improve the evaluation of police services, while avoiding increasing the impression that the police are overly aggressive, and
- Improve satisfaction with the area.

The remainder of this report describes how the coordinated Newark program was implemented, how it was evaluated and the results of that evaluation.

IMPLEMENTATION OF THE PROGRAM

Introduction

Several separate but integrated components of the coordinated community policing program were developed. First, a police community station (a "storefront" office) was opened. Second, directed citizen contacts (door-to-door visits) were made throughout the area. Third, a police neighborhood newsletter was distributed. Fourth, several activities aimed at intensified enforcement of laws concerning conduct in public places and the maintenance of order were undertaken. Finally, two different approaches designed to reduce physical deterioration were utilized. The actual operations of those programs are described below.

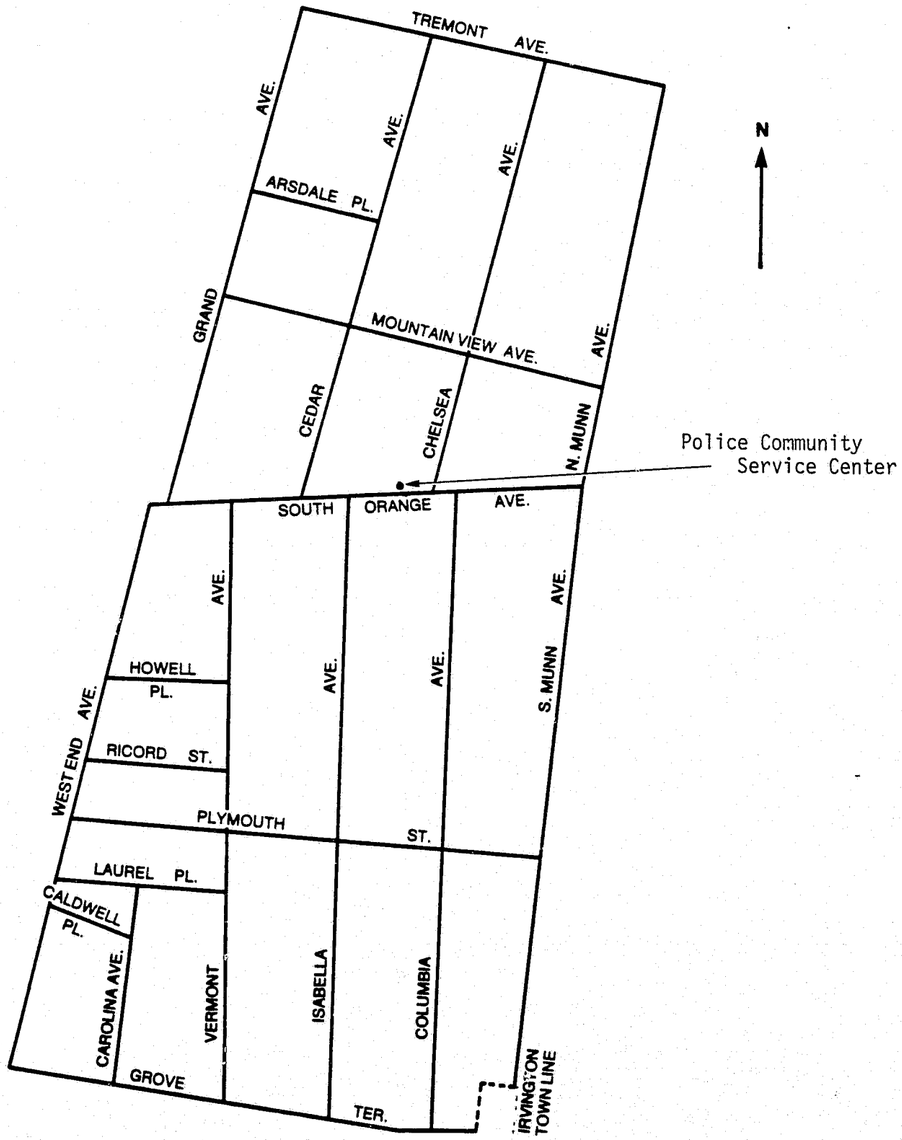
Police Community Service Center

The task force members believed that a local police community service center (a "storefront" office) within an area would provide an important mechanism for reducing the distance between the police and citizens. After visiting local police stations in Santa Ana, California, the Task Force located a vacant storefront at 767 South Orange Avenue, the major thoroughfare in the program area (called West 1, as described later). Figure 1 shows the location of the center within that area. While negotiations concerning the renting of this space proceeded, police officer Paul Jackson of the Detroit Police Department visited Newark to provide advice and assistance about the goals and operations of such an office.

After these discussions, the rent was set at $325 a month and the task force agreed that the center would provide the following services:

Figure 1

Location of Police Community Service Center in Program Area



- o Walk-in reporting of crimes,
- o Reporting of less serious crimes by telephone,
- o Distribution of crime prevention and Operation I.D. information,
- o Referral of problems to other city and community agencies,
- o Dissemination of newsletters,
- o Recruitment for and holding of meetings of block watch and other community organizations,
- o Coordination for door-to-door activities, and
- o Provision of space for police officers to meet, fill out reports and consume meals.

The center was officially opened on September 1, 1983, with service hours from 12 noon until 10 p.m., Monday through Saturday. In November, 1983, the center hours were expanded to 10 a.m. to 10 p.m., Mondays through Saturdays. The staffing consisted of one sergeant (Kenneth Williams), two police officers (Herbert Childs and George Manzella), and, when available, members of the auxiliary police, civilians with an interest in providing assistance to the police. Organizationally, the center was a subunit of the district within which it was located. As a result, the sergeant in charge of the center reported to the commander of the West District, Captain George Dickschied.

On a typical day, the officers at the storefront office would periodically be visited by residents of the neighborhood with information about local events, questions about police-related matters, or simply to talk. Occasionally, a citizen would report a crime directly to the storefront officers instead of calling or going to police headquarters or the precinct station. Children would often stop by just to chat. The storefront sergeant frequently had meetings with officers who had conducted "door-to-door" interviews with residents in the area in order to determine the types of problems being mentioned most often and to develop strategies to deal with with. One one or two evenings per week, local groups--ranging from block club organizations to a Boy Scout troup organized by the storefront officers--held meetings on the storefront premises.

TABLE 1

Monthly Community Service Center Activities*

Activity	Month										
	Sept	Oct	Nov	Dec	Jan	Feb	March	April	May	June	Total
Contacts With Citizens											
Walk-in visits:											
- General (providing or seeking information or assistance)	85	71	98	72	136	173	173	130	149	104	1191
- Filing report	29	35	27	28	39	42	39	39	40	34	352
- Making complaint	35	22	19	19	25	18	39	10	8	6	201
- Attending meeting	110	127	75	119	35	66	62	75	73	46	788
- Volunteers	44	89	26	13	32	60	37	40	19	84	444
Total	(303)	(344)	(245)	(251)	(267)	(359)	(350)	(294)	(289)	(274)	(2976)
Telephone Calls:											
- General	0	0	12	10	37	16	24	12	6	2	119
- Filing report	0	0	0	0	0	0	1	0	0	0	1
- Making complaint	0	0	1	1	0	5	6	0	4	2	19
Total	(0)	(0)	(13)	(11)	(37)	(21)	(31)	(12)	(10)	(4)	(139)
Contacts With Police											
Walk-in visits	37	48	39	73	138	88	76	54	122	36	711
Telephone calls	0	0	5	7	36	24	13	14	6	9	114
Total	(37)	(48)	(44)	(80)	(174)	(112)	(89)	(68)	(128)	(45)	(825)
Total contacts	340	392	302	342	478	492	470	374	427	323	3440

* These activities exclude those involved in coordination of directed police-citizen contacts and distribution of newsletters.

Table 1 presents a summary of activities recorded in official program records at the center from September 1983 through June 1984, the end of the evaluation period. As the table demonstrates, an average of almost 300 citizens came into the center each month, supplemented by about fourteen telephone calls. In addition, an average of about 82 contacts with police officers occurred each month.

Directed Police-Citizen Contacts

To provide a mechanism for creating positive contacts between police officers and citizens, the sergeant in charge of the service center (Kenneth Williams) was given the responsibility of assigning police offices to visit residents in the program area. Such visits, in addition to establishing communications with citizens, were designed to:

- o Elicit information about the nature and basis of citizens' fears--and possible means of combating them,
- o Provide follow-up assistance, information and referral advice,
- o Encourage citizens to become involved in block watch and other neighborhood groups,
- o Distribute crime prevention information,
- o Distribute the neighborhood police newsletter, and
- o Alert residents to the existence of the local Police Community Service Center.

Training for the officers assigned to these duties was provided by Major Philip Huber of the Baltimore County, MD Police Department. The visits were made primarily by the officers normally assigned to the program area, assisted by officers specifically assigned to this job by the precinct commander. The contacts were made between the hours of 10 a.m. and 8 p.m., excluding the usual dinner hour between 5 p.m. and 7 p.m.

At each home, the visiting officers, using an open-ended questionnaire (a copy is included as Appendix B), asked one representative of the household the following questions:

- o What are the biggest problems in the neighborhood?
- o Which are the three most serious problems?
- o For each of those three:
  - how has it affected the household?
  - what are the causes?
  - what should be done to solve it?

The answers to each of these questions were written on the questionnaire along with any comments or recommendations the officer(s) might have. The typical interview lasted seven to ten minutes. Citizens were often puzzled at first about why the police had initiated contact with them without a complaint being filed. This confusion and wariness usually dissipated quickly however, with citizens, many of whom offered coffee to the officers and invited them to sit down, frequently seeking to converse at great length.

This form was then submitted to the service center sergeant. After reviewing the forms to discern patterns, the sergeant then conferred with the officers filing the report to determine the most appropriate response. In this capacity, the sergeant became, in effect, the coordinator of the several program components. If the problem identified concerned matters that could be addressed by existing police units, the sergeant would enlist the assistance of those units in order to direct their attention to the specific area in question. If the response required the involvement of the Directed Patrol Task Force, the sergeant would contact the commander of that unit to notify him of the need for specific action. If the problems pertained to concerns that were the responsibility of other city agencies,

the sergeant would notify those agencies--either directly or with the assistance of the Assistant Coordinator of the program. The sergeant was then responsible for attempting to ensure that effective steps were taken to address the problem(s) identified and that the citizen involved was informed of the action(s) taken.

The initial contacts began on September 1, 1983 and continued throughout the evaluation period until July 1984. For the first two months, the officers were assigned general neighborhoods within the program area in which to concentrate their efforts; no specific addresses were assigned to particular officers. This system did not provide the extent of management control necessary for such a complex undertaking. As a result, starting in November 1983, each household in the program area was listed, given a unique identification number, and entered in a master log. Using this log, the sergeant assigned specific addresses to particular officers. The status of each assignment was recorded both in the master log and on a detailed map of the area maintained on the wall of the service center.

Table 2 presents a summary of the activities recorded in official program records of the directed police-citizen contact program from September 1983 through June 1984. The results indicate that contacts were reportedly made or attempted at 1242 households in the program area. Based on the 1980 census estimate of 1611 total and 1530 occupied households in the area, this indicates that contacts were made at 77% of the total and 81% of the occupied households in the area. Since area listings suggest that

TABLE 2

Monthly Distribution of Directed Police-Citizen Contact Forms

Nature of Form	Month										
	Sept	Oct	Nov	Dec	Jan	Feb	March	April	May	June	Total
Completed Interview	26	44	98	47	129	158	120	89	64	15	790
Unable to Locate Resident After Four Attempts	14	53	114	46	54	53	24	31	22	15	416
Vacant, Abandoned Building	3	1	3	0	4	7	6	5	0	0	29
Recontact	3	4	26	3	5	5	7	2	2	1	58
Outside Program Area	4	4	0	0	0	0	0	0	0	0	8
Refusal	0	1	0	0	2	2	1	0	1	0	7
Total	40	107	241	96	194	225	158	127	89	30	1306

fewer households existed in 1983-4 than in 1980, the percentages are probably even higher. Altogether, 790 completed interviews were recorded. Using the 1980 census estimates, this suggests that interviews were completed in 49% of the total and 52% of the occupied units.

The results further reveal that the number of completed interviews rose slowly in the first two months, increased in November, decreased during the Christmas/New Year period, rose again during the next three months, and declined steadily from April through June.

To provide an insight into the nature of the problems mentioned in the interviews, Table 3 presents a summary of the types of problems mentioned in response to the questions about the first and second most important problems in the neighborhood. It is noteworthy that the greatest number of responses, 25.6 percent of the total, indicated that the residents had no major problem. The most frequently mentioned problems were juveniles (22.3%), burglary (13.4%), auto theft or damage (11.1%), and personal crime (5.6%). No other problems were mentioned 5 percent of the time.

In order to get a better understanding of the ways in which the police responded to these problems, Table 4 provides data concerning the responses recorded to the two most important problems mentioned. The results indicate that, overall, the most frequent responses were to change police tactics (25%), encourage citizen involvement (13%), recommend security devices (11%), and increase police presence (11%). The pattern of responses to problems followed reasonable expectations: security devices were most often recommended to deal with burglary; police tactics were most often changed to deal with disorders, drugs, juveniles, auto theft, personal crime and

Table 3

Distribution of Problems Mentioned in Directed Police-Citizen Contacts (In Descending Order of Mentions)

Type of Problem	Number of Mentions	Percent
None	402	25.6
Juveniles	350	22.3
Burglary	21	13.4
Auto Theft or Damage	175	11.1
Personal Crime	88	5.6
Traffic	59	3.8
Drugs	49	3.1
Environment	47	3.0
General Fear	35	2.2
Disorders	32	2.0
Don't Know	23	1.5
Theft	20	1.3
Vandalism	19	1.2
Other	17	1.1
Police Service	13	0.8
Public Services	12	0.8
Disputes	10	0.6
Suspicious Behavior	6	0.4
Neighbors	5	0.4
Total	1573	100.1*

Note: Based on responses to questions concerning first and second most important problems.

*Does not equal 100% due to rounding.

Table 4

Responses to Two Most Important Problems Mentioned*

Type of Problem		Recommend Security Devices	Provide Information	Encourage/ Assist Citizen Involvement	Increase Traffic Enforcement	Increase Police Presence	Direct Police Involvement	Involve Auxiliary Police	Change Police Tactics	Contact Other Agencies	Provide More Opportunities	No Action Taken	Total*
Juveniles	N	66	66	87	12	109	23	77	314	109	44	174	1081
	(%)	(6)	(6)	(8)	(1)	(10)	(2)	(7)	(29)	(10)	(4)	(16)	(99)
Burglary	N	150	36	136	8	72	8	43	128	36	8	86	711
	(%)	(21)	(5)	(19)	(1)	(11)	(1)	(6)	(18)	(5)	(1)	(12)	(100)
Auto Theft or Damage	N	80	11	80	6	75	6	17	155	34	6	103	573
	(%)	(14)	(2)	(14)	(1)	(13)	(1)	(3)	(27)	(6)	(1)	(18)	(100)
Personal Crime	N	37	15	40	3	43	0	9	79	21	3	55	305
	(%)	(12)	(5)	(13)	(1)	(14)	(0)	(3)	(26)	(7)	(1)	(18)	(100)
Traffic	N	12	12	19	35	17	0	9	51	16	2	29	202
	(%)	(16)	(6)	(9)	(17)	(8)	(0)	(4)	(25)	(8)	(1)	(14)	(98)
Drugs	N	6	12	14	2	28	2	2	51	8	2	32	159
	(%)	(4)	(8)	(9)	(1)	(18)	(1)	(1)	(32)	(5)	(1)	(20)	(100)
Environment	N	6	10	24	3	11	2	3	35	39	2	26	161
	(%)	(4)	(6)	(15)	(2)	(7)	(1)	(2)	(22)	(24)	(1)	(16)	(100)
General Fear	N	8	19	22	2	20	0	15	17	18	2	15	138
	(%)	(6)	(14)	(16)	(1)	(14)	(0)	(11)	(12)	(13)	(1)	(11)	(99)
Disorders	N	0	3	3	1	11	0	3	30	3	3	15	72
	(%)	(0)	(4)	(4)	(1)	(15)	(0)	(4)	(42)	(4)	(4)	(21)	(99)
Theft	N	8	4	8	0	9	0	4	14	8	2	11	68
	(%)	(12)	(6)	(12)	(0)	(13)	(0)	(4)	(22)	(12)	(3)	(16)	(100)
Vandalism	N	9	7	10	0	4	3	2	9	6	2	17	69
	(%)	(13)	(10)	(14)	(0)	(6)	(4)	(3)	(13)	(9)	(3)	(25)	(100)
Other	N	14	14	23	0	18	2	2	33	33	5	32	176
	(%)	(8)	(8)	(13)	(0)	(10)	(1)	(1)	(19)	(19)	(3)	(18)	(100)
Total	N	396	209	466	72	417	46	186	916	331	81	595	3715
	(%)	(11)	(6)	(13)	(2)	(11)	(1)	(5)	(25)	(9)	(2)	(16)	(101)

Note: Based on responses to questions concerning two most important problems mentioned. Multiple responses to the same problem were not uncommon; therefore, the total number of entries exceed the total number of problems mentioned. Percentages are across columns, within the same row.
*Totals may not equal 100% due to rounding.

traffic; other agencies were most often notified to deal with environmental problems.

Neighborhood Police Newsletter

To provide area residents with crime prevention advice, stories of successful efforts to prevent or solve crimes and other local information, the task force decided to publish a monthly newsletter designed for the program area. Sergeant Ernest Newby was appointed editor-in-chief; Detective William Caulfield served as assistant editor. They were assisted by an editorial board consisting of Captain Joseph Santiago, the Fear Reduction Program Coordinator, and Ms. Maria Cardiellos, the Assistant Coordinator.

To familiarize themselves with the nature of their tasks, this group collected several examples of neighborhood newsletters from around the nation, including police-generated ones. The one that ultimately served as the principal model was ALERT, a publication of the Evanston (IL) Police Department and its Residential Crime Prevention Committee. Commander Frank Kaminski of the Evanston Police Department and Dr. Dennis Rosenbaum of Northwestern University provided consultation to the Newark editorial board about design, content and production.

The newsletter was entitled, "ACT 1," based on the acronym for "Attack Crime Together," the name given to the Department's overall fear reduction program. A sub-heading read, "Published by the Newark Police Department and Neighborhood Residents." Print was black on light brown stock. A variety of type sizes and styles were used for story headings and graphics were

utilized wherever possible. The newsletter consisted of four pages, and was printed on a single 11" x 17" sheet of paper which was folded so as to produce four 8 1/2" x 11" pages. There were three columns to the page, and a variety of spatial arrangements were used.

The editor, Sergeant Newby, was responsible for locating general items of interest, sometimes finding them in newsletters from other cities, and writing others from local source materials. In addition, information was provided by Lieutenant Jack Yablonski of the Newark Crime Prevention Bureau, Captain George Dickscheid of the South District, Sergeant Kenneth Williams of the Police Community Service Center, members of the Crime Analysis Bureau, and other members of the Department.

Materials were to be submitted to the editor by the first of each month. The final copy was then sent to the Neighborhood Information Services Bureau of the City of Newark for layout and typesetting. Because only one person worked in this capacity, and because several other city agencies were making competing requests, preparation of the newsletter often took several days. In addition, the graphic artist assigned to work on this task was not able to give it top priority; as a result other delays often occurred. To compensate, the editor and assistant editor assumed the responsbility for designing and laying out the newsletter format themselves.

Another production problem concerned the supply of materials required for publication, which was frequently exhausted, as the printing agency was unable to maintain a continuous supply from the City. As a result, the Police Department arranged to procure the necessary materials directly.

As planned, the newsletter (a copy of which is included as Appendix C) contained a mix of general and specific local items. The general items included crime prevention and other safety advice meant to provide the reader with a sense that there were precautionary measures which could be employed to increase personal, household, and neighborhood security. In addition, there were two regular columns, "From the Desk of the Police Director," written by Director Hubert Williams, and "Captain's Corner," written by Captain George Dickscheid, commander of the West District. Finally, the newsletter included, among the neighborhood items, information about neighborhood activities, area officers, and "good news" stories about crime that had been prevented or solved, or other situations that had been resolved because of efforts of the police and citizens in the area. Although Commander Kaminski had encouraged citizen involvement in writing and production, this proposal was not feasible in Newark because of schedule demands to produce the newsletters as quickly as possible.

Table 5 presents the percentage distribution of the content of the newsletter. As the table indicates, the largest amount of space (29%) was devoted to "good news" stories of successful efforts to prevent or solve crimes. Crime prevention advice was the second most common type of content, which constituted 26% of the total. Information about the fear reduction program was given 20% of the space. No other type of content constituted more than 10% of the total.

The first newsletter was distributed in mid-October, 1983. Thereafter, newsletters were distributed mid-month in November, December (of 1983), January, February, and March of 1984. From 1,000 to 1,500 copies were given

Table 5

Percentage Distribution of Newark W-1 Newsletter Content
(Based on Column Inches)

Type of Content	Percent of Content
Good News (Successful Prevention)	29%
Crime Prevention Advice	
Personal Crime	4%
Property Crime	18%
Personal and Property Crime	4%
(Crime Prevention Advice total)	26%
Departmental Information	
Related to Fear Reduction	20%
Not Related to Fear Reduction	4%
(Departmental Information total)	24%
Advice or Information	
Related to Crime	5%
Not Related to Crime	8%
(Advice or Information total)	13%
Safety advice	2%
Encouraging people to get involved	4%
Greetings	3%
Total	100%

each month to block and tenant associations, retail stores, apartment buildings, banks, grocery stores and other locations. Distribution was carried out by members of the community service center staff, officers conducting directed police-citizen contacts, auxiliary police and neighborhood volunteers. Copies were also available at the center itself.

Intensified Enforcement and Order Maintenance Program

Activities to intensify enforcement and order maintenance consisted of five components:

- o foot patrol, to enforce laws and maintain order on sidewalks and streets corners,
- o radar checks, to enforce speeding laws on the streets,
- o bus checks, to enforce ordinances and maintain order aboard public buses,
- o enforcement of the state disorderly conduct laws, to reduce the amount of loitering and disruptive behavior on corners and sidewalks, and
- o road checks, to identify drivers without proper licenses or under the influence of alcohol, to detect stolen automobiles and to apprehend wanted offenders.

These operations were conducted at least three times per week, from Monday through Friday, based on a random assignment schedule to minimize predictability. Almost all of these operations were conducted from 4 p.m. to midnight. Primary emphasis was given to the program area, called W-1, discussed here (and another one, S-1, which also tested this approach, and is described in Pate and Skogan, 1985). In addition, the Directed Patrol Task Force was assigned periodically to other areas of the city where levels of disorder required it. However, these operations were not conducted in the comparison area, S-4.

All of these operations were conducted by the Directed Patrol Task Force, a group of 24 patrol officers selected by the precinct commanders as the best qualified to assume such responsibility. The group received three days of training on the legal, tactical, and community relations aspect of such operations.*

The level of total monthly program activity in the W-1 area, as measured by the number of days, operations and officer-hours worked, is

* From April through August, several demonstration operations were carried out in areas of the city not involved in the experiment to refine the techniques required for conducting such activities without disrupting community relations.

In order to provide this group of officers with time away from their regular assignments, a pool of 157 non-patrol officers was established. Each one of these officers was expected to spend one eight-hour tour of duty per month in a patrol car as a replacement for one of the specialized enforcement officers. To accomplish this, a scheduling technique was developed to minimize inconveniences to the officers involved. Although some non-patrol officers expressed resentment at being assigned to patrol duty, this type of reaction never became a serious problem.

Another problem also arose as a result of the scheduling technique used by the special enforcement officers. Due to the structure of the program, schedule changes could be made only one week before they went into effect. This was in violation of contractual agreements established by the police union and the police administration, which require 30 days notice of schedule changes. However, because there was a belief among the officers assigned to the Directed Patrol Task Force that the program was of merit, they waived this requirement.

shown in Table 6. These data are compiled from official program records. As a check on its reliability, a full-time monitor was hired to observe a random sample of program operations for which she collected independent data. The match between the two sets of data was almost perfect, suggesting that the official program records can be relied upon as quite accurate.

Table 6

Level of Enforcement and Order Maintenance Program Activity, By Month, in W-1 Program Area

Indicator of Activity	Month										
	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	Total
Number of Days	5	3	9	8	13	8	7	7	6	7	73
Number of Operations	5	7	11	16	32	32	31	21	11	16	182
Number of Officer Hours	145.5	148.5	138.5	224.5	366.5	265.0	383.0	254.0	210.0	323.0	2458.5

As the table indicates, the Directed Patrol Task Force conducted 182 operations in program area W-1 on 73 days, expending a total of almost 2500 officer hours. In order to understand better the exact nature of the program activity, Tables 7 and 8 present the monthly number of operations and officer hours expended in W-1, broken down by program component.

Table 7

Number of Enforcement Operations, By Month and Strategy in W-1 Program Area

Strategy	Month										
	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	Total # (%)
Foot Patrol	5	2	9	3	16	15	17	11	5	7	90 (49.5)
Radar Checks	0	2	1	8	8	12	3	3	2	2	41 (22.5)
Bus Checks	0	1	1	5	7	2	2	2	2	5	27 (14.8)
Disorderly Behavior Enforcement	0	0	0	0	1	3	8	4	1	0	17 (9.3)
Road Checks	0	2	0	0	0	0	1	1	1	2	7 (3.8)
Total	5	7	11	16	32	32	31	21	11	16	182 (99.9)

Table 8

Number of Enforcement Officer Hours, By Month and Strategy, in W-1 Program Area

Strategy	Month										
	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	Total # (%)
Foot Patrol	145.5	42.5	117.5	55	187	155	236.5	136	123	254	1452 (59.1)
Radar Checks	0	9	3	70	85.5	102	42	34	20	26	391.5 (15.9)
Bus Checks	0	5	18	99.5	92	5	20	17	6	30	292.5 (11.9)
Disorderly Behavior Enforcement	0	0	0	0	2	3	28.5	18	7	0	58.5 (2.4)
Road Checks	0	92	0	0	0	0	56	49	54	13	264.0 (10.7)
Total	145.5	148.5	138.5	224.5	366.5	265.0	383.0	254.0	210.0	323.0	2458.5 (100.0)

These tables reveal that about 50 percent of the operations and 59 percent of the officer hours devoted to the program were expended on foot patrol. The only program activity during the first month consisted of foot patrol. Other components were added in October. Enforcement of disorderly behavior laws began in January of 1984.

The outcomes achieved by the enforcement and order maintenance program are summarized in Table 9 below.

Table 9

Program Outcomes Produced by the Enforcement and Order Maintenance Program, By Month, in the W-1 Program Area

	Month										
Outcome	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	Total
Summonses	19	54	6	72	58	89	59	93	42	20	512
Buses Inspected	7	6	13	58	44	8	4	5	16	34	195
Field Interrogations	13	7	6	2	11	4	8	14	7	39	111
Arrests	3	0	3	4	3	6	11	8	4	8	50
Evictions from Buses	5	3	0	26	12	4	0	3	2	7	62

The table indicates that the most frequent program outcome was the issuance of summonses, followed by the inspection of buses, field interrogations, arrests and evictions from buses. Component-specific descriptions of levels of activity and outcomes are discussed below.

Foot Patrol. On a typical evening, eight pairs of two officers each would walk throughout the program area for one to four hours. During that time, the officers would engage in a wide variety of activities, ranging from casual conversation with area residents and merchants to dispersing unruly crowds to ticketing illegally parked cars to responding to calls for assistance. The sergeant in charge continuously drove through the area,

observing the officers on foot, stopping to discuss developments with them and providing instructions.

As shown in Table 7, a total of 90 such operations were conducted in W-1 in the 10 months of the program, requiring slightly over 1,450 officer hours. The outcomes produced by these activities are shown in Table 10.

Table 10

Program Outcomes Produced by the Foot Patrol Component, By Month, in W-1 Program Area

	Month										
Outcome	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	Total
Summonses	19	0	6	5	12	48	21	27	3	20	161
Field Interrogations	13	2	6	1	4	4	8	12	6	17	73
Arrests	3	0	3	1	1	4	8	3	3	4	30
Buses Inspected	7	0	0	2	0	0	1	0	0	0	10
Evictions from Buses	5	0	0	0	0	0	0	0	0	0	5

The data indicate that 161 summons were issued, 73 field interrogations were conducted and 30 arrests were made program officers while engaged in foot patrol.

Radar Checks. These operations were conducted by two officers, sitting in a marked police vehicle equipped with a radar device, alongside a major thoroughfare. When a vehicle was found to be exceeding the legal speed limit, the police vehicle, with lights flashing, would quickly pursue the violator and require it to pull to the side of the road. The officers would then approach the vehicle, request the driver's license and vehicle registration, and, if no acceptable excuse for the excessive speed was

provided, issue a ticket to the violator. In addition to issuing summonses to violators of speed laws, the officers checked the credentials of the drivers and determined if the driver had been driving while under the influence of alcohol, or whether the car has been reported stolen.

Table 7 indicates that radar checks began in October of 1983 and continued through June of 1984. The outcomes achieved by this component are presented in Table 11.

Table 11

Program Outcomes Produced by the Radar Check Component, By Month, in W-1 Program Area

	Month										
Outcome	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	Total
Summonses	0	12	0	52	46	40	11	21	10	0	192
Field Interrogations	0	0	0	0	6	0	0	0	0	10	16
Arrests	0	0	0	2	2	2	2	1	1	0	10

A total of 192 summonses were issued over the ten-month program period by officer working on this assignment.

Bus Checks. As a result of repeated complaints from citizens, the Directed Patrol Task Force began a program designed to reduce disorderly

behavior on public buses. On a typical operation, two officers would signal a bus driver to pull to the side of the road. One officer would enter the bus by the rear exit, the other through the front door. The officer at the front would deliver this message:

> Excuse me, ladies and gentlemen, this is a Newark Police Department bus inspection. We are here to remind you that there are certain city ordinances which apply when you ride public transportation in our city. There is no smoking, no drinking, no gambling and no loud music allowed. Anyone doing any of these things should cease immediately. Otherwise, we will ask you to get off the bus.
>
> [After dealing with any problem cases.] These bus inspections are being conducted by the Newark Police Department for your safety and comfort. Thank you for your cooperation.

After the message was delivered and offenders were evicted, the officers answered questions from the passengers and requested the bus driver to sign a form indicating the time and place the inspection occurred. These forms were submitted to the supervisor of the Directed Patrol Task Force to document the unit's activities.

The vast majority of the bus operations adhered to these guidelines. However, on rare occasions, when the program was in its initial months, the officers failed to explain the reasons for conducting a bus inspection before actually proceeding with the operation. It is possible that, on these few occasions, failure to inform the passengers of the rationale until after the inspection was completed may have unintentionally increased the level of fear and anxiety. In the vast majority of cases, however, the rules were adhered to scrupulously. These operations appeared to be well received by most passengers, even producing applause on some occasions.

Again referring to Table 7, it can be seen that bus checks began in October of 1983 and continued for the next eight months. Table 12 shows the outcomes achieved by these operations.

Table 12

Program Outcomes Produced by the Bus Check Component, By Month, in W-1 Program Area

	Month										
Outcome	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	Total
Buses Inspected	0	6	13	56	44	8	3	5	16	34	185
Evictions from Buses	0	3	0	26	12	4	0	3	2	7	57
Summonses	0	0	0	15	0	0	0	0	0	0	15
Arrests	0	0	0	1	0	0	0	2	0	0	3
Field Interrogations	0	0	0	1	1	0	0	0	0	0	2

As the table indicates, this component resulted in the inspection of 185 buses during the ten-month program period, producing a total of 57 evictions.

Disorderly Conduct Enforcement. The disorderly conduct enforcement component was designed to reduce street disorder by the rigorous enforcement of the state disorderly conduct laws. Operations of this component were carried out in three stages. First, any group of four or more persons which "congregated to create a public hazard" (in the words of the State statute) were notified by officers in a marked police car that they were in violation

of the law and required to disperse.* Second, a few minutes after this notice was given, officers in a police van appeared and, assisted by as many other officers as necessary, took to the local precinct station all persons who failed to heed the request to disperse. Finally, those persons detained were processed, screened for existing warrants and charged. It was expected that continual enforcement of this law would eventually lead to a reduction in the number of disorderly groups lingering in public places.

As Table 7 indicates, operations of this type started throughout the rest of the program period in January and were used periodically throughout the rest of the program period.

The outcomes produced by this component are summarized in Table 13.

Table 13

Program Outcomes Produced by the Disorderly Conduct Enforcement Component, By Month, in W-1 Program Area

	Month										
Outcome	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	Total
Field Interrogations	0	0	0	0	0	0	0	2	1	12	15
Compliant Dispersals	0	0	0	0	1	2	8	2	1	0	14
Arrests	0	0	0	0	0	0	0	2	0	4	6
Summonses	0	0	0	0	0	1	0	0	0	0	1

*The notification is the legal descendent of the requirement that local magistrates "read the riot act" to bands of citizens bent upon disturbing the peace before their yeomanry could act to disperse the crowd. The magistrates, typically sitting on horseback (this was before patrol cars), literally read to the crowd the words of the act defining a riot and requiring dispersal. (See Silver, 1967.)

A total of 15 field interrogations were conducted in the W-1 area during these operations; six arrests were made.

Road Checks. Road checks were established to identify drivers without licences or under the influence of alcohol, to determine if any of the automobiles stopped had been stolen and to ascertain if there were any outstanding arrest warrants for any of the persons stopped. In accordance with legal precedents, it was decided that, as a general rule, every fifth vehicle would be stopped. If traffic was sparse, the sampling interval was reduced; if the flow was heavy, the interval was increased.

The motorist would first become aware of such an operation by the presence of a sign indicating "Newark Police Road Check in Effect" and a police vehicle with flashing lights on its roof. Reflective cones would designate the paths through which traffic was to flow. At night, flares would also be used to illuminate the traffic lanes. To insure compliance to the selection procedure, an officer recorded the license number of every vehicle passing through the checkpoint, designating which ones were to be stopped and, in certain instances, notified the inspecting officres of suspicious behavior by the occupants of particular cars. At this point, selected drivers were requested to pull off the road; all others were allowed to proceed.

The selected motorists would then encounter another sign saying, "Have driver's license, registration and insurance card ready." Two officers would approach each selected car and request the required identification papers. If all was in order, the driver was allowed to drive on. In most

instances, the delay required three to five minutes. In cases in which licenses had expired, registration or insurance certificates appeared not to be in order, or drivers acted suspicioulsy or appeared to be under the influence of alcohol, further inquiries were made. If record checks and further discussions with the driver could resolve all questions, the vehicle was allowed to pass through the checkpoint, requiring a total delay of perhaps ten minutes. In those cases where violations were found, summonses were issued or arrests were made.

In determining the feasibility of establishing a road check, many considerations had to be taken into account. First, road checks could not be conducted during inclement weather. One important reason for this was that the intense lighting apparatus used to illuminate the operation was so sensitive to moisture that it broke when it got wet. In addition, rain or snow during such operations would cause motorists' and their credentials to become wet, risking numerous complaints and citizen dissatisfaction.

Second, to insure that these operations were conducted effectively, a total of 16 officers and two supervisors were utilized in most cases. In cases of illness, vacation or other situations in which a full complement of officers were not available, at least ten officers and one supervisor were required. If the minimum number of officers was not available, such operations were not conducted.

Finally, the costs involved in such operations, especially for flares and replacement lights, made road checks a highly expensive strategy in light of the limited discretionary budget of the police department.

For all of these reasons, this was the least frequently utilized component of the intensified enforcement program. As Table 7 indicates, road checks were utilized only seven times in ten months, requiring a total of 264 officer hours. The outcomes produced by this component are shown in Table 14.

Table 14

Program Outcomes Produced by the Road Check Component, By Month, in W-1 Program Area

	Month										
Outcome	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	Total
Summonses	0	42	0	0	0	0	27	45	29	0	143
Field Interrogations	0	5	0	0	0	0	0	0	0	0	5
Arrests	0	0	0	0	0	0	1	0	0	0	1

As the table indicates, a total of 143 summonses were issued during such road check operations.

Neighborhood Clean-Up Program

This program had two components: an intensification of city services, and a revision of the juvenile judicial sentencing process to allow for community work in the program area. Each of these is discussed below.

Intensification of City Services. The city government committed itself to intensifying its demolition of previously abandoned and condemned buildings; cleaning up lots designated to have high priority by the police department; and intensifying efforts to repair streets, improve lighting and maintain garbage collection in the area. The personnel necessary for this effort were to be from either existing city agencies or private contractors hired by the city to accomplish the requisite tasks.

Before the program began, the component coordinator compiled a list of 4 lots or buildings in the W-1 area which needed to be cleaned up. Of the total of 4 locations which had been designated as needing attention, the city did not clean any. Emergency demolition was performed, however, on two designated sites. In addition, the city placed emphasis on the delivery of other services to the area.

Juvenile Judicial Sentencing. The second component of the clean-up program was the creation of a legal mechanism to assign juveniles arrested for minor acts of delinquency or other minor offenses to appear before a Juvenile Conference Committee (JCC), where they were given the option of performing community service activities or appearing before a juvenile court judge for case adjudication. The committee was comprised of 15 representatives of the business community, the clergy, educational institutions and area residents. Members were selected by the police and probation departments and approved by the presiding judge of the Domestic Relations Court.

At a typical meeting of the Juvenile Conference Committee, the accused youths, aged 13 to 18, were given an opportunity to respond to the charges against them--ranging from possession of marijuana to receiving property to simple assault to shoplifting to burglary. In the company of at least one of their parents, each youth was given a chance to explain the circumstances of his/her arrest. If the youth accepted culpability and was willing, he/she was considered for inclusion in the community work service program. Depending on the seriousness of the offense, the JCC would assign the youth to serve a designated number of hours in such service.

On the first day of such service, the youths were given a physical examination by the police department surgeon to insure that each was able to participate in program activities without serious risk. All those who passed this exam were then given instructions by the program supervisor concerning the rules of their participation, physical fitness training and the necessity to work as a disciplined team. After this instruction, the youths were transported to the work site, where they were trained in the use of the necessary equipment, organized into work teams and supervised closely during the remainder of the eight-hour work day. During the half-hour lunch period, the youths were driven to a local fast food franchise where they were provided with a meal paid for by the local franchise.

The supervisor of these work teams evaluated the attitudes and performance of each youth and supplied these evaluations to the JCC for their review. Each youth was expected to appear for work on as many days as were required to complete the work sentence supplied to him/her. If a youth did not successfully complete that sentence, he/she would be referred again

to the JCC, which would either administer an alternative sentence or refer the youth back to the court for trial.

A total of 3 youths worked in one location in the program area for one Saturday in December, performing a total of 18 person hours of labor. Two youths who were scheduled to work did not appear.

Through the efforts of both components of the clean-up program, therefore, a total of 3 of the 6 locations designated as requiring attention actually received it.

Summary

The Newark coordinated community policing program had two major goals:

- To increase the quantity and quality of police-community contacts, and
- Reduce social disorder and physical deterioration.

To accomplish the first goal, the task force created:

- o A neighborhood community police center,
- o A directed police-citizen contact program, and
- o A neighborhood police newsletter.

To accomplish the second goal, the task force established:

- o Several programs designed to reduce social disorder, and
- o Programs to reduce physical deterioration.

As part of the effort to reduce social disorder the following tactics were utilized:

- o foot patrol, to enforce laws and maintain order on sidewalks and street corners,
- o radar checks, to enforce speeding laws on the streets,

- o bus checks, to enforce ordinances and maintain order aboard public buses,
- o enforcement of the state orderly conduct laws, to reduce the amount of loitering and disruptive behavior on corners and sidewalks, and
- o road checks, to identify drivers without proper licenses or under the influence of alcohol, to detect stolen automobiles and to apprehend wanted offenders.

The program to reduce physical deterioration consisted of the intensified efforts of municipal service agencies and the sentencing to community work service of juvenile first-time offenders.

EVALUATION DESIGN AND METHODOLOGY

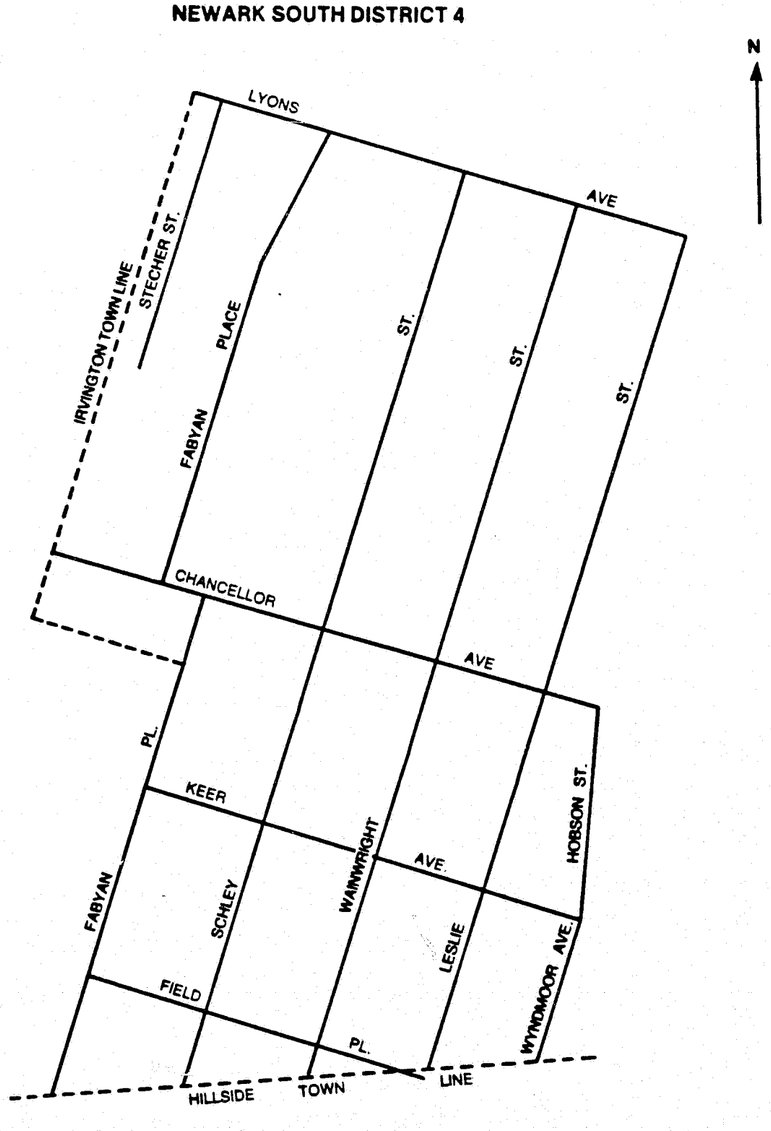
Introduction

The fundamental evaluation design was based upon the comparison of attitudinal measures collected before and ten months after the introduction of the program. These measures were obtained by conducting interviews with random samples of residents and representatives of non-residential establishments in both a program area and in a comparison area in which no new fear reduction activities were undertaken. In addition, monthly recorded crime data were collected for both areas forty four months prior to, and 13 months during, the implementation of the program. The remainder of this section describes the process by which the program and comparison areas were selected, the sampling procedures, the measures used and the recorded crime data retrieval procedures.

Program and Comparison Areas

A multi-stage selection process was used to insure that the fear reduction programs were implemented in comparable areas--and in areas appropriate to the theories being tested. First, the crime analyst, the four precinct captains and other members of the Newark Police Department were asked to identify areas of approximately 20 square blocks, containing both residential and commercial units. Each area had to display conditions of social disorder and physical deterioration sufficient to be expected to be associated with the fear of crime but not so exaggerated as to be beyond effect within a one-year evaluation. A total of 34 such areas were selected. Data for each of these areas were compiled from the block statistics contained in the 1980 Census of Population and Housing concerning:

Figure 2



- population
- number of occupied units
- ethnic composition
- median housing value
- occupancy rate
- percentage of owner-occupied units
- average number of persons per occupied unit
- percentage of inhabitants over the age of 65
- percentage of inhabitants under the age of 18

Cluster analyses were performed on these data to determine the set of five noncontiguous areas which were most closely matched on the dimensions examined. These five areas were then randomly assigned to receive certain types of programs or, in the case of the comparison area, to receive no new programs.

Demographic data from the 1980 Census concerning the program area, W-1, which was exposed to the effort to reduce the signs of crime and the comparison area, S-4, are presented in Table 15 below.

Table 15

Demographic Data for Coordinated Community Policing Program and Comparison Areas

	Population						Housing Units			Occupied Units		
		Ethnicity			Age							
Area	Total	% Black	% White	% Spanish Origin	% Below 18	% 65 and above	Total	% Single Family	% Occupied	Persons Per Unit	Total	% Owner Occupied
Program Area W-1	5189	88	6	6	39	5	1611	12	95	3.4	1530	39
Comparison Area S-4	4300	98	1	1	36	7	1435	13	96	3.1	1372	25

Source: 1980 Census

A map of the program area was presented as Figure 1; a map of the comparison area is provided as Figure 2. The program area, termed W-1, had a population of 5,189 persons living in 1,611 housing units. Of that

Table 16

Types of Non-Residential Establishments
in Program and Comparison Areas

Type of Establishment	Program Area (W-1)		Comparison Area (S-4)	
	N	%	N	%
Construction	0	0.0	0	0.0
Manufacturing	2	4.3	1	1.9
Wholesale	0	0.0	1	1.9
Hardware & Garden Supply	2	4.3	1	1.9
Grocery and Food Services Stores	8	17.0	7	13.2
Restaurant/Fast Food	4	8.5	7	13.2
Liquor Stores/Bars/Lounges	8	17.0	3	5.7
Furniture & Clothing/ Department Stores	2	4.3	2	3.8
Speciality Shops/Book Stores/Drug Stores	2	4.3	1	1.9
Electronic & Video Sales	0	0.0	1	1.9
Finance, Insurance, Real Estate	1	2.1	5	9.4
Auto Sales & Repair Shops	2	4.3	2	3.8
Electronics/Appliance Service	1	2.1	0	0.0
Personal and Medical Service	3	6.4	5	9.4
Cleaners	4	8.5	5	9.4
Hotel/Motel	0	0.0	0	0.0
Church	6	12.8	5	9.4
Public Association/Organization	1	2.1	6	11.3
Other	1	2.1	3	5.7
Total	47	100.0	53	100.0

population, 88 percent was black, 39 percent under the age of 18 and only five percent aged 65 or over. Twelve percent of the housing units were for single families; 95 percent of the units were occupied. Of those units that were occupied, 39 percent were inhabited by their owners. An average of 3.4 persons lived in each occupied unit. The houses were mostly two-story duplexes, often separated by fences, situated along tree-lined streets.

As Table 16 indicates, forty-seven non-residential establishments existed in the area, almost all of them along South Orange Avenue. Among these establishments were six churches, four restaurants, eight liquor stores, and bars, five grocery stores, four medical offices, a public library and 21 other establishments.

The comparison area, termed S-4, had a population of 4,300 persons living in 1,372 housing units. Ninety-eight percent of the residents were black, 36 percent were under the age of 18 and only seven percent were aged 65 or over. Thirteen percent of the housing units were for single families; 96 percent were occupied. Among those, 25 percent were occupied by their owners. An average of 3.1 persons lived in each occupied unit. The houses were largely two-story complexes, situated along tree-lined streets.

As shown in Table 16, fifty-three non-residential establishments were located in the area, most of them located along Chancellor Avenue and a few along Lyons Avenue. Among those establishments were three liquor stores, and bars, seven restaurants, seven grocery stores, five churches, five medical offices and 33 other establishments.

In genral, the two areas were quite similar, although the comparison area was inhabited by a higher proportion of blacks and a smaller proportion of persons owning their own homes.

Sampling Procedures

Areal Listing and Household Selection. Once program and comparison areas were selected, Police Foundation staff employed updated 1980 census block maps to compile the sample frames for both the residential and non-residential samples. Area survey supervisors conducted an areal listing, walking the streets and recording all addresses within the defined boundaries on Listing Sheets. After being put onto computer-readable tape, these listings were subdivided into two sub-lists, one for residences and one for non-residential establishments such as businesses, churches, offices and other such places. Each address on both lists was assigned an identification number. Selection of sample addresses was accomplished by dividing the universe (the number of addresses listed) by the desired sample size to arrive at a sampling interval. Starting with a random number and selecting every Nth case (where N was equal to the sampling interval), this procedure was used to produce a random sample of addresses in the program and control areas. The number of non-residential establishments in the area was so small that they were all included in the sample.

Respondent Selection Within The Household. Once the samples of addresses were selected, the final step was the selection of a respondent within the households. This selection was accomplished during the first visit of an interviewer by listing all household members who were 19 years old or older and assigning them numbers, starting with the oldest male to the youngest female. The interviewer then referred to a random selection table assigned to that household to determine who should be the respondent. No substitution was

permitted for the selected respondent. (This is a standard "Kish-table" selection procedure.)

The plan for the Wave 2 survey was to contact all sample addresses (including those in which no interview was conducted at Wave 1), and interview the respondent from Wave 1 when possible, thus creating a panel sample. A replacement respondent was selected at sample address where the Wave 1 respondent was no longer a resident of the household. For an address at which no interview was completed during Wave 1, a respondent was selected on the initial contact, using the same selection table that was assigned to that address for Wave 1.

Respondent Selection Within an Establishment. In each nonresidential establishment, the goal was to interview the owner or the manager of the establishment. In a few cases, because the owner or manager was unavailable, the most knowledgeable staff member was selected as the actual respondent.

Supervisor/Interviewer Training. The interview operations for Wave 1 began with the recruitment of supervisors, who were given a two-day training session, followed by the recruitment and hiring process for interviewers. After general advertising for interviewers, several orientation sessions were held for screening and selection purposes. The selected interviewers were then invited to a three day training session, after passing a police record check to which they had agreed as part of the hiring process. The final hiring decisions were made by the Police Foundation's Survey Director and the Newark field supervisor after the training session.

The interviewers' training was conducted by the Survey Director with the assistance of the Project Director, a trainer and the site supervisor. Prior to attending the training sessions, an Interviewer Training Manual was sent to each interviewer. This manual was designed as a programmed learning text with questions which interviewers were to answer as they reviewed each section. The training agenda included general introductory remarks (including background on the study and the Foundation role); general and specific instructions on procedures for respondent selection; a complete review of the questionnaire with special attention to the victimization series; a practice review session; and role-playing sessions.

Contacting Sampled Households and Non-Residential Establishments. About one week before interviewing began, an advance letter from the Mayor of Newark was mailed to the selected households and establishments. The letter, addressed to "resident," or "owner" informed them of the main objectives of the research effort in an attempt to give credibility to the study and encourage cooperation with it.

The Wave 1 interviewing began in both the program and comparison areas on June 3, 1983; interviewing was completed on August 20, 1983 in the program area and September 5, 1983 in the comparison area. In both areas, the post implementation survey (Wave 2) began on June 20, 1984 and continued until August 24, 1984.

All interviewing was conducted in person. Telephone contacts were made only after an initial household visit had been made, in order to arrange an appointment for an in-person interview with the selected respondent.

Call-Back Procedures. Interviewers made a minimum of five attempts to complete an in-person interview. Each attempt was recorded on a Call Record Sheet. The attempts were made at different times of the day and different days of the week to maximize the chances of finding the respondent at home. About 40 percent of the interviews were completed on the first and second visits.

A Non-Interview Report (NIR) was completed for each selected household in which an interview could not be completed. The supervisor reviewed each NIR to decide whether or not the case should be reassigned to another interviewer for conversion. Most refusal cases were reassigned and interviewers were successful in converting nearly 40 percent of the initial refusals to completed interviews.

In-Field Editing. Completed questionnaires were returned to the supervisor on a daily basis. The supervisor and her clerical staff were then responsible for the field editing of all completed questionnaires. This process enabled the supervisor to provide the interviewers with feedback concerning their performance and insure that they did not repeat the errors they had previously committed. It also permitted retrieval of missing information before sending the cases to the home office.

Validation. Validation procedures were designed to insure that 30 percent of the respondents were recontacted to verify that the interview was indeed completed with the selected respondent. The validation process also helped to provide feedback about the interviewer's work. Thirty percent of each interviewer's work was randomly chosen for validation as they were received by the site office. Validations were completed either by telephone or in-person.

If one of an interviewer's completed questionnaires could not be validated, the supervisor conducted a 100 percent validation of that interviewer's work. Cases that failed validation were either reassigned or dropped from the data base.

Towards the end of the field work period for Wave 1, the interviewers' mode of payment was changed from an hourly basis to a "per completed" basis. The validation was then changed to 100 percent validation of completed interviews. Even though this was more costly, it was felt that such validations were necessary because of the increased reward provided for completed interviews. To further guarantee reliability, these validations were conducted from the home office by telephone. Cases in which the telephone number was no longer working and cases without telephone numbers were sent back to the field for in-person validation. The per completed mode of payment for interviewers was continued for the Wave 2 survey; the validation rate was kept at 33 percent after the initial five completed interviews for each interviewer had been successfully validated.

Response Rates. As Table 17 indicates, response rates of 77.0 percent and 82.1 percent were achieved in the program and comparison areas during Wave 1 interviewing at the residential units. Similar response rates, 82.8 percent. 76.4 percent, were achieved during Wave 2. The results from the panel survey interviews indicate that over 69 percent of the desired residential sample was reinterviewed in the program area; over 64 percent were successfully reinterviewed in the comparison area.

Table 17

WAVE 1 RESIDENTIAL RESPONSE RATES
(Numbers in Parentheses are Percentages of Sample Size)

Area	Total Units	Sample* Size	Completed	Refusals	Vacant	Bad Address	Maximum Calls	Ineligible, Duplicates	Other1	Area Response Rate2
Program Area (West 1)	1452	606	419 (69.1%)	33 (5.4%)	42 (6.9%)	19 (3.1%)	72 (11.9%)	1 (0.2%)	20 (3.3%)	77.0%
Comparison Area (South 4)	1129	611	449 (73.5%)	37 (6.1%)	53 (8.7%)	11 (1.8%)	40 (6.5%)	0 (0.0%)	21 (3.4%)	82.1%

WAVE 2 RESIDENT RESPONSE RATES
(Numbers in Parentheses are Percentages of Sample Size)

Area	Total Units	Sample* Size	Completed	Refusals	Vacant	Bad Address	Maximum Calls	Ineligible, Duplicates	Other1	Area Response Rate2
Program Area (West 1)	1452	606	446 (73.6%)	18 (3.0%)	44 (7.3%)	14 (2.5%)	48 (7.9%)	2 (0.3%)	34 (5.6%)	81.8%
Comparison Area (South 4)	975	611	435 (71.2%)	18 (2.9%)	33 (5.4%)	4 (0.7%)	69 (11.3%)	5 (0.8%)	47 (7.7%)	76.4%

PANEL RESIDENT RESPONSE RATES
(Number in Parentheses are Percentages of Sample Size)

Area	Sample Size *	Completed, Same Address, Same Respondent	Completed, Same Address, Different Respondent	Refusals	Vacant	Bad Address	Maximum Calls	Ineligible, Duplicates	Other1	Panel Response Rate3
Program Area (West 1)	419	270 (64.4%)	53 (12.6%)	10 (2.4%)	30 (7.2%)	6 (1.4%)	34 (8.1%)	2 (0.5%)	14 (3.3%)	69.8%
Comparison Area (South 4)	449	275 (61.2%)	58 (12.9%)	10 (2.2%)	18 (4.0%)	0 (0.0%)	49 (10.9%)	3 (0.7%)	36 (8.0%)	64.3%

1. "Other" includes the number of respondents who were in hospital, ill, on vacation, or had a language problem, plus completed interviews which were invalidated during quality control checks.

2. "Area Response Rate" equals Number Completed ÷ (Sample Size - (Number Vacant + Number with Bad Address + Number Ineligible))

3. "Panel Response Rate" equals Number Completed at Same Address with same Respondent ÷ (Sample Size - (Number Vacant + Number with Bad Address + Number Ineligible))

*The sample size was based on the assumption that the survey operations would produce completion rates of 75 percent for the a area sample and 66 percent for the panel (reinterview) sample.

Table 18

WAVE 1 NON-RESIDENTIAL RESPONSE RATES
(Numbers in Parentheses are Percentages of Sample Size)

Area	Total Units	Sample* Size	Completed	Refusals	Vacant	Bad Address	Maximum Calls	Ineligible, Duplicates	Other[1]	Area Response Rate[2]
Program Area (West 1)	47	47	27 (57.4%)	3 (6.4%)	14 (29.8%)	0 (0.0%	0 (0.0%)	2 (4.2%)	1 (2.1%)	87.1%
Comparison Area (South 4)	53	53	37 (69.8%)	1 (1.9%)	8 (15.1%)	1 (1.9%)	3 (5.7%)	1 (1.9%)	2 (3.8%)	86.0%

WAVE 2 NON-RESIDENTIAL RESPONSE RATES
(Numbers in Parentheses are Percentages of Sample Size)

Area	Total Units	Sample* Size	Completed	Refusals	Vacant	Bad Address	Maximum Calls	Ineligible, Duplicates	Other[1]	Area Response Rate[2]
Program Area (West 1)	45	45	32 (71.1%)	2 (4.4%)	6 (13.3%)	0 (0.0%)	2 (4.4%)	0 (0.0%)	3 (6.7%)	82.1%
Comparison Area (South 4)	51	51	35 (68.6%)	0 (0.0%)	9 (17.6%)	0 (0.0%)	2 (3.9%)	5 (9.8%)	0 (0.0%)	94.6%

1. "Other" includes the number of respondents who were in hospital, ill, on vacation, or had a language problem, plus completed interviews which were invalidated during quality control checks.

2. "Area Response Rate" equals Number Completed ÷ (Sample Size - (Number Vacant + Number with Bad Address + Number Ineligible))

*The sample size was based on the assumption that the survey operations would produce completion rates of 75 percent for the area sample and 66 percent for the panel (re-interview) samples.

Table 18 indicates that area response rates of approximately 87 and 86 percent were achieved in both the program and comparison areas during the Wave 1 non-residential surveys. During Wave 2, the area response rates were 82 percent in the program area and 95 percent in the comparison area. In the program area, the number of establishments in which interviews were conducted represented at least 81 percent of the total number of establishments at each wave; in the comparison area, interviews were completed in at least 66 percent of all establishments..

Measures

Survey questionnaires were designed to collect information about exposure to the program as well as to measure the effects on each of the dimensions on which the program was hypothesized to have some impact. One version was created for residents; another shorter version was created for use with owners and managers of non-residential establishments. Copies of both instruments are included in a separate methodology report. Appendix D describes in detail the measures used in the residential survey and how they were created. Appendix E presents the same information about the measures used in the non-residential survey. A brief summary of the measures used is presented below.

o Recalled Program Exposure. Both before and after the program, respondents were asked whether they recalled having seen or heard about the tactics to be utilized. In addition, respondents were asked if they recalled being stopped by a road check or while walking during the past

months. Respondents also were asked to indicate when they last saw and had contact with a police officer, both for contacts initiated by the citizen and for those initiated by the police.

o Perceived Area Social Disorder Problems. To measure perceived social disorder problems, residential respondents were asked a series of questions about how much of a problem each of the following activities were:

- Groups hanging around on corners,
- People saying insulting things,
- Public drinking,
- People breaking windows,
- Writing or painting on walls,
- Gangs, and
- Sale or use of drugs in public.

The responses to each of these questions were combined to form one composite scale. A similar set of items was used among non-residential respondents.

o Perceived Area Physical Deterioration Problems. Perceived physical deterioration was measured among residential respondents by combining the responses to questions about how much of a problem each of the following were in the area:

- Dirty streets and sidewalks,
- Abandoned houses and buildings, and
- Vacant lots filled with trash and junk.

A similar set of items was utilized among non-residential respondents.

o Fear of Personal Victimization in Area. A composite scale was created combining the responses of residential respondents to four questions which asked about:

- Perceived safety while in area alone,
- Whether there was a place in the area where the respondent was afraid to go,
- Worry about being robbed in the area,
- Worry about being assaulted in the area.

Similar items were combined among non-residential respondents.

o Perceived Concern About Crime Among Employees and Patrons.

Responses to two questions were combined to form a measure of the concern expressed by the employees and patrons of the establishment:

- Frequency of hearing employees express concern about their personal security in the area, and
- Frequency of hearing patrons express concern about their personal safety in the area.

o Worry About Property Crime Victimization in Area. A scale combined responses of residential respondents to two items asking about one extent of worry about:

- Burglary, and
- Auto theft.

Among non-residential respondents the responses to items concerning worrying about burglary and vandalism were combined.

o Perceived Area Personal Crime Problems. This scale combined responses to three questions which asked about the extent to which each of the following were perceived as problems in the area:

- People being attacked or beaten up by strangers in the area,
- People being robbed or having their money, purses or wallets taken, and
- Rape or other sexual attacks.

o Perceived Area Property Crime Problems. This scale combined responses to three questions which asked about the extent to which each of the following were perceived in the area:

- Burglary,
- Auto vandalism, and
- Auto theft.

o Victimization. Residents were asked whether they had beenvictims of various types of attempted and successful crimes during the six-month period prior to being interviewed. Because many individual types of victimization were relatively infrequent, respondents have been categorized for this analysis as to whether they were victims of:

--personal crimes, including actual and attempted robbery, pursesnatching and pocketpicking, actual and attempted or threatened assault, threats, and sexual assault;

--property crimes, including actual and attempted burglary, theft, mailbox and bicycle theft, as well as motor vehicle theft, vandalism of home and automobile.

Representatives of non-residential establishments were asked whether their establishment had been victimized by each of the following crimes during the six months prior to being interviewed:

- Robbery or attempted robbery,
- Burglary or attempted burglary, and
- Vandalism.

o Evaluations of Police Service and Aggressiveness. Two scales were created to measure respondents' evaluations of the police. The first scale, designed to indicate general attitudes toward police service, was composed of the responses to the following individual items:

- How good a job do the police in the area do at preventing crime,
- How good a job do the police in the area do in helping victims,
- How good a job do the police in the area do in keeping order on the street,
- How polite are police in the area in dealing with people,
- How helpful are police in the area in dealing with people, and
- How fair are police in the area in dealing with people.

The second measure, to serve as an indicator of perceived police aggressiveness, was created by combining the responses to questions concerning the extent to which each of the following were thought to be problems in the area.

- Police stopping too many people on the streets without good reason, and
- Police being too tough on people they stop.

o Defensive Behaviors to Avoid Personal Crime. To measure the extent to which respondents take restrictive, defensive precautions to protect themselves against crime, the answers to the following questions were combined:

- Whether the respondent goes out with someone else after dark in order to avoid crime
- Whether the respondent avoids certain areas
- Whether the respondent avoids certain types of people
- Whether the respondent avoids going out after dark

These are used in this evaluation as behavioral measures of fear of crime.

o Household Crime Prevention Efforts. To measure the extent to which respondents had made efforts to prevent household crime, the responses to the following questions concerning whether the following household crime prevention efforts had been made:

- Install special locks,
- Install outdoor lights,
- Install timers,
- Install special windows or bars, and
- Is a neighbor asked to watch home when respondent is away for a day or two.

These are used in this evaluation as indicators of positive effects upon purposive crime prevention.

o Change in Business Environment. To measure the extent to which business conditions had changed in the recent past, the responses of non-residential representatives to the following two questions were combined:

- Change in the number of people who came in the establishment during the past year, and
- Change in the amount of business at the establishment during the past year.

o Satisfaction with Area. To ascertain the extent to which residential respondents were satisfied with the area, responses were combined for two items which explored:

- Their perception of the extent to which the area had become a better or worse place in the past year, and
- The extent to which they were satisfied with the area as a place to live.

The answers to the following two questions asked of non-residential respondents were combined:

- The extent to which the respondent was satisfied with the area as a place for the establishment, and
- The extent to which the area had become better or worse in the past year.

Recorded Crime Data Collection

Data concerning each incident of Part I crime recorded by the Newark Police Department from January 1980 through September 1984 were extracted from the department's computer tapes, with the assistance of the data processing coordinator and aggregated by month. A comparison between the actual offense reports and the incidents recorded on the data tape for three randomly-selected months showed less than two percent discrepancy between the two; in all but a few cases, the difference was due to update information which had been incorporated into the data tape but had not been added to the offense report. Part 2 and Part 3 crime data, concerning public disorder offenses and other less serious crimes, were found to be less reliably recorded and, therefore, were not collected.

Summary

The basic evaluation design compared attitudinal measures collected before and ten months after the introduction of the program. These measures were obtained by conducting inteviews with random samples of residents and

representatives of non-residential establishments in both a program area and in a comparison area, similar to the program area in size and demographic characteristics, in which no new fear reduction activities were undertaken.

The surveys produced area response rates ranging from 76 to 83 percent. Attempts to conduct interviews with a set of respondents both before and after the program began produced panel response rates of approximately 70 and 64 percent, in the program and comparison areas respectively. Interviews were also conducted with owners, managers or employees of non-residential establishments. The response rates for these efforts were consistently higher than 86 percent.

Survey questionnaires were designed to collect information about each of the following:

- Recalled Program Exposure
- Perceived Area Social Disorder Problems
- Perceived Area Physical Deterioration Problems
- Fear of Personal Victimization in Area
- Worry About Property Crime Victimization in Area
- Perceived Area Personal Crime Problems
- Perceived Area Property Crime Problems
- Victimization
- Evaluations of Police Service and Aggressiveness
- Defensive Behaviors to Avoid Personal Crime
- Household Crime Prevention Efforts
- Satisfaction with Area

Recorded crime data for Part I crimes were also collected, by month, for both areas from January 1980 through September 1984.

ANALYSIS AND RESULTS

Introduction

This section presents the results of several different types of analysis:

1. Recalled program awareness and contact in both the program and comparison areas were examined to determine the extent to which respondents recalled different program components. In addition, differences in awareness across population subgroups were investigated.

2. To provide an indication of the general levels and changes demonstrated by the various survey measures in both the program and comparison areas, simple comparisons between certain means, percentages and distributions at Waves 1 and 2 were examined.

3. To provide indicators of the possible program impact on residential respondents, two different types of analysis were conducted:

   a. An analysis of pooled cross-sectional data, to supply evidence of program impact at the broad area level, and

   b. An analysis of panel data, collected from the subset of the persons interviewed both before and 10 months after the program was implemented, to provide an indication of the program's impact on particular individuals.

4. Among members of the panel sample in the program area, comparisons of outcome measures were made between those persons who recalled being exposed to the program and those who did not.

5. To test for possible subgroup-specific program effects, the responses of members of the panel samples were subjected to treatment-covariate interaction analysis.

6. Recorded crime data were subjected to interrupted time series analysis to determine if trends or levels were affected by program implementation.

The results of each of these analysis are presented below.

Recalled Program Awareness and Contact

Residential Survey Results

The extent to which respondents said they recalled being exposed to the various program components is presented in Tables 19 and 20, for the cross-sectional and panel samples, respectively. The results indicate few differences between the recalled response levels in the two types of samples.

Ninety percent of those interviewed called the local police substation. Only three percent of the respondents in the comparison area recalled such an office. Approximately 63 percent of the residents of the program area recalled seeing or hearing of foot patrol in their neighborhood during the program period. About thirteen percent of the respondents in the comparison area said they had seen or heard of neighborhood foot patrol.* Unfortunately, because foot patrol was added as a program component after the Wave 1 surveys were completed, no pretest data are available concerning earlier awareness of such patrols. The fact that the level of exposure to foot patrol was much higher in the program area than in the comparison neighborhood suggests that the perceived "dosage" was indeed greater in the program area.

About fifty-four percent of program area residents said they had seen or heard of bus checks; 36 percent recalled such a program in the comparison area. The relatively high level of exposure in the latter area may have resulted from the fact that, although such bus checks were not conducted in

*This generally high level of awareness is not surprising. From 1973 until 1981, state funds had paid for the maintenance of foot patrols in Newark and other major New Jersey cities. Only recently, due to massive lay offs of personnel, has this program been discontinued in Newark. Given the success of the program in reducing the fear of crime (as shown by an evaluation conducted by the Police Foundation), the police department has instituted a "walk and ride" program to encourage patrol officers to park their vehicles and engage in foot patrol throughout the city.

Table 19

Wave One - Wave Two Recalled Program Exposure Measures

(All Residential Respondents)

	W-1 Program Area		S-4 Comparison Area	
	Wave 1	Wave 2	Wave 1	Wave 2
Seen/heard of foot patrol?				
Percent Yes	--	63	--	13
(N)		(443)		(435)
Seen/heard of bus checks?				
Percent Yes	--	54	--	36
(N)		(421)		(425)
Seen/heard of road checks?				
Percent Yes	3	49	6	11
(N)	(407)	(442)	(444)	(431)
Sigf.	$p < .001$		$p < .01$	
Seen/heard of disorderly conduct enforcement?				
Percent Yes	20	41	19	26
(N)	(403)	(433)	(433)	(428)
Sigf.	$p < .001$		$p < .05$	
Stopped by road check?				
Percent Yes	3	6	1	1
(N)	(416)	(442)	(449)	(433)
Sigf.	$p < .01$		$p < .50$	
Stopped while walking?				
Percent Yes	3	4	4	3
(N)	(415)	(446)	(449)	(435)
Sigf.	$p < .70$		$p < .30$	
Seen/heard of clean up efforts?				
Percent Yes	10	12	14	9
(N)	(412)	(440)	(443)	(427)
Sigf.	$p < .50$		$p < .05$	

-continued-

Table 19
(continued)

Wave One - Wave Two Recalled Program Exposure Measures

(All Residential Respondents)

	W-1 Program Area Wave 1	W-1 Program Area Wave 2	S-4 Comparison Area Wave 1	S-4 Comparison Area Wave 2
Seen brochures/pamphlets?				
Percent Yes	11	43	7	11
(N)	(406)	(439)	(446)	(434)
Sigf.	p < .001		p < .05	
Heard about police newsletter?				
Percent Yes	--	41	--	6
(N)		(442)		(434)
Police come to door to ask about problems?				
Percent Yes	2	40	1	4
(N)	(412)	(437)	(442)	(433)
Sigf.	p < .001		p < .10	
Aware of place in area to get information?				
Percent Yes	5	84	3	5
(N)	(394)	(428)	(420)	(412)
Sigf.	p < .001		p < .30	
Aware of small neighborhood police office in area?				
Percent Yes	3	90	2	3
(N)	(390)	(437)	(428)	(420)
Sigf.	p < .001		p < .50	
Called police office?				
Percent Yes	--	13 (428)	--	1 (419)
Visited police office?*				
Percent Yes	--	26 (429)	--	0 (419)

* of respondents answering "yes" or "no" to Q64.
Chi-square tests of significance.

Table 20

Wave One - Wave Two Recalled Program Exposure Measures

(Panel Respondents)

	W-1 Program Area Wave 1	W-1 Program Area Wave 2	S-4 Comparison Area Wave 1	S-4 Comparison Area Wave 2
Saw brochures/pamphlets?				
Percent Yes	13	46	7	13
[N]		[257]		[271]
		p < .001		p < .001
Heard about police newsletter?				
Percent Yes	--	43	--	6
[N]		[265]		[275]
Police officer came to door to ask about problems?				
Percent Yes	2	40	2	4
[N]		[260]		[268]
Sigf.		p < .001		p < .06
Aware of place to get information?				
Percent Yes	5	86	2	5
[N]		[242]		[247]
Sigf.		p < .002		p < .08
Aware of small neighborhood police office in area?				
Percent Yes	4	91	1	2
[N]		[249]		[252]
Sigf.		p < .001		p < .16
Called or visited storefront office?				
No	--	70	--	99
One	--	5	--	1
Both	--	25	--	0
		[269]		[275]

T-tests for paired measures

Table 20
(continued)

Wave One - Wave Two Recalled Program Exposure Measures

(Panel Respondents)

	W-1 Program Area		S-4 Comparison Area	
	Wave 1	Wave 2	Wave 1	Wave 2
Seen/heard of foot patrol?				
Percent Yes	--	62	--	12
[N]		[269]		[275]
Seen/heard of bus checks?				
Percent Yes	--	56	--	36
[N]		[257]		(266)
Seen/heard of road checks?				
Percent Yes	3	48	3	11
[N]	[259]	[259]	[272]	[272]
Sigf.		p < .001		p < .001
Seen/heard of disorderly conduct enforcement?				
Percent Yes	23	42	17	25
[N]	[252]	[252]	[266]	[266]
Sigf.		p < .001		p < .01
Stopped by road check?				
Percent Yes	2	6	1	1
[N]	[270]	[270]	[275]	[275]
Sigf.		p < .01		p < .37
Stopped while walking?				
Percent Yes	2	2	2	2
[N]	[246]	[246]	[260]	[260]
Sigf.		p < .29		p < .36
Seen/heard of clean up efforts?				
Percent Yes	9	11	13	10
[N]	[263]	[263]	[271]	[271]
Sigf.		p < .19		p < .14

-continued-

the comparison area, they were carried out throughout much of the rest of the city and had been well publicized during the program period. It is quite plausible, therefore, that comparison area residents might have been exposed to or heard about such operations outside their own neighborhood. As with foot patrol, this component was added too late to allow for measurement of exposure at Wave 1.

The percent of program area respondents who had seen or heard of road checks increased from about three percent before the program began to 49 percent ten months after implementation; this increase was statistically significant at the .001 level. In the comparison area, the percent of residents aware of road checks in the area also increased, from six to 11 percent; this change was also statistically significant. As with bus checks, comparison area residents may have been exposed to road checks elsewhere in the city. The percent of respondents who said they had been stopped by a road check was relatively low in both areas, although the six percent indicating such contact in the program area was higher than that in the comparison area and significantly higher than the exposure level before the program began.

The percent of respondents who said they had seen or heard of the disorderly conduct enforcement program increased from 20 to 41 percent in the program area and from 19 to 26 percent in the comparison area. The program area increase was significant at the .01 level; the change in the comparison area was statistically significant at the .05 level. The generally high level of program exposure in both areas is probably attributable to the fact that such tactics have periodically been employed by the Newark Police Department even before the fear reduction study began.

The percent of respondents who said they had seen or heard of area clean-up activities increased slightly, but non-significantly, from ten to 12 percent in the program area. In the comparison area, awareness fell from 14 to 9 percent, a non-significant change. Given the minimal level of activity in the program area, the low level of awareness is not surprising.

Regardless of the level of awareness, very few people said they had themselves been stopped by the police, either while walking or driving their automobile.

The percentage of respondents who said they had seen brohcures or pamphlets describing crime prevention techniques rose from 11 to 43 percent in the program area, a change significant at the .001 level. In the comparison area, the awareness level rose from 7 to 11 percent, a difference which did not reach the .01 level of significance.

In the program area, 41 percent of respondents at Wave 2 said they had heard of the neighborhood police newsletter, much higher than the 6 percent discovered in the comparison area.

When asked if the police had come to their door to ask about problems in the neighborhood or to give them information, the percentage of program area respondents who recalled such contact rose from two to 40 percent between waves one and two, a highly significant increase. In the comparison area, there was a nonsignificant change from one to four percent.

Awareness of the community service center was extremely high. For example, when asked if they were aware of a place in the neighborhood where they could talk to police officers the percentage saying that they did rose from five percent at Wave 1 to 84 percent at Wave 2, a very significant

increase. In the comparison area, a slight change from three to five percent occurred. Asked if they knew of the existence of a small neighborhood police office nearby, the percentage saying yes rose dramatically from three to 90 percent in the program area, a highly significant increase. In the comparison area, there was a slight, but nonsignificant change from two to three percent. In addition, in the program area, 13 percent of the respondents said they had called the police office and 26 percent said they had visited it. In the comparison area, there were virtually no affirmative respondes.

Results from more indirect measures of program exposure, dealing with police visibility and contacts, are presented in Tables 21 and 22 for the cross-sectional and panel samples respectively. The tables show few differences across the two types of samples. The only statistically significant changes were detected in the program area, where significantly more respondents indicated they had initiated contacts with the police at Wave 1 than said so at Wave 2. This finding is supported by the fact that the percent of respondents in the program area who believed that the number of police in the neighborhood was increasing was more than twice the percent expressing that opinion in the comparison area. This question was not asked at Wave 1 and, therefore, no change measures are possible. Arguably, this perceived increase in the number of police in the area could have been due to the frequent operations of the Directed Patrol Task Force; similarly, the increased number of citizen-initiated contacts could have been due to the increased availability of police officers due to the program activity.

Table 21

Wave One - Wave Two Respondent Perceptions of Police Presence and Contact

(All Residential Respondents)

	W-1 Program Area		S-4 Comparison Area	
	Wave 1	Wave 2	Wave 1	Wave 2
Last time saw officer in the area?				
past 24 hours	26	46	26	27
past week	40	32	36	40
neither	34	22	38	33
	(419)	(446)	(450)	(435)
	$p < .001$		$p < .50$	
Number of police working in the area has?				
decreased	___	10	___	21
about same	___	44	___	70
increased	___	45	___	9
		(399)		(391)
Do you think number of officers patrolling area is:				
need more	___	71	___	89
adequate	___	28	___	10
need less	___	1	___	1
		(403)		(425)
Citizen-initiated contacts with the police in the area:				
Count 0	78	70	76	80
1	14	22	16	13
2 +	6	7	8	7
	(419)	(446)	(450)	(435)
	$p < .01$		$p < .50$	
Police-initiated contacts with the police in the area:				
Count 0	96	92	96	97
1+	4	8	4	3
	(419)	(446)	(450)	(435)
	$p < .01$		$p < .50$	

Table 22

Panel Analysis

Wave One - Wave Two Respondent Perceptions of Police Presence and Contact

(Residential Panel Respondents)

	W-1 Program Area		S-4 Comparison Area	
	Wave 1	Wave 2	Wave 1	Wave 2
Last time saw officer in the area?				
past 24 hours	27	45	23	26
past week	40	34	38	42
neither	33	22	39	32
	(269)	(269)	(275)	(275)
	$p < .001$		$p < .04$	
Number of police working in the area has?				
decreased	___	10	___	22
about same	___	44	___	69
increased	___	47	___	9
		(249)		(255)
Citizen-initiated contacts with the police in the area:				
Mean number	.31 (269)	.42 (269)	.42 (275)	.29 (275)
	$p < .04$		$p < .01$	
Police-initiated contacts with the police in the area:				
Mean number	.31 (269)	.32 (269)	.42 (275)	.29 (275)
	$p < .01$		$p < .29$	
Know officers in the area?				
Yes	10	21	16	14
[N]	[267]		[271]	
	$p < .001$		$p < .30$	

CONTINUED

1 OF 4

To understand better the types of people who were exposed to the program components, Tables 23 through 31 present the results of an analysis of the extent of subgroup differences, if any, in program exposure. Only three of the measures of program awareness showed differences across subgroups that were statistically significant, and those differences show no clear pattern. Looking at differences which approached statistical significance, however, there does appear to be a tendency for females and homeowners to have been more aware of the efforts to reduce the distance between police and citizens. Younger people (aged 15-24) were least likely to be aware of those programs but most likely to know of the intensified enforcement and order maintenance efforts. Persons with incomes over $15,000 and those with a high school education tended to be more aware of most program elements.

In summary then, awareness of the program components was quite high, ranging from 90 percent for the community service center to 63 percent for foot patrol, 54 percent for bus checks, 49 percent for road checks, 41 percent for disorderly conduct enforcement and the newsletter to 40 percent for the directed police-citizen contacts. Only 12 percent, however, indicated awareness of the clean-up efforts.

Non-Residential Establishment Survey Results

The extent to which representatives of non-residential establishments indicated they recalled being exposed to the components of the overall program is shown in Table 32.

As with the residential samples, program awareness was quite high. Fully 97 percent of the respondents in the program area said they knew of

Table 23

Correlates of Recalled Program Contact
Wave Two W-1 Program Area Only

Police Came to Door to Ask About Problems

(All Residential Respondents)

	Percentage Recalling Program Contact and Significance of Subgroup Difference	
Sex		
Males	34	(183)
Females	44	(254)
	$p < .04$	
Income		
Under $15,000	38	(149)
Over $15,000	42	(260)
	$p < .40$	
Education		
Not high school	42	(136)
HS graduate	39	(300)
	$p < .69$	
Housing		
Own	44	(231)
Rent	36	(202)
	$p < .09$	
Age Category		
15-24	27	(73)
25-49	43	(264)
50 plus	43	(98)
	$p < .05$	
Number of Adults in Household		
One	42	(104)
Two	45	(190)
Three +	33	(143)
	$p < .08$	
Length of Residence		
0-2 years	29	(104)
3-5 years	51	(96)
6-9 years	50	(88)
10 years +	35	(144)
	$p < .001$	

Chi-square tests

Table 24

Correlates of Recalled Program Contact
Wave Two W-1 Program Area Only

Aware of Community Service Center

(All Residential Respondents)

Percentage Recalling Program Contact and Significance of Subgroup Difference

Sex			Age Category		
Males	86	(180)	15-24	88	(74)
Females	93	(257)	25-49	90	(264)
	$p < .03$		50 plus	89	(97)
				$p < .75$	
Income					
Under $15,000	93	(153)			
Over $15,000	89	(256)	Number of Adults in Household		
	$p < .23$		One	94	(105)
			Two	87	(190)
Education			Three +	89	(142)
Not high school	93	(137)		$p < .17$	
HS graduate	88	(299)			
	$p < .22$		Length of Residence		
			0-2 years	85	(108)
Housing			3-5 years	95	(95)
Own	91	(232)	6-9 years	90	(87)
Rent	88	(201)	10 years +	90	(142)
	$p < .25$			$p < .17$	

Chi-square tests

Table 25

Correlates of Recalled Program Contact
Wave Two W-1 Program Area Only

Aware of Neighborhood Police Newsletter

(All Residential Respondents)

Percentage Recalling Program Contact and Significance of Subgroup Difference

Sex			Age Category		
Males	37	(183)	15-24	28	(75)
Females	44	(259)	25-49	45	(267)
	$p < .17$		50 plus	39	(98)
				$p < .03$	
Income					
Under $15,000	38	(154)			
Over $15,000	44	(260)	Number of Adults in Household		
	$p < .29$		One	39	(105)
			Two	44	(191)
Education			Three +	38	(145)
Not high school	35	(137)		$p < .93$	
HS graduate	43	(304)			
	$p < .12$		Length of Residence		
			0-2 years	36	(111)
Housing			3-5 years	32	(96)
Own	43	(231)	6-9 years	47	(88)
Rent	39	(207)	10 years +	47	(143)
	$p < .43$			$p < .06$	

Chi-square tests

Table 26

Correlates of Recalled Program Contact
Wave Two W-1 Program Area Only

Seen or Heard of Foot Patrol

(All Residential Respondents)

Percentage Recalling Program Contact and Significance of Subgroup Difference

Sex			Age Category		
Males	66	(184)	15-24	71	(75)
Females	61	(259)	25-49	62	(268)
	p < .32		50 plus	58	(98)
				p < .23	
Income					
Under $15,000	61	(155)			
Over $15,000	64	(260)	Number of Adults in Household		
	p < .68				
			One	59	(107)
Education			Two	60	(190)
Not high school	60	(138)	Three +	68	(146)
HS graduate	64	(304)		p < .21	
	p < .48				
			Length of Residence		
Housing			0-2 years	61	(109)
Own	63	(232)	3-5 years	63	(97)
Rent	62	(207)	6-9 years	60	(89)
	p < .97		10 years +	65	(143)
				p < .85	

Chi-square tests

Table 27

Correlates of Recalled Program Contact
Wave Two W-1 Program Area Only

Seen or Heard of Road Checks

(All Residential Respondents)

Percentage Recalling Program Contact and Significance of Subgroup Difference

Sex			Age Category		
Males	54	(184)	15-24	46	(74)
Females	46	(258)	25-49	54	(267)
	p < .13		50 plus	38	(99)
				p < .03	
Income					
Under $15,000	46	(155)			
Over $15,000	55	(259)	Number of Adults in Household		
	p < .09				
			One	47	(107)
Education			Two	53	(190)
Not high school	45	(138)	Three +	47	(145)
HS graduate	51	(303)		p < .48	
	p < .27				
			Length of Residence		
Housing			0-2 years	51	(109)
Own	51	(231)	3-5 years	56	(96)
Rent	48	(207)	6-9 years	44	(89)
	p < .62		10 years +	47	(143)
				p < .33	

Chi-square tests

Table 28

Correlates of Recalled Program Contact
Wave Two W-1 Program Area Only

Seen or Heard of Bus Checks

(All Residential Respondents)

Percentage Recalling Program Contact and Significance of Subgroup Difference

Sex			Age Category		
Males	55	(172)	15-24	63	(71)
Females	54	(249)	25-49	55	(254)
	p < .94		50 plus	45	(94)
				p < .05	
Income					
Under $15,000	55	(151)			
Over $15,000	56	(244)	Number of Adults in Household		
	p < .90		One	43	(103)
			Two	55	(177)
Education			Three +	62	(141)
Not high school	52	(136)		p < .01	
HS graduate	55	(284)			
	p < .67		Length of Residence		
			0-2 years	54	(105)
Housing			3-5 years	55	(92)
Own	51	(215)	6-9 years	54	(87)
Rent	58	(222)	10 years +	54	(132)
	p < .20			p < .99	

Chi-square tests

Table 29

Correlates of Recalled Program Contact
Wave Two W-1 Program Area Only

Aware of Police Enforcing Disorderly Conduct Laws

(All Residential Respondents)

Percentage Recalling Program Contact and Significance of Subgroup Difference

Sex			Age Category		
Males	42	(181)	15-24	47	(73)
Females	40	(252)	25-49	42	(263)
	p < .62		50 plus	34	(95)
				p < .21	
Income					
Under $15,000	41	(149)			
Over $15,000	43	(256)	Number of Adults in Household		
	p < .77		One	37	(102)
			Two	40	(188)
Education			Three +	45	(143)
Not high school	39	(132)		p < .47	
HS graduate	42	(300)			
	p < .74		Length of Residence		
			0-2 years	34	(105)
Housing			3-5 years	42	(96)
Own	40	(227)	6-9 years	41	(87)
Rent	43	(202)	10 years +	43	(140)
	p < .60			p < .79	

Chi-square tests

Table 30

Correlates of Recalled Program Contact
Wave Two W-1 Program Area Only

Seen or Heard of Clean-Up Program

(All Residential Respondents)

Percentage Recalling Program Contact and Significance of Subgroup Difference					
Sex			Age Category		
Males	12	(185)	15-24	16	(74)
Females	12	(255)	25-49	12	(267)
	p < .99		50 plus	8	(97)
				p < .28	
Income					
Under $15,000	10	(151)			
Over $15,000	14	(261)	Number of Adults in Household		
	p < .32				
			One	16	(103)
Education			Two	12	(192)
Not high school	10	(135)	Three +	10	(144)
HS graduate	13	(304)		p < .60	
	p < .57				
			Length of Residence		
Housing			0-2 years	12	(108)
Own	12	(233)	3-5 years	13	(97)
Rent	12	(203)	6-9 years	8	(87)
	p < .99		10 years +	14	(143)
				p < .58	

Chi-square tests

Table 31

Correlates of Recalled Program Contact
Wave Two W-1 Program Area Only

Seen a Police Officer in Area in Past 24 Hours

(All Residential Respondents)

Percentage Recalling Program Contact and Significance of Subgroup Difference					
Sex			Age Category		
Males	48	(185)	15-24	60	(75)
Females	44	(261)	25-49	42	(270)
	p < .50		50 plus	46	(99)
				p < .02	
Income					
Under $15,000	42	(157)			
Over $15,000	49	(261)	Number of Adults in Household		
	p < .22				
			One	42	(101)
Education			Two	45	(192)
Not high school	39	(139)	Three +	50	(146)
HS graduate	49	(306)		p < .41	
	p < .06				
			Length of Residence		
Housing			0-2 years	51	(111)
Own	42	(234)	3-5 years	58	(97)
Rent	50	(208)	6-9 years	35	(89)
	p < .09		10 years +	41	(144)
				p < .01	

Chi-square tests

Table 32

Wave One - Wave Two Recalled Program Exposure Measures

(Non-Residential Establishment Respondents)

	W-1 Program Area		S-4 Comparison Area	
	Wave 1	Wave 2	Wave 1	Wave 2
Aware of place to get police information?				
Percent Yes	4	90	9	13
[N]	[26]	[30]	[33]	[31]
Sigf.	p < .001		p < .95	
Aware of area police office?				
Percent Yes	0	97	3	0
[N]	[24]	[31]	[35]	[32]
Sigf.	p < .001		p < .98	
Police came to ask about problems-give information?				
Percent Yes	4	31	16	23
[N]	[28]	[32]	[37]	[35]
Sigf.	p < .02		p < .50	
Seen brochures, pamphlets, newsletters on crime?				
Percent Yes	7	50	11	15
[N]	[28]	[30]	[37]	[34]
Sigf.	p < .001		p < .70	
Seen/heard of road checks?				
Percent Yes	4	56	6	17
[N]	[28]	[32]	[36]	[35]
Sigf.	p < .001		p < .10	
Seen/heard of disorderly conduct enforcement?				
Percent Yes	7	56	29	35
[N]	[27]	[32]	[34]	[34]
Sigf.	p < .001		p < .40	

Table 32
(continued)

Wave One - Wave Two Program Exposure Measures

(Non-Residential Establishment Respondents)

	W-1 Program Area		S-4 Comparison Area	
	Wave 1	Wave 2	Wave 1	Wave 2
Seen/heard of clean-up efforts?				
Percent Yes	4	26	30	21
[N]	[27]	[31]	[37]	[34]
Sigf.	p < .10		p < .25	
Stopped by road check?				
Percent Yes	4	3	0	0
[N]	[28]	[32]	[37]	[35]
Sigf.	p < .70		p < NC	
Stopped on foot in area?				
Percent Yes	0	3	0	0
[N]	[28]	[32]	[37]	[35]
Sigf.	p < .95		p < NC	

the existence of the community service center during Wave 2, compared to non at Wave 1. In the comparison area, awareness remained virtually nonexistent at both times.

When asked if the police had come to ask them about problems or give them information, the percentage of program area respondents indicating this to be the case rose from four to 31 percent. In the comparison area, the percentage rose from 16 to 23 percent. Similarly, the indicated awareness of the newsletter rose from 7 to 50 percent in the program area but only from 11 to 15 percent in the comparison area.

Awareness of the components of the intensified enforcement and order maintenance effort also increased markedly in the program area. Awareness of both disorderly conduct enforcement and road checks rose to 56 percent during wave two, highly significant increases from Wave 1. In the comparison area, increases in awareness were also indicated but neither change was statistically significant.

Finally, although awareness of clean-up efforts rose in the program area and declined in the comparison area, neither change reached the level of statistical significance.

As with the residential sample, very few of the respondents in either area said they had themselves been stopped by the police, either while walking or driving.

Results from other, more indirect, measures of program exposure, as indicated by police visibility and contact, are presented in Table 33. No observed changes were statistically significant in either area. It is interesting to observe, however, that the percent of respondents who

Table 33

Wave One - Wave Two Perceptions of Police Presence and Contact

(Non-Residential Establishment Respondents)

	W-1 Program Area		S-4 Comparison Area	
	Wave 1	Wave 2	Wave 1	Wave 2
Last time saw officer in this area? Percent who said:				
past 24 hours	64	47	54	43
past week	11	38	24	29
neither	25	16	22	29
[N]	[28]	[32]	[37]	[35]
	$p < .10$		$p < .70$	
Know any officers who work in area? Percent Yes	14	34	42	30
[N]	[28]	[32]	[36]	[33]
	$p < .20$		$p < .50$	

indicated that an officer had come to the establishment increased from 14 to 34 percent in the program area, but declined from 42 to 30 percent in the comparison area.

Descriptive Data Analysis

Residential Sample Results

The mean responses of the Wave 1 and Wave 2 residential respondents in the program and comparison areas are presented in Table 34. These means are presented only in order to provide information about the general levels and trends in scale and item means. Because of differences in, and differential changes of the composition of the groups in the program and comparison areas, these results should not be used as indicators of program impact, which is examined later in this section.*

As Table 25 indicates, few sizable differences in mean scores were found across the program and comparison areas at Wave 1. Similarly, few notable differences in trends between the two waves were detected. Further analysis of these differences--with appropriate statistical controls--are presented in later sections of this report.

*The demographic characteristics of the respondents during both waves are shown in Appendix D. Complete results, including means, standard deviations, sample sizes and significance levels for all scales and their individual items are presented in Appendix E. Appendix F contains similar information for the panel respondents.

Table 34

Wave One-Wave Two Outcome Measures

(All Residential Respondents)

Scale	W-1 Program Area Wave 1	W-1 Program Area Wave 2	S-4 Comparison Area Wave 1	S-4 Comparison Area Wave 2
Perceived Area Social Disorder Problems				
Mean	1.91	1.80	2.04	2.04
(sd)	(.52)	(.50)	(.47)	(.49)
[N]	[419]	[446]	[449]	[434]
Perceived Area Physical Deterioration Problems				
Mean	1.77	1.66	1.81	1.72
(sd)	(.57)	(.52)	(.50)	(.58)
[N]	[419]	[446]	[450]	[434]
Fear of Personal Victimization in Area				
Mean	1.77	1.73	2.01	1.96
(sd)	(.62)	(.57)	(.55)	(.61)
[N]	[419]	[446]	[450]	[435]
Worry About Property Crime Victimization in Area				
Mean	2.24	2.11	2.21	2.33
(sd)	(.69)	(.70)	(.64)	(.68)
[N]	[418]	[446]	[450]	[435]
Perceived Area Personal Crime Problems				
Mean	1.74	1.65	1.91	1.74
(sd)	(.56)	(.59)	(.50)	(.53)
[N]	[410]	[441]	[443]	[432]

-continued-

Table 34
(continued)

Wave One-Wave Two Outcome Measures

(All Residential Respondents)

Scale	W-1 Program Area Wave 1	W-1 Program Area Wave 2	S-4 Comparison Area Wave 1	S-4 Comparison Area Wave 2
Perceived Area Property Crime Problems				
Mean	2.05	1.94	2.13	2.18
(sd)	(.64)	(.68)	(.50)	(.57)
[N]	[418]	[439]	[450]	[435]
Victimized by Any Crime				
Percent Victims	49	55	46	43
Victimized by Personal Crime				
Percent Victims	18	27	24	24
Victimized by Property Crime				
Percent Victims	41	42	34	33
Evaluation of Police Service				
Mean	2.53	3.13	2.51	2.70
(sd)	(.71)	(.70)	(.67)	(.77)
[N]	[399]	[438]	[442]	[428]

-continued-

Table 34
(continued)

Wave One-Wave Two Outcome Measures

(All Residential Respondents)

Scale	W-1 Program Area Wave 1	W-1 Program Area Wave 2	S-4 Comparison Area Wave 1	S-4 Comparison Area Wave 2
Police Aggressiveness				
Mean	1.23	1.20	1.18	1.19
(sd)	(.47)	(.48)	(.46)	(.43)
[N]	[371]	[422]	[427]	[415]
Defensive Behaviors to Avoid Personal Crime				
Mean	.53	.53	.56	.57
(sd)	(.35)	(.34)	(.35)	(.35)
[N]	[419]	[446]	[448]	[434]
Household Crime Prevention Efforts				
Mean	1.51	1.49	1.57	1.42
(sd)	(1.29)	(1.30)	(1.40)	(1.18)
[N]	[419]	[446]	[450]	[435]
Satisfaction with Area				
Mean	2.12	2.35	1.85	2.10
(sd)	(.66)	(.69)	(.61)	(.70)
[N]	[418]	[446]	[449]	[435]

Non-Residential Establishment Samples

Just as with the residential samples, differences in, and differential changes of the samples in the program and comparison areas makes inferences concerning program impact subject to rival interpretation. Appendix I indicates, for example, that approximately 68 percent of the interviews conducted at Wave 2 were conducted in the same establishments where interviews were completed at Wave 1. However, not all of the persons interviewed at those establishments were the same at each wave.

A summary of the non-residential survey results are presented in Table 35 and are discussed below.*

o Perceived Area Social Disorder Problems. As Table 35 indicates, the perceived level of social disorder problems increased somewhat, in both the program and the comparison areas.

o Perceived Area Physical Deterioration Problems. Perceived levels of physical disorder and deterioration declined in both the program and comparison areas.

o Fear of Personal Victimization in Area. The fear of being personally victimized decreased in the program area and increased in the comparison area.

o Worry About Property Crime Victimization in Area. Worry declined, in the program area while increasing in the comparison area.

*The types of establishments at which interviews were completed are shown in Appendix I. Complete results are presented in Appendix J.

Table 35

Wave One-Wave Two Outcome Measures

(Non-Residential Establishments Respondents)

Scale	W-1 Program Area Wave 1	W-1 Program Area Wave 2	S-4 Comparison Area Wave 1	S-4 Comparison Area Wave 2
Perceived Area Social Disorder Problems				
Mean	1.68	1.91	1.68	1.73
(sd) [N]	(.50) [28]	(.53) [32]	(.50) [37]	(.49) [35]
Sigf.	$p < .05$		$p < .40$	
Perceived Area Physical Deterioration Problems				
Mean	2.02	1.98	2.16	1.74
(sd) [N]	(.58) [27]	(.64) [32]	(.62) [37]	(.61) [35]
Sigf.	$p < .50$		$p < .005$	
Fear of Personal Victimization in Area				
Mean	2.34	2.25	2.06	2.19
(sd) [N]	(.69) [28]	(.74) [32]	(.70) [37]	(.80) [35]
Sigf.	$p < .40$		$p < .25$	
Worry About Property Crime Victimization in Area				
Mean	2.27	1.94	1.64	2.01
(sd) [N]	(.76) [28]	(.76) [32]	(.76) [37]	(.70) [35]
Sigf.	$p < .10$		$p < .025$	
Perceived Concern Among Employees and Patrons				
Mean	2.52	2.25	2.43	2.24
(sd) [N]	(.86) [28]	(.89) [32]	(.97) [37]	(1.02) [35]
Sigf.	$p < .25$		$p < .25$	

Table 35
(continued)

Wave One-Wave Two Outcome Measures

(Non-Residential Establishment Respondents)

Scale	W-1 Program Area Wave 1	W-1 Program Area Wave 2	S-4 Comparison Area Wave 1	S-4 Comparison Area Wave 2
Evaluation of Police Service				
Mean	2.23	3.93	2.81	3.01
(sd)	(.99)	(.77)	(.88)	(.87)
[N]	[26]	[32]	[37]	[35]
Sigf.	$p < .001$		$p < .25$	
Police Aggressiveness				
Mean	1.04	1.15	1.00	1.03
(sd)	(.20)	(.46)	(.00)	(.18)
[N]	[25]	[26]	[32]	[31]
Sigf.	$p < .25$		$p < .25$	
Change in Business Environment				
Mean	2.12	2.39	2.43	2.06
(sd)	(.62)	(.51)	(.50)	(.70)
[N]	[28]	[31]	[37]	[34]
Sigf.	$p < .05$		$p < .01$	
Satisfaction with Area				
Mean	2.12	2.73	2.27	2.59
(sd)	(.83)	(.58)	(.80)	(.74)
[N]	[28]	[32]	[37]	[35]
Sigf.	$p < .001$		$p < .05$	

-continued-

Table 35
(continued)

Wave One-Wave Two Outcome Measures

(Non-Residential Establishment Respondents)

Scale	W-1 Program Area Wave 1	W-1 Program Area Wave 2	S-4 Comparison Area Wave 1	S-4 Comparison Area Wave 2
Victimization by Robbery or Attempted Robbery in Past Six Months				
Percent Victims	18	9	11	6
[N]	[28]	[32]	[37]	[35]
Sigf.	$p < .70$		$p < .50$	
Victimization by Burglary or Attempted Burglary in Past Six Months				
Percent Victims	54	25	30	26
[N]	[28]	[32]	[37]	[35]
Sigf.	$p < .05$		$p < .80$	
Victimization by Vandalism in Past Six Months				
Percent Victims	21	38	32	40
[N]	[28]	[32]	[37]	[35]
Sigf.	$p < .30$		$p < .70$	

o Perceived Concern About Crime Among Employees and Patrons. As Table 25 reveals, the perceived level of concern about crime expressed by employees and patrons decreased somewhat in both areas.

o Victimization. The percent of program area non-residential establishments reported to have been victimized by robbery and burglary declined; declines were also noted in the comparison area, although neither was as large as in those in the program area. Vandalism was reported to have increased in both areas.

o Evaluations of Police Service and Aggressiveness. Improvements in the evaluation of police services occurred in both the program and comparison areas.

Slight increases in the perceptions of police aggressiveness were indicated in both the program and comparison areas.

o Changes in Business Environment. As Table 34 indicates, there was a notable improvement in reported business conditions in the program area. By contrast, in the comparison area, business conditions were reported to have declined sharply.

o Satisfaction with Area. Increased satisfaction was expressed concerning both the program and comparison areas.

Survey Indicators of Program Impact

Pooled Cross-Sectional Data Analysis

For this analysis, two waves of surveys (pretest and posttest) were merged into one data set. They were then analyzed as a single set, with controls for wave, area, and covariates. The analysis model is:

Y = a + b*COVARIATES + b*WAVE + b*TREAT + b*INTER

Where:

Y = an outcome measure;

a = intercept;

COVARIATES = indicators modeling differences between residents of the program and comparison areas which potentially are related to the outcome measures (see below.).

WAVE = pretest (coded 0) or posttest (coded 1) wave;

TREAT = residence in comparison (coded 0) or program (coded 1) area; and

INTER = interaction term coded 1 if respondent lives in the program area and it is a posttest interview, and a 0 otherwise.

The covariates are critical. One of the major design flaws of an area-level quasi-experiment is that residents are not randomly assigned to treatment or comparison status, but rather opt (or are forced, in one fashion or another) into one of the areas. The factors which lie behind their selection of, or assignment to, treatment or control areas potentially are confounded with the treatment. Program and comparison areas can never be perfectly matched. The goal of the analysis, therefore, is to model the selection process in order to statistically "control" the factors

which led them to one neighborhood or the other and which are related to the outcome measures.

The covariates used in this analysis (listed in Table 36) include many of the known correlates of most of the outcome measures for the evaluation. They reflect the respondent's crime experiences and physical vulnerability, the anonymity of their immediate environment, cultural and ethnic differences in experiences with the police, and social supports. Many factors which affect fear and assessments of the police also are linked to residential choice, including income, education, race, household organization, and employment status. Most of the covariates listed here are "demographic" because it is important that they be conceptually and temporally antecedent to the program, and not be affected by it. This is especially critical in the pooled cross-sectional analysis, for half of the respondents were interviewed after the program took place. If factors were included among the covariates which could have been affected by the program (like recent experiences with the police or victimization) controlling for them would "take ut" variance also associated with the treatment, and could lead to an underestimate of program effect. Note, however, that their exclusion contributes to the specification bias in the structural models of fear and assessments of the police which guided the selection of the covariates, for the examples given above are important determinants of both outcomes. This problem is rectified in the analysis of panel data, where measurs of victimization and assessments of the police taken before the onset of the program can be used as covariates.

Table 36
Covariates Used in Pooled Cross-Sectional Analyses

Race-black	Origin-hispanic	High school graduate
Age in years	Elderly-over 60	Income (dichotomy)
Gender-female	Married	Length of residence
Own home	Single family home	Work full-part time
Live alone	Household size	Single family head
Poor English	Apartment complex	Number of children

There were scattered missing data for most of the covariates. These were coded at median values or mid-ranges where appropriate. There was more missing data for income (8.5 percent), and those cases were coded midway between the low and high categories. Appendix I compares two analyses, one based on "complete cases" data sets and one on those excluding missing-data cases. These analyses suggest there is no systematic bias introduced by this procedure.

In addition to identifying the structural model of the selection process, it is important to understand how its components were measured. Unlike the outcome measures, which have known estimated reliabilities, are single factored, and are well distributed, the covariates analyzed here were all measured using single indicators. However, because the interviews were conducted in-person, some covariates (such as sex, observed building type) probably are usually accurate. Others, like race, are conceptually thorny, but at least self-identified categories, and most of the remainder ("working," "married") should be fairly reliably measured by the questionnaire. Income level doubtless is the worst-measured of the covariates, but there are no reliability estimates for any of them.

Because they are intended to model the selection process and adjust for unmatched differences between the treatment and control areas, in this analysis the covariates were forced in before an assessment was made of the significance of other components of the model.

The WAVE measure controls for the main effects of wave of interview. It identifies interviews conducted before and after the onset of the program, and its inclusion should take out the simple, linear effects of history, maturation, and other general over-time changes in both program and comparison areas. It will not account for differences in the magnitude of general temporal shifts between the two areas, however.

The TREATment measure controls for the main effects of area of residence. This is an interesting factor in the model. If the covariates (which were entered first) adequately accounted for selection differences between the two areas which are related to the outcome measures, the regression coefficient for TREAT should approximate zero ("significance" is not the best criterion in this case); there should be no independent effect of area of residence. If the selection model were less adequate, the inclusion of TREAT will serve to take out further unmodeled (or ill-measured) differences between respondents from the two areas. However, as we shall see shortly, the problem of multicolinearity makes this a less desirable solution to the problem than is modeling differential area selection.

Treatment effect is estimated in this analysis by the size and significance of the unstandardized regression coefficient associated with

the INTERaction indicator. INTER identifies interviews with (a) residents of the program area conducted (b) after the onset of the program.

One problem with this analysis model is that there inevitably will be a substantial amount of multicollinearity between the WAVE, TREAT, and INTER indicators. This makes it less likely that any significant program effects will be identified. However, because they perform important analytic functions, it clearly would be incorrect to leave out either of the main effect indicators--unless the coefficient associated with area of residence (TREAT) approximates zero because of an adequate modeling of the selection process. Unfortunately, while the coefficients for area of residence frequently were insignificant in the multivariate analyses, they sometimes were significant and rarely were zero; thus, they were included in each analysis.

Note that, after all of this, INTER will continue to be a biased estimator of program affect due to unaccounted-for treatment-by-history and tratment-by-maturation threats to validity, if present.

Panel Data Analysis

The before-and-after surveys draw relatively representative sketches of area residents at two points in time, providing an indication of comunity-wide effects of a program. However, the absence of a pretest forces us to rely upon covariates which were measured in the surveys to factor out non-program differences between treatment and contorl individuals, and important differences between residents of the program and comparison areas may not have been included or may have been badly measured.

Unlike the data described above, respondents in this set were interviewed twice, yielding pretest measures of the outcomes for the evaluation. The analysis model is:

POSTTEST = a + b*PRETEST + b*TREAT + b*COVARIATES

Where:

POSTTEST = scale scores for an outcome measure;

a = intercept;

COVARIATES = indicators modeling differences between residents of the program and comparison areas which potentially are related to the outcome measures;

PRETEST = scale scores for a pretest measure; and

TREAT = residence in comparison (coded 0) or program (coded 1) area.

Treatment effect is estimated by the significance levels associated with the b's for TREATment area of residence. The COVARIATES (listed in Table 37) control for a number of known correlates of the outcome measures which also may be related to area of residence. The PRETEST is a very important control for unmeasured covariates, and is the primary rationale for collecting panel data. The panel design also enables us to include as covariates pre-test measures of direct victimization (total, personal, and burglary) and vicarious victimization (knowing area crime victims), factors which in the cross-sectional analysis had to be excluded because they were potentially confounded with program effects.

Table 37
Covariates Used in Panel Analyses

Race-black	Origin-hispanic	High school graduate
Age in years	Elderly-over 60	Income (dichotomy)
Gender-female	Married	Length of residence
Own home	Single family home	Work full-part time
Live alone	Household size	Single family head
Poor English	Apartment complex	Number of children
Direct victimization (total, personal, burglary)		
Vicarious victimization		

The panel data provide important measures repeated over time among the same set of respondents. They present stronger evidence of true individual-level change than is possible from the pooled cross-sectional analyses.

One technical issue, however, that of differential reliability of measurement, intrudes into the otherwise straightforward process of conducting this form of regression analysis. Both the pre-test and post-test measures of outcomes are, of necessity, fallible indicators of the true levels of the attributes and behaviors of the survey respondents. This results in two problems. The first is that any statistical tests conducted using multiple regression analysis will probably underestimate the true relationship between the pre-test and post-test scores which are controlled for. That is, the relationship would appear to be stronger, and the analysis would be able to control for more variation in the post-test score with the pre-test scores, if the measures were better. The second problem is that is pre-test and post-test scores for an outcome are prone to different levels of error, then using the pre-test to "adjust" the post-test for "how people stood before the program began" can produce biased results.

The first problem cannot be solved; all indicators are fallible measures of theoretical concepts. To address the second problem, it is necessary, first of all, to determine if there is indeed differential reliability of measurement in the two waves of outcome measures and, second, to statistically adjust the estimates of pre-test/post-test relationships based on those reliabilities. Appendices B and C present a tabulation of the scale reliabilities for each outcome measure, for both the pre- and post-intervention surveys, for each area. The results indicate that the reliabilities of the scales were approximately the same for both pre-test and post-test measures. The reliabilities themselves, although not as high as might be desired in lengthy psychometric scales, are within the acceptable range for social psychological scales.

Another problem is that panel surveys inevitably are biased against (a) persons who move out of the area and are lost, (b) recent inmovers who could not have participated in the first wave survey, and (c) those who refuse to be reinterviewed. Losses from a panel due to various forms of attrition usually bias the data in predictable ways, in favor of more affluent, older, home-owning, long-term residents. It is often the case that such residents are more likely than others to be aware of, if not affected by, area-level programs like those evaluated here. Thus, positive panel results may be difficult to generalize to the entire population of the treatment area.

To provide information concerning the nature of panel attrition in this study, Table 38 compares the social backgrounds of all respondents in the Wave 1 survey in each area to those of the subset of respondents who could be located and reinterviewed ten months later. If those two groups differ

Table 38

Wave One - Wave Two Panel Attrition

	W-1 Program Area Wave 1	W-1 Program Area Reinterviewed	S-4 Comparison Area Wave 1	S-4 Comparison Area Reinterviewed
Sex				
Males	43	42	32	32
Females	57	58	68	68
	(419)	(269)	(450)	(275)
	$p < .80$		$p < .90$	
Race				
Black	91	92	98	97
White	6	6	1	1
Hispanic	1	2	1	2
Other	2	1	-	-
	(419)	(269)	(450)	(275)
	$p < .95$		$p < .80$	
Housing				
Own	49	57	36	44
Rent	51	43	64	56
	(416)	(267)	(450)	(275)
	$p < .05$		$p < .90$	
Education				
Not High School	30	28	34	34
High School Graduate	70	72	66	66
	(415)	(225)	(445)	(272)
	$p < .70$		$p < .90$	
Income				
Under $15,000	50	46	52	47
Over $15,000	50	54	48	53
	(379)	(242)	(390)	(242)
	$p < .50$		$p < .20$	
Age Category				
15-24	18	18	16	9
25-49	60	58	59	62
50-98	22	24	25	28
	(417)	(269)	(441)	(272)
	$p < .90$		$p < .05$	

significantly, the ability to generalize from the panel to the areas as a whole is limited by the resulting attrition bias.

Note that while some of the social attributes described in Table 29 should not change over the course of the year (e.g. sex, race), others might change considerably. That is, the respondents will become older, and could get married, find a job, and make more money even if they were successfully reinterviewed. In order not to confuse such true changes in the panel with Wave 1-Wave 2 differences due to the fact that people were only selectively relocated, both columns for each area in Table 38 are based upon the Wave 1 survey results. For example, the "reinterview" income split is based upon the results obtained during the Wave 1 survey for those respondents who were later reinterviewed, thus discounting any actual change in income which might have occurred in the intervening period.

Table 38 indicates that only two attrition effects were notable. One occurred in the comparison area with respect to the age of those persons who were successfully reinterviewed. During the Wave 1 interviews, 16 percent of the respondents were aged 15 to 24; only nine percent of those reinterviewed were in this age category.

The only other strong attrition effect was with respect to the owner/renter status of the program area panel sample. During the Wave 1 interviews, 49 percent of the respondents owned their home; among those successfuly reinterviewed, however, 57 percent were owners. The fact that no other differences that these results can be taken not only as

representative of the particular individuals in the panel sample but also, to a large extent, of the broader populations of the program and comparison areas as well.

Regression Analysis Results

Table 39 presents the results of both the pooled cross-sectional and the panel analyses described above. The first two columns in the table report the estimated sign and size of the unstandardized regression coefficient associated with the program effect, and the significance of that effect, after controlling for all other variables. The right-most two columns present comparable results from the analysis of the panel data. Because the tables present unstandardized regression coefficients, the size of program effects estimated by the two procedures can be compared across rows.

The results indicate that the program had consistently significant results in both types of analysis on four different outcome measures:

- In both analyses, the program was found to have led to significant reductions in perceived social disorder problems; that effect was somewhat stronger in the panel analysis.
- Both analyses indicated that the program produced significant reductions in worry about property crime; the measures of effect were virtually the same in both cases.
- The program was shown to have produced significant reductions in the level of perceived area property crime problems, although the size of the effect was much greater in the panel analysis.
- Both types of analysis showed the program to have produced significant improvements in evaluations of police service, with both measures of effect of comparable size.

Table 39

Program Effects for Cross-Sectional and Panel Analyses of Resident Surveys: Regression Coefficients and Levels of Significance

Outcome Measures	Pooled Cross-Sectional Analysis		Panel Analysis	
	Relative Effect	Level of Significance	Relative Effect	Level of Significance
Perceived Area Social Disorder Problems	-.11	(.02)*	-.18	(.01)*
Perceived Area Physical Deterioration Problems	-.04	(.49)	-.06	(.23)
Fear of Personal Victimization in Area	-.01	(.86)	-.13	(.01)*
Worry About Property Crime Victimization in Area	-.23	(.01)*	-.24	(.01)*
Perceived Area Personal Crime Problems	+.08	(.11)	-.06	(.22)
Perceived Area Property Crime Problems	-.12	(.05)*	-.24	(.01)*
Victimization by Any Crime	+.08	(.08)	+.11	(.02)*
Victimization by Personal Crime	+.08	(.04)*	+.01	(.75)
Victimization by Property Crime	+.01	(.82)	+.11	(.01)*
Evaluations of Police Service	+.41	(.01)*	+.43	(.01)*
Perceived Police Aggressiveness	-.03	(.13)	+.02	(.39)
Defensive Behaviors to Avoid Personal Crime	-.01	(.80)	-.06	(.04)*
Household Crime Prevention Efforts	+.19	(.08)	+.08	(.48)
Satisfaction with Area	-.00	(.97)	+.17	(.01)*

*Significance level less than or equal to .05.

One other effect was significant in only the cross-sectional analyses. Specifically, residents of the program area reported more incidents of personal crime than did those in the comparison area.

The analyses of the panel data revealed four significant effects other than those revealed by both types of analysis:

- o Fear of personal victimization declined significantly;
- o Satisfaction with the area increased significantly;
- o Total victimization increased significantly; and
- o Property victimization increased significantly.

Correlational Analysis of Possible Effects of Program Exposure. Both the pooled cross-sectional analyses and the analyses of panel respondent data used the fact that a respondent resided (or worked, in the case of the non-residential survey) in the program area, as opposed to the comparison area, as the basis for including those respondents in a category of persons assumed to have received "treatment." The empirical results of the level of recalled program exposure demonstrate, however, that a sizeable proportion of the respondents within the program area do not recall having been exposed to one or more of the program components. As a result, both the cross-sectional and the panel analyses provide a relatively weak test of the effect of the program. One way of attempting to compensate for this weakness is to compare panel members in the program area who recall being exposed to those in the panel who do not recall such exposure. Differences between those two groups, after statistical controls are applied, would suggest a program effect on those individuals who recall being exposed to

it. Such comparisons can be made by performing a regression analysis in which recalled exposure, along with the pre-test score and several other variables, is entered as a predictor. A significant coefficient attached to this recall of exposure measure could then be taken as weak evidence of program effect, showing that those who recall being exposed differed significantly from those who do not. This section reports the results of such an analysis.

One difficulty with this analysis is that it confounds measurement error with program involvement. That is, we cannot be sure that respondents' answers to questions about program exposure truly reflect their contact with the program; respondents might forget, be confused, exaggerate, etc.

One threat is that if the recall error is random it will bias coefficients measuring the effect of the program downward, tending to increase Type II statistical error, a falsely negative conclusion concerning program effect.

A second threat is that this recall error may be related to program contact; that is, people who were involved in some way with the program may provide a true "yes" response more often, while those who were not involved might be giving affirmative or negative responses for a variety of other reasons. If this were true, it would bias the findings in confusing ways.

A third threat is that recall itself may be related to impact; that is, people who are affected by the program may be more likely to truly recall contact, while those whose lives were untouched by the program might forget such a contact more easily, even if it occurred. This would bias the

evaluation in the direction of inaccurately finding a program effect, a Type I statistical error.

The second and third threats to validity seem, in our experience, to be more likely than the first. As a result, correlational program exposure analyses probably tend toward Type I error, falsely supporting the hypothesis that the program had an effect.

Despite this danger, such an analysis provides one exploratory way of determining the effect of actual contact with the program. Furthermore, by examining differences between recalled contact and unrecalled contact with the program within the program area it is possible to control for some of the differences between the program and control areas which have presented problems for the earlier analyses.

Table 40 presents the results of regression analysis in which reported program exposure of program area residents was entered as an explanatory variable along with the same factors entered as control variables in the regression analyses discussed above. The results of these analyses are discussed below, according to the type of program contact whose potential effects are being examined. Complete results appear in Appendix L.

o Effects of Recalled Exposure to Directed Police-Citizen Contact. Program area panel respondents who recalled police officers coming to their door to ask about neighborhood prodblems differed significantly from those who did not on three outcome measures.* Specifically such recalled contacts:

*Given the power of the pre-test as a statistical control, a criterion of .05 was applied as a decision rule for statistical significance.

Table 40

Relationship Between Self-Reported Program Exposure and Outcome Measures

Controlling for Sixteen Factors Including the Pretest*

(Panel Respondents in Program Area Only - West 1)

Outcome Measure	Police Came To Door	Visited/ Called Community Service Station	Saw Newsletter	Seen or Heard of: Community Service Center	Foot Patrol	Bus Checks	Disorderly Conduct Enforcement	Road Checks	Clean-Up	Police Officer in Area	(N)
	Effect (Sigf.)	Effect (Sigf.	Effect (Sigf.)	Effect (Sigf.)	Effect (Sigf.)	Effect (Sigf.)	Effect (Sigf.)	Effect (Sigf.)	Effect (Sigf.)	Effect (Sigf.)	
Perceived Area Social Disorder Problems	- (.01)	+ (.02)	+ (.94)	- (.59)	+ (.85)	+ (.20)	- (.77)	- (.69)	- (.63)	+ (.81)	(264)
Perceived Area Physical Deterioration Problems	- (.55)	+ (.04)	- (.97)	+ (.55)	+ (.96)	+ (.04)	+ (.94)	- (.24)	+ (.66)	+ (.69)	(264)
Fear of Personal Victimization in Area	- (.15)	+ (.24)	- (.28)	- (.98)	- (.75)	+ (.46)	- (.47)	+ (.81)	- (.86)	- (.46)	(264)
Worry About Property Crime Victimization in Area	- (.40)	+ (.75)	+ (.87)	+ (.87)	- (.50)	+ (.83)	- (.61)	- (.96)	- (.15)	- (.41)	(264)
Perceived Area Personal Crime Problems	- (.26)	+ (.18)	- (.95)	- (.27)	- (.22)	+ (.02)	+ (.87)	+ (.38)	+ (.03)	- (.51)	(262)
Perceived Area Property Crime Problems	- (.05)	+ (.94)	+ (.96)	- (.12)	- (.56)	+ (.28)	+ (.19)	+ (.50)	+ (.77)	+ (.78)	(260)
Personal Crime Victimization	- (.70)	? ?	+ (.38)	- (.32)	- (.91)	- (.91)	+ (.71)	- (.57)	? ?	+ (.70)	(265)
Property Crime Victimization	- (.01)	? ?	- (.93)	+ (.97)	- (.77)	+ (.03)	+ (.04)	+ (.34)	? ?	+ (.59)	(265)
Evaluations of Police Service	+ (.08)	+ (.03)	+ (.13)	+ (.001)	+ (.001)	+ (.20)	+ (.001)	+ (.31)	+ (.37)	+ (.02)	(260)
Perceived Police Aggressiveness	+ (.03)	+ (.54)	+ (.91)	- (.76)	+ (.55)	- (.91)	+ (.75)	+ (.35)	- (.74)	- (.12)	(247)
Defensive Behaviors to Avoid Personal Crime	+ (.42)	+ (.01)	+ (.73)	+ (.28)	- (.99)	+ (.44)	+ (.13)	+ (.14)	- (.12)	+ (.66)	(264)
Household Crime Prevention Efforts	+ (.33)	+ (.01)	+ (.72)	- (.92)	- (.17)	+ (.22)	+ (.17)	+ (.14)	- (.23)	- (.49)	(264)
Satisfaction With Area	+ (.15)	- (.30)	+ (.29)	+ (.73)	+ (.17)	+ (.01)	+ (.02)	+ (.58)	+ (.58)	+ (.46)	(264)

* Including indicators of age, race, sex, income, education, length of residence, marital status, household organization size, renter status, building size, personal victimization, knowledge of local crime victims, and the pretest.

- o Reduced perceived area social disorder problems,
- o Reduced perceived area property crime problems, and
- o Increased perceived police aggressiveness.

No other statistically significant effects were found.

In general, then, the tactic appeared to have basically positive effects.

o Effects of Recalled Exposure to the Newsletter. Only one statistically significant association with awareness of the newsletter was observed: Those who were aware of the newsletter improved their evaluation of the police service in their neighborhood. Otherwise, generally mixed results were found.

o Effects of Recalled Awareness of Community Service Center. Only one statistically significant association with awareness of the center was observed. Those who were aware of the center improved their evaluations of police service in the area. Otherwise, weak and mixed results were found.

o Effects of Recalled Exposure to Foot Patrol. The only outcome measure on which panel respondents who recalled having seen or heard of foot patrol in the area demonstrated a statistically significant difference from those who did not was the evaluation of police services, about which those who recalled exposure gave significantly higher evaluations. The results from other analyses were generally mixed.

o Effects of Recalled Exposure to Bus Checks. Program area respondents in the panel sample who recalled having seen or heard about bus checks demonstrated results which were different to a statistically significant extent, from those provided by respondents who did not recall such program exposure on three measures. Such recalled exposure:

- o Increased perceived area physical deterioration problems,
- o Increased perceived area personal crime problems, and
- o Increased satisfaction with the neighborhood.

In general, exposure to bus checks was associated with exposed to increased perceptions of area problems but improved evaluations of the police and the neighborhood.

o Effects of Recalled Exposure to Disorderly Conduct Enforcement.

Responses of program area respondents who saw or heard of police operations to remove groups of loiterers from the streets were significantly different from those of respondents who did not on only two dimensions. Such exposure:

- o Improved evaluations of police service, and
- o Increased satisfaction with the neighborhood.

Otherwise, the associations with exposure to this tactic were weak and mixed.

o Effects of Recalled Exposure to Road Checks. No statistically significant associations with recalled exposure to road checks were discovered.

o Effects of Recalled Exposure to Clean-Up Activities. Only one significant association with recalled exposure to clean-up activities was found: Those who recalled such exposure were likely to increase their level of perceived area personal crime problems. No other trends were apparent.

o Effects of Recalled Exposure to Police Officers in the Area. Panel respondents who recall seeing a police officer in the neighborhood recently differed significantly from others in only one respect: They provided much higher evaluations to the police service they received. Otherwise, no consistently strong patterns emerged.

Analysis of Possible Differential Impacts on Subgroups. The first three types of analysis have examined the impact of the program for the area and panel samples as a whole. However, it is possible that a program like this could have a special impact upon selected subgroups of the population, while having none--or different--consequences for others in the area. For example, this type of police operation might reduce the fear of people who generally are vulnerable to victimization and fear, or have had past experiences with crime, but not other groups. These are hypotheses about "treatment-covariate interaction." Such hypotheses imply that program contact (treatment) had special impact (an interaction effect) upon subgroups defined by particular factors (covariates).

Hypotheses about such special impacts can be tested by including interaction measures in multiple regression analyses. Table 41 presents a summary of such analyses for these subgroups:

- age (the differential impact of the program upon older people)
- sex (the differential impact of the program upon females)
- victimization (the differential impact of the program upon victims, as measured by the Wave 1 survey)
- housing (the differential impact of the program upon persons living in single family homes

For each subgroup, the table indicates the direction of the effect of being in that group and living in the treatment area; in additon, the statistical significance of each effect is shown. (Complete results are presented in Appendix M.) The measures of effect take into account the pre-test score for each outcome listed at the heads of the columns, residence in the program or comparison area (the measure of program exposure), and the simple linear effect of being a group member. (Coefficients associated with those factors are not presented here, both to reduce the complexity of the table, and because they have little interpretive value). People who score high on the interaction measures described here were (a) in the group, and (b) in the program area.

The results indicate seven statistically significant interaction effects with respect to the differential effects of the program on females, as opposed to males. To better understand these results, Table 42 presents Wave 1 and Wave 2 adjusted means for males and females separately for those seven outcome measures which demonstrated a significant interaction effect. The means indicate that the positive program effects, although generally found for members of both sexes, were stronger among females than among males.

Table 41

Treatment-Covriate Interaction Analysis Results
(Impact of Program Area Residence Upon Certain Subgroups)

(Panel Respondents Only - West 1)

	Effect (and Significance) of Subgroup Membership											
Wave 2	Female Subgroup		Aged Subgroup		Wave 1 Victim		Single Family Home Subgroup		High School Graduate Subgroup		Renter Subgroup		Long Term Residence Subgroup	
Outcome	Effect	Sigf	Effect	Sigf	Effect	Sigf	Effect	Sigf.	Effect	Sigf.	Effect	Sigf.	Effect	Sigf.
Perceived Area Social Disorder Problems	-	.01	+	.14	+	.57	+	.01	+	.29	+	.38	-	.48
Perceived Area Physical Deterioration Problems	-	.31	?	?	?	?	?	?	+	.37	-	.59	+	.86
Fear of Personal Victimization in Area	-	.01	+	.15	-	.65	-	.83	+	.35	+	.54	-	.13
Worry About Property Crime Victimization in Area	-	.04	+	.04	+	.50	-	.15	+	.67	+	.67	-	.72
Perceived Area Personal Crime Problems	-	.01	-	.97	+	.04	+	.56	+	.96	-	.71	+	.22
Perceived Area Property Crime Problems	-	.03	-	.80	+	.57	+	.90	+	.51	+	.24	-	.77
Total Victimization	-	.20	-	.12	+	.52	-	.05	+	.13	+	.55	-	.56
Personal Crime Victimization	?	?	-	.72	+	.50	-	.72	?	?	?	?	?	?
Property Crime Victimization	?	?	-	.33	-	.77	-	.04	?	?	?	?	?	?
Evaluations of Police Services	+	.45	-	.08	-	.98	-	.01	-	.48	+	.14	-	.03
Perceived Police Aggressiveness	+	.42	+	.25	-	.47	-	.43	-	.92	-	.70	+	.57
Defensive Behaviors To Avoid Personal Crime	-	.01	+	.22	-	.69	-	.78	-	.98	-	.65	+	.42
Household Crime Prevention Efforts	-	.01	-	.80	+	.14	+	.04	-	.57	+	.58	-	.01
Satisfaction With Area	+	.68	-	.25	+	.12	-	.72	-	.01	+	.01	-	.03

Note: "N" approximately 490 for all analyses

Table 42

Means for Selected Outcome Measures by Gender

Outcome Measure By Gender	Program Area (West 1)					Comparison Area (South 4)				
	Wave 1 Mean	Wave 2 Mean	Diff.	(Sigf.)	[N]	Wave 1 Mean	Wave 2 Mean	Diff.	(Sigf.)	[N]
Perceived Area Social Disorder Problems										
Males	1.98	1.92	-.06	(.21)	[112]	2.01	1.95	-.06	(.16)	[86]
Females	1.89	1.74	-.15	(.001)	[155]	2.07	2.09	+.02	(.31)	[187]
Fear of Personal Victimization in Area										
Males	1.69	1.61	.08	.11	[113]	1.72	1.60	-.12	(.04)	[87]
Females	1.88	1.77	-.11	(.02)	[156]	2.16	2.12	-.04	(.16)	[188]
Worry About Property Crime Victimization in Area										
Males	2.28	2.15	-.13	(.07)	[111]	2.19	2.21	+.02	(.42)	[86]
Females	2.22	2.06	-.16	(.007)	[155]	2.26	2.40	+.14	(.01)	[187]
Perceived Area Personal Crime Problems										
Males	1.80	1.78	-.02	(.38)	[110]	1.84	1.63	-.20	(.001)	[83]
Females	1.73	1.59	-.14	[148]	[148]	1.95	1.80	-.15	(.001)	[186]
Perceived Area Property Crime Problems										
Males	2.23	2.15	-.08	(.18)	[110]	2.10	2.19	+.09	(.14)	[84]
Females	1.97	1.80	-.17	(.002)	[153]	2.12	2.16	+.04	(.22)	[186]
Defensive Behaviors to Avoid Personal Crime										
Males	.41	.44	+.03	(.19)	[112]	.32	.38	+.06	(.11)	[85]
Females	.64	.57	-.07	(.01)	[155]	.65	.69	+.04	(.09)	[187]
Household Crime Prevention Efforts										
Males	1.08	1.80	+.72	(.00)	[112]	1.34	1.41	+.07	(.35)	[86]
Females	.92	1.30	+.38	(.005)	[155]	1.05	1.44	+.38	(.00)	[187]

The only other subgrouping for which interaction effects often proved to be significant was length of residence. To clarify this finding, Table 43 presents Wave 1 and Wave 2 adjusted means for respondents subdivided into four categories of length of residence. The results show no consistent relationship between length of residence and program effects, although those respondents who had lived in the program area the longest showed the smallest relative increase in satisfaction with the area, the least improvement in evaluations of police service and the greatest reduction in household crime prevention efforts.

Recorded Crime Data Analysis

Monthly recorded crime data were analyzed according to the following categories:

- Total Part 1 crimes,
- Burglaries,
- Personal crimes (robbery, assault, rape),
- Outside incidents,
- Larcenies, and
- Auto thefts.

Figures 3 through 6 present these data in graphic form for the first four types. These data were subjected to interrupted time series analysis to determine if, at month 45, there was a significant change in either the levels or trends of these series. To the extent that the coordinated program had any effect on recorded crimes, the null hypothesis of no effect should be expected to be rejected for the series in the W-1 program area. Since no program weas implemented in th S-4 area, the time series for that area serve as quasi-experimental controls for those in the program area.

Table 43

Means for Selected Outcome Measures by Length of Residence

Outcome Measure	Program Area: Length of Residence	Wave 1 Mean	Wave 2 Mean	Diff.	(Sigf.)	[N]	Comparison Area: Wave 1 Mean	Wave 2 Mean	Diff.	(Sigf.)	[N]
Satisfaction With With Area	Short 1	2.32	2.52	+ .20	(.04)	[61]	2.05	2.09	+ .04	(.37)	[74]
	2	2.21	2.47	+ .26	(.01)	[56]	1.71	1.89	+ .18	(.03)	[57]
	3	1.95	2.27	+ .32	(.01)	[64]	1.97	2.16	+ .19	(.08)	[35]
	Long 4	1.86	2.21	+ .35	(.001)	[87]	1.79	2.10	+ .31	(.001)	[107]
Evaluations of Police Service	Short 1	2.48	3.23	+ .75	(.001)	[53]	2.56	2.62	+ .06	(.32)	[71]
	2	2.73	3.08	+ .35	(.001)	[55]	2.39	2.44	+ .05	(.33)	[57]
	3	2.32	3.20	+ .88	(.001)	[60]	2.57	2.83	+ .26	(.05)	[35]
	Long 4	2.48	3.08	+ .60	(.001)	[84]	2.51	2.82	+ .31	(.001)	[107]
Household Crime Prevention Efforts	Short 1	.72	1.43	+ .71	(.001)	[61]	.66	1.03	+ .37	(.02)	[74]
	2	.94	1.55	+ .61	(.01)	[56]	.88	1.21	+ .33	(.03)	[57]
	3	1.19	1.70	+ .51	(.01)	[64]	1.40	1.40	.00	(.99)	[35]
	Long 4	1.67	1.39	+ .32	(.02)	[87]	1.55	1.84	+ .29	(.05)	[107]

Figure 3

Total Verified Crimes

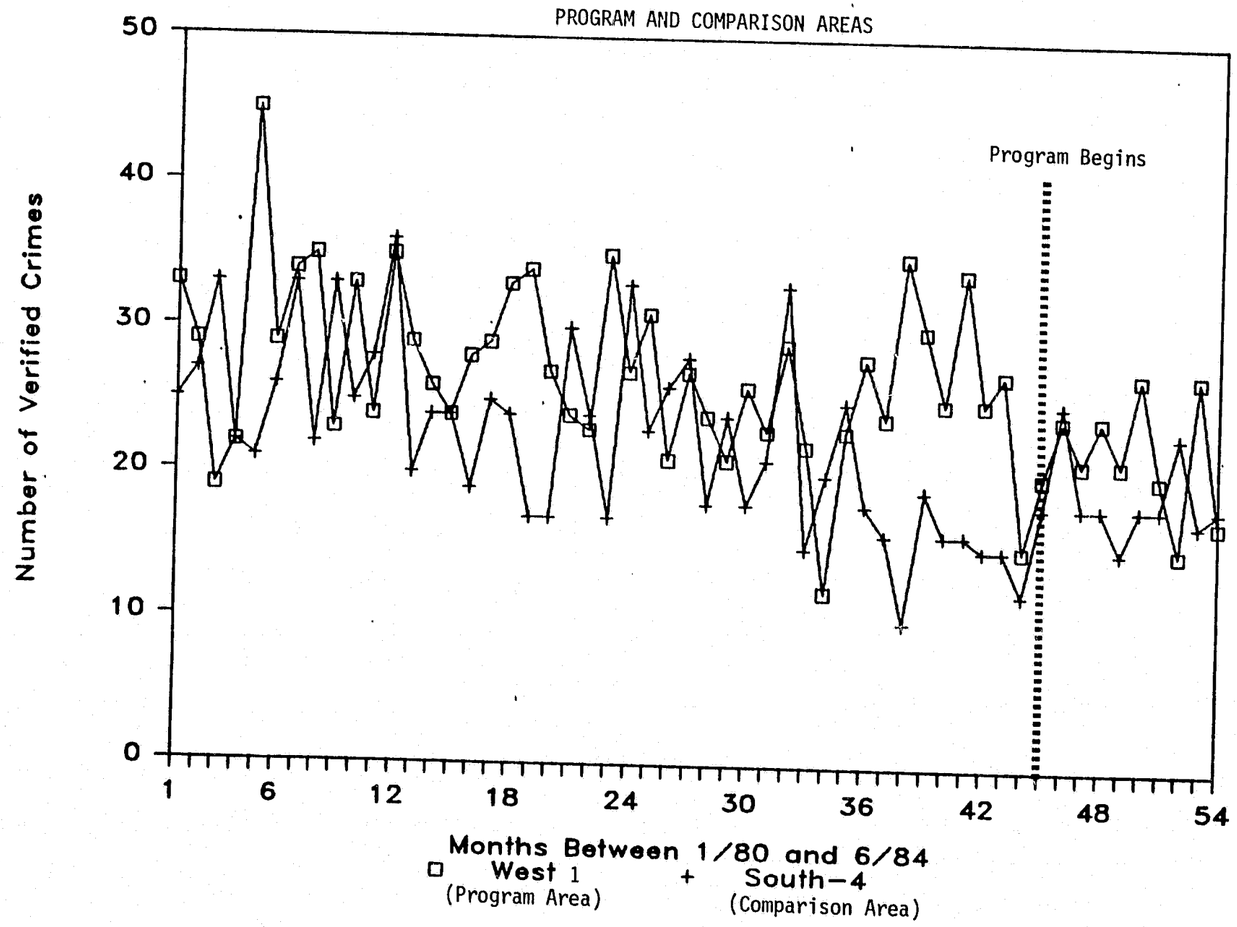


Figure 4

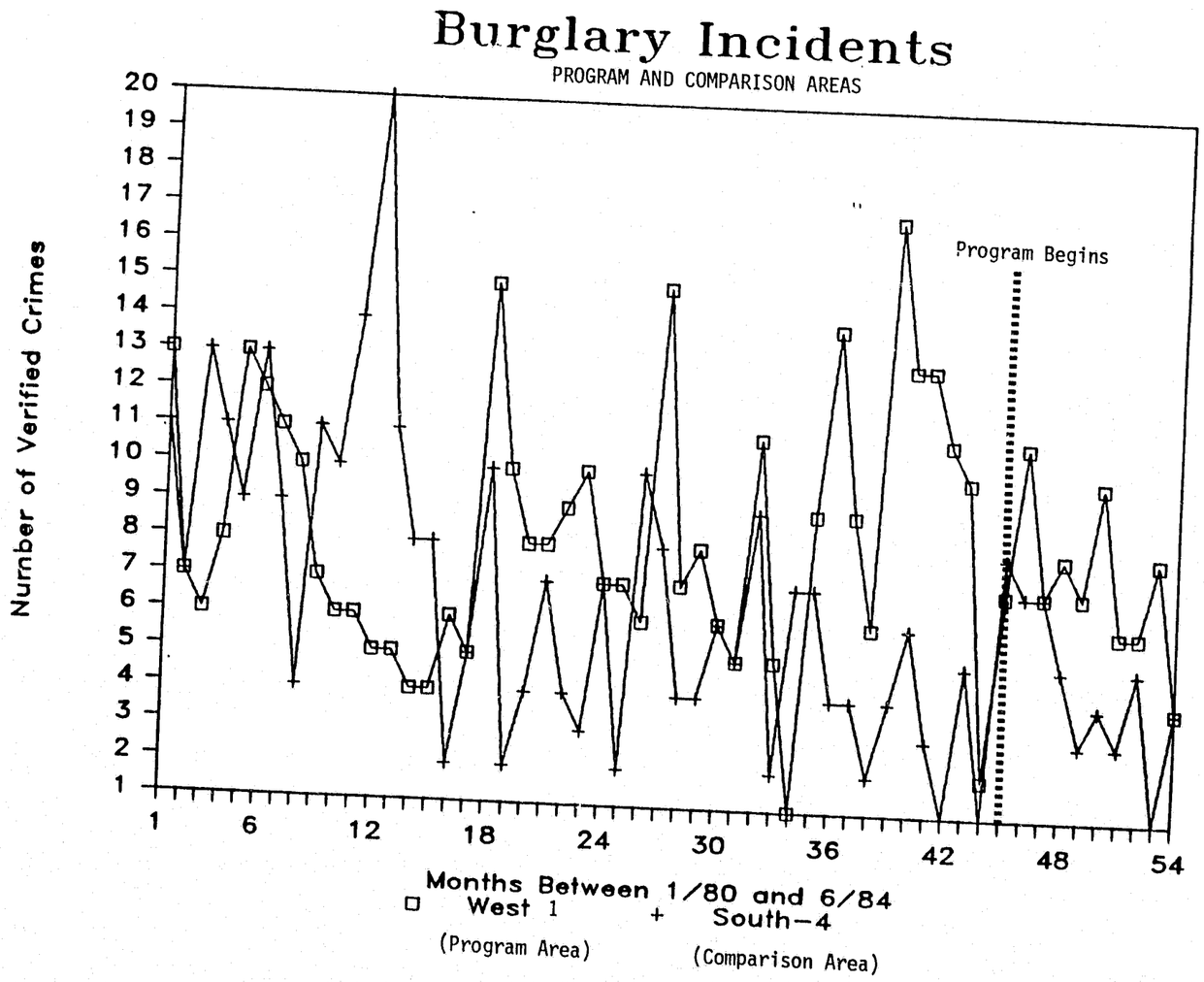

Burglary Incidents
PROGRAM AND COMPARISON AREAS
Number of Verified Crimes
20
19
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
1
6
12
18
24
30
36
42
48
54
Program Begins
Months Between 1/80 and 6/84
West 1
(Program Area)
+ South-4
(Comparison Area)

Figure 5

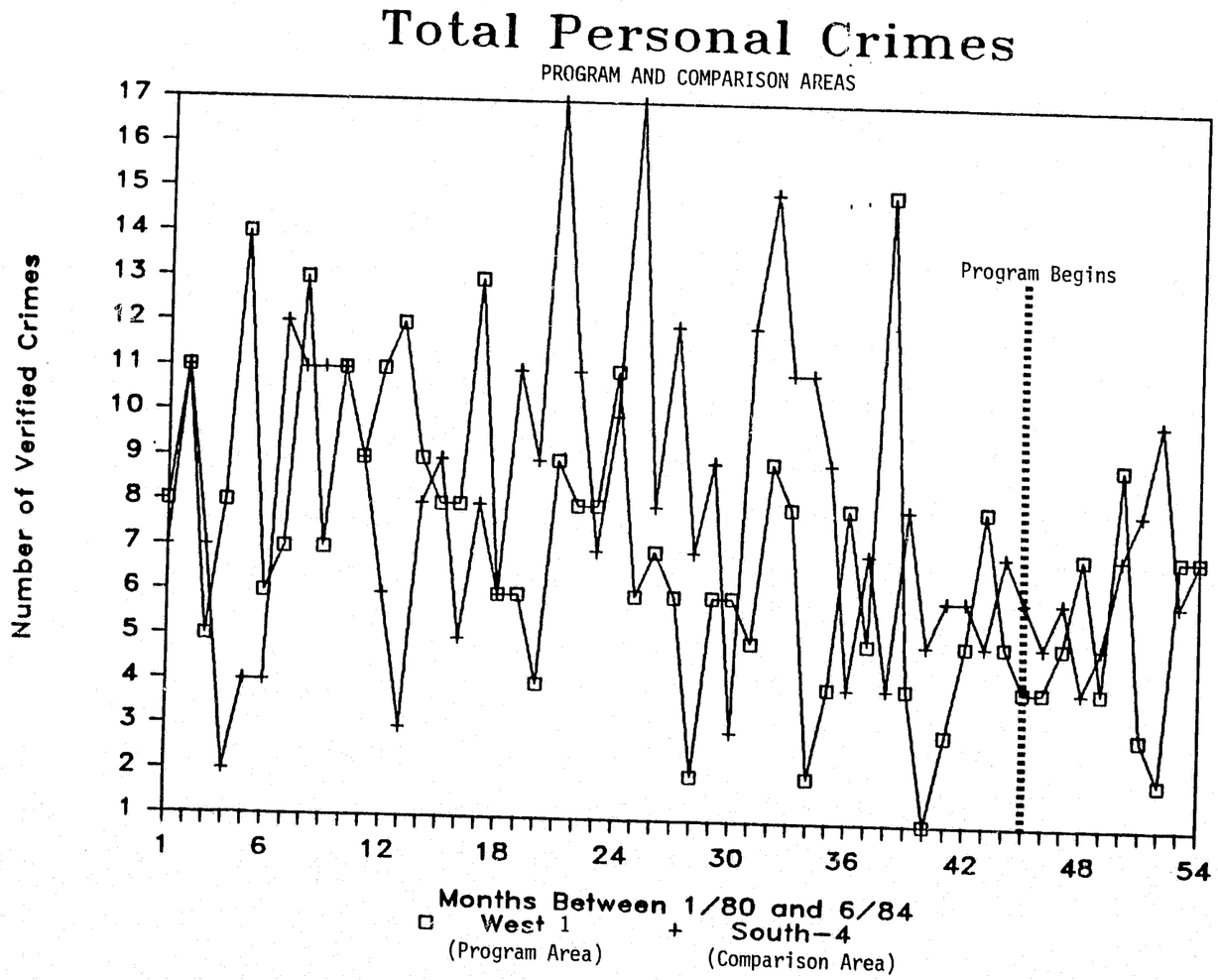
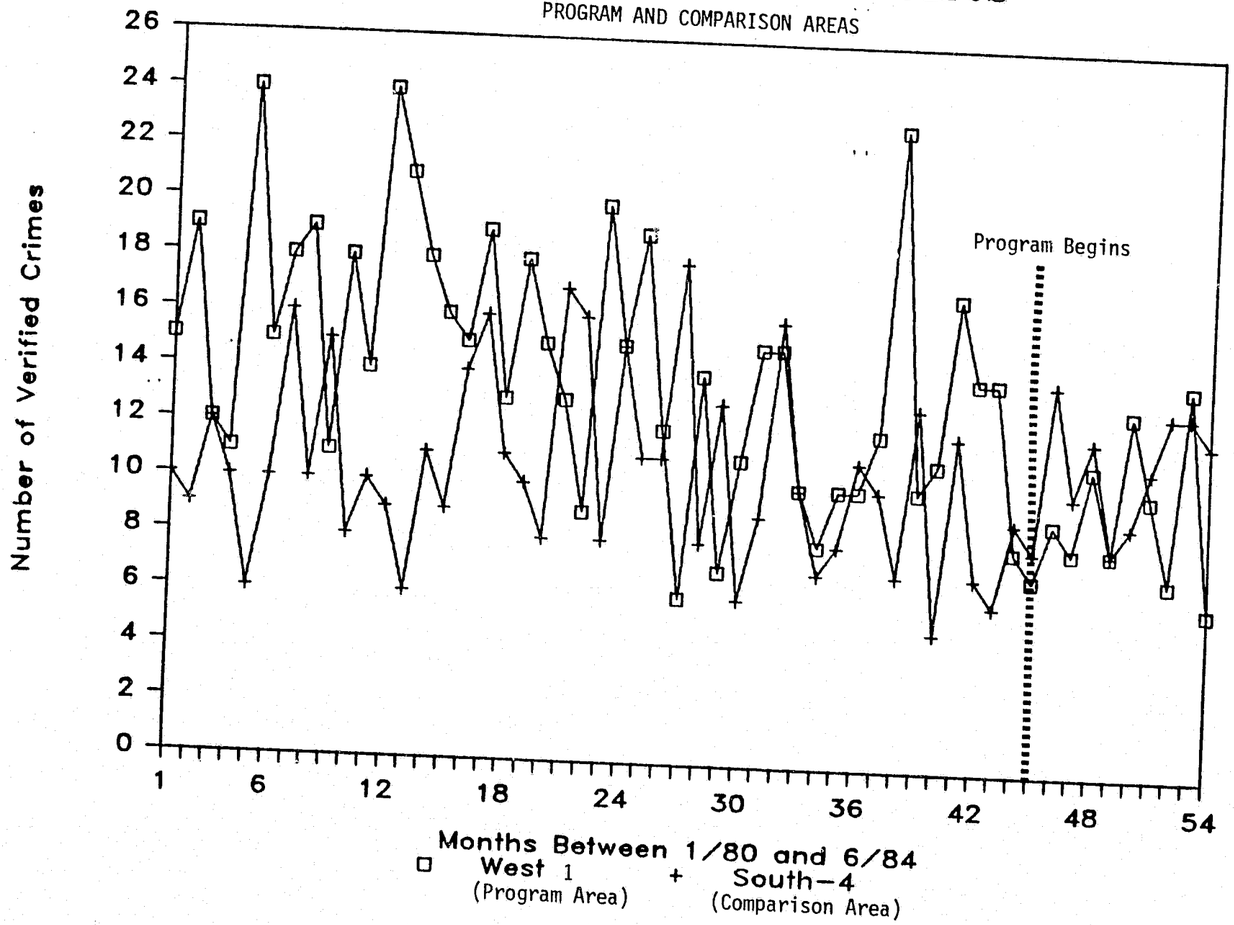

Total Personal Crimes
PROGRAM AND COMPARISON AREAS
Number of Verified Crimes
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
Program Begins
1
6
12
18
24
30
36
42
48
54
Months Between 1/80 and 6/84
West 1
(Program Area)
South-4
(Comparison Area)

Figure 6

All Outside Incidents

PROGRAM AND COMPARISON AREAS



Since no effect is expected in S-4, if the null hypothesis is rejected for any S-4 time series, effects in the program series can be potentially attributed to external factors other than the program. The rationale for such an approach is discussed in Cook and Campbell (1979, Chapter 5) and Glass, Willson and Gottman (1975).

Several different forms of analysis were conducted: univariate Auto Regressive Integrated Moving Average (ARIMA) analyses, "constrained" multivariate ARIMA analyses and "unconstrained" multivariate ARIMA analyses. Complete data, descriptions of analysis procedures and results are presented in Appendix N. Although each type of analysis provides useful information, both the univariate and "constrained" analyses have serious limitations. The univariate analyses, for example, are restricted in their statistical power because of the relatively short lengths (59 months) of these series and because of the fact that neither the series nor the tests of changes in them are independent. The "restrained" analyses, on the other hand, are limited by the fact that they are based on the assumption that each series will demonstrate the same program effect. Although these analyses provide a test of displacement of crime from one category or area to another, the underlying assumsption is admittedly unrealistic.

The best overall indicators of program impact, therefore, are provided by the "unrestrained" multivariate ARIMA analyses. The results of these analyses are presented in several different ways in Table 44. The two columns of data represent the change estimates calcualted for both the program and comparison areas. The first six rows present the estimated average monthly change after September 1983, the month when the program began, in standardized units. Calculating effects in such units allows them to be compared across areas and crime types. The second set of six

TABLE 44

Results of Multivariate Time Series Analyses of Recorded Crime

Type of Change Measure	Crime Type	Estimated Change	
		Program Area (West-1)	Comparison Area (South-4)
Average Monthly Change in Standardized Units	Total	-1.014*	-.561
	Personal	- .847*	-.539
	Burglary	- .216	-.435
	Larceny	- .137	-.088
	Auto Theft	- .711*	.236
	Outside	-1.122*	.045
Average Monthly Change in Unstandardized Units	Total	-6.1 *	-3.3
	Personal	-2.7 *	-1.9
	Burglary	- .8	-1.4
	Larceny	- .3	- .2
	Auto Theft	-1.5 *	+ .7
	Outside	-3.6 *	+ .2
Percent Change from Monthly Average in Unstandardized Units	Total	-23.7 *	-15.5%
	Personal	-40.5	-23.6%
	Burglary	-13.1	-17.5%
	Larceny	- 8.1	- 4.0%
	Auto Theft	-38.1 *	+12.1%
	Outside	-34.5 *	+ 1.6

*Statistically significant at $p \leq .05$

rows presents the estimated monthly change in actual numbers of recorded crimes. Examining change in this way provides an idea of the actual number of crimes affected. Finally, the last set of six rows presents the results in terms of the percentage change discovered in monthly crimes.

The results show that there were statistically significant decreases in the program area in (1) total Part 1 crimes, (2) personal crimes, (3) auto thefts and (4) outside incidents. These produced decreases of from 24 to 41 percent in the monthly incidences of these types of crime. No significant effects of any kind were indicated in the comparison area.

Such findings, although interesting, are difficult to interpret clearly, because of the intrinsic ambiguity of recorded crime data (see Skogan, 1976). These results, therefore, could well represent a change in the reporting behavior of the residents and in the recording practices of the officers. McCleary and Riggs (1982) have developed statistical models for controlling for such effects but these time series, unfortunately, are too short for correction. No matter what effect on reporting or recording may have led to these differences, however, the reader is strongly warned not to interpret them as changes in actual victimization, as further demonstrated by the fact that no significant effects were noted with respect to the survey measurement of victimization.

Summary

This evaluation examined the effects of the Newark program in several ways:

1. Recalled program awareness and contact in both the program and comparison areas were examined to determine the extent to which respondents recalled different program components. In addition, differences in awareness across population subgroups were investigated.

2. To provide an indication of the general levels and changes demonstrated by the various survey measures in both the program and comparison areas, simple comparisons between certain means, percentages and distributions at Wave 1 and 2 were examined.

3. To provide indicators of the possible program impact on residential respondents, two different types of analysis were conducted:

   a. An analysis of pooled cross-sectional data, to supply evidence of program impact at the broad area level, and

   b. An analysis of panel data, collected from the subset of the same persons interviewed both before and after the program was implemented, to provide an indication of the program's impact on particular individuals.

4. Among members of the panel sample in the program area, comparisons of outcome measures were made between those persons who recalled being exposed to the program and those who did not.

5. To test for possible subgroup-specific program effects, the responses of members of the panel samples were subjected to treatment-covariate interaction analysis.

6. Recorded crime data were subjected to interrupted time series analysis to determine if trends or levels were affected by program implementation.

The results of each of these analysis are presented below.

Recalled Program Exposure and Contact

Among program area residents, the component with the highest level of awareness was the storefront office, which 90 percent of those interviewed recalled. Sixth-three percent said they were aware of foot patrol; 54 percent recalled bus checks; 49 percent knew about road checks; 41 percent said they knew about the disorderly conduct enforcement operations; 41 percent had heard of the newsletter; 40 percent said that police officers

had come to their door to inquire about local problems. Awareness of these components among representatives of non-residential establishments was consistently higher than among residents, probably due to the fact that much of the program activity was situated in active commercial areas. Very few persons said that they themselves had been stopped by the police in the area, either while walking or driving. Only about 12 percent of residents (26 percent of non-residential respondents) said they were aware of any local clean-up efforts.

Descriptive Data Analysis

Few sizable differences in mean scores were found across the program and comparison areas at Wave 1. Similarly, few notable differences in changes between the two waves were detected.

Survey Indicators of Program Impact

Two different types of analysis were conducted to measure possible program impact:

- o A pooled cross-sectional analysis was performed on the complete set of data obtained during both waves of surveys in both the program and comparison areas; and
- o A separate panel analysis was conducted on the data obtained from the subset of persons with whom interviews were conducted both before and ten months after the program started.

The results indicate that the program had consistently significant results in both types of analysis on four different outcome measures:

- o In both analyses, the program was found to have been associated with significant reductions in perceived social disorder problems; that effect was somewhat stronger in the panel analysis.
- o Both analyses indicated that the program was related to significant reductions in worry about property crime; the measures of effect were virtually the same in both cases.
- o The program was shown to have been associated with significant reductions in the level of perceived area property crime problems, although the size of the effect was much greater in the panel analysis.
- o Both types of analysis showed the program to have been associated with significant improvement in evaluations of police service, with both measures of effect and comparable size.

One other effect was significant in only the cross-sectional analyses. Specifically, residents of the program area reported more incidents of personal crime than did those in the comparison area.

The analyses of the panel data revealed four significant effects other than those revealed by both types of analysis:

- o Fear of personal victimizaton declined significantly;
- o Satisfaction with the area increased significantly;
- o Total victimization increased significantly; and
- o Property victimization increased significantly.

Recalled Program Exposure Effects

Within the program area panel sample, a correlational analysis of the effect of recalled exposure to various program components produced these statistically significant results:

- o Respondents who recall police officers coming to their door were more likely to have reduced levels of perceived area social disorder problems, reduced levels of perceived area property crime problems, and increased levels of perceived police aggressiveness.

- Respondents who recall the neighborhood newsletter were more likely to have improved evaluations of police service.
- Respondents who recall foot patrol in the area were more likely to have improved evaluations of police service.
- Respondents who recall the community service center were more likely to have improved their evaluation of the police service in their neighborhood.
- On the other hand, respondents who remember calling or visiting the community service center were more likely to have increased levels of peceived area social disorder problems, increased levels of perceived area physical deterioration problems, improved evaluations of police physical deterioration problems, improved evaluations of police service, increased efforts to defend themselves against personal crime, and increased efforts to install household crime prevention devices.
- Respondents who recall bus checks were more likely to have increased levels of perceived personal crime problems and increased levels of satisfaction with the area.
- Respondents who recall the enforcement of disorderly conduct laws were more likely to have improved evaluations of police service and increased levels of satisfaction with the area.

Analysis of Possible Differential Impacts on Subgroups

On seven different measures, the program's positive program effects were stronger among females than among males. In addition, those respondents who had lived in the program area the longest showed the smalled relative increase in satisfaction with the area, the least improvement in evaluations of police service and the greatest reduction in household crime prevention efforts.

The results with respect to residents of single family homes were somewhat more complicated. Specifically, respondents living in single family homes in the program area indicated a decrease in worry about property crime, while residents in other types of housing reported an

increaed level of worry. On the other hand, program area respondents in single family homes indicated a more improved evaluation of police service than did those program area respondents in other dwelling types, the relative improvement was not as great as that found among residents of single family homes in the comparison area. Respondents in single family homes in the program area indicated that they thought that police aggressiveness had decreased; program area respondents in other types of dwellings--and respondents in all types of housing units in the comparison area--perceived an increased in aggressiveness. Finally, single family home residents in the program area indicated an increase in efforts to prevent household crime; in the comparison area, however, a decrease in such efforts was indicated.

Recorded Crime Analysis

Interrupted time series analyses of recorded crime data from the program area indicate significant reductions in the level of (1) total Part 1 crimes, (2) personal crimes, (3) auto theft and (4) crimes which occurred outside. No significant effects were found in the comparison area.

SUMMARY AND DISCUSSION

Introduction

Recent research, much of it funded by the National Institute of Justice, has revealed that fear of crime has become a major problem in our society. Other research has revealed that this fear often derives from concern about various "signs of crime," as well as from direct or indirect experience with crime. For example, neighborhoods which suffer from such physical and social disorder as vandalism, loitering and public drinking or gambling convey the feeling of having been abandoned. As a results, law-abiding residents and merchants begin to flee. Houses and shops become vacant, making them vulnerable to more vandalism and social disorder. Those who choose to remain--or are unable to leave--look upon the streets with detachment, respondening to the apparent lack of concern revealed by the neglect and disorder around them. An insidious cycle leads from fear of crime to even more fear.

This has been known for some time--but little has been done about it. In 1982, however, N.I.J. decided to fund well-evaluated experiments in Houston and Newark to determine the most effective ways that police, working with citizens, can dismantle the cycle of fear. Through a competitive bidding process, the Police Foundation was awarded a grant to plan and conduct the evaluations of those experiments.

In each city, task forces were assembled to determine the most appropriate programs to be tested, given the local circumstances. In both cities, the programs agreed upon included door-to-door police visits, as

well as police community offices and newsletters. In Houston, the effectiveness of community organizing by police officers and a program to recontact victims were also tested. In Newark, a program to reduce the social and physical "signs of crime" was implemented; in addition, the police, working with other agencies, were to develop recreational alternatives to street corner loitering and to clean up deteriorated areas and buildings. All of these strategies were to be implemented by the police department and evaluated by the Police Foundation using the best research designs possible.

The Rationale for the Coordinated Community Policing Program

There is good reason to believe that increased social contact between police officers and citizens in dispassionate settings can lead to more effective crime prevention, reductions in fear and increased satisfaction with police service. In addition, prior research has demonstrated the links between social disorder and physical deterioration (the "signs of crime"), fear of crime, crime, and neighborhood deterioration. It appears reasonable, therefore, that the police, working with other agencies of government, might be able, by affecting disorder and deterioration, to have positive contributions to make toward the reduction of fear, more effective crime prevention and, finally, increased satisfaction with the police and the neighborhood.

As a result, the Newark Fear Reduction Task Force decided to institute a coordinated program designed both to increase the quantity and quality of police-community contacts and to reduce the "signs of crime." The Task Force sought to accomplish the following goals:

- o Reduce perceptions of area social disorder and physical deterioration problems,
- o Reduce the fear of personal and property crime victimization in the area,
- o Reduce perceptions of area crime problems,
- o Reduce victimization by crime,
- o Reduce unnecessary defensive behaviors, and perhaps affect the installation of household protection devices,
- o Improve the evaluation of police services, while avoiding increasing the impression that the police are overly aggressive, and
- o Improve satisfaction with the area.

This evaluation was designed, therefore, to document the ways and extent to which the Newark program to reduced the "signs of crime" was implemented and what effects that program achieved those goals.

The Newark Program

The Newark Coordinated Community Policing program had two major goals:

- To increase the quantity and quality of police-community contacts, and
- To reduce social disorder and physical deterioration.

To accomplish the first goal, the task force created:

- o A neighborhood community service center,
- o A directed police-citizen contact program, and
- o A neighborhood police newsletter.

To accomplish the second goal, the task force established:

- o Several programs designed to reduce social disorder, and
- o Programs to reduce physical deterioration.

As part of the effort to reduce social disorder the following tactics were utilized:

- o foot patrol, to enforce laws and maintain order on sidewalks and street corners,
- o radar checks, to enforce speeding laws on the streets,
- o bus checks, to enforce ordinances and maintain order aboard public buses,
- o enforcement of the state orderly conduct laws, to reduce the amount of loitering and disruptive behavior on corners and sidewalks, and
- o road checks, to identify drivers without proper licenses or under the influence of alcohol, to detect stolen automobiles and to apprehend wanted offenders.

The program to reduce physical deterioration consisted of the intensified efforts of municipal service agencies and the sentencing to community work service of juvenile first-time offenders.

Evaluation Design and Methodology

The fundamental evaluation design was based upon the comparison of attitudinal measures collected before and ten months after the introduction of the program. These measures werre obtained by conducting interviews with random samples of residents and representatives of non-residential establishments in both a program area and in a comparison area in which no new fear reduction activities were undertaken. In addition, monthly recorded crime data were collected for both areas forty-four month prior to, and 13 months during, the implementation of the program.

To facilitate this design, two areas were carefully selected to be as similar as possible. In one neighborhood, the program area, intensive efforts to reduce the social and physical indicators of disorder were implemented. The other neighborhood was maintained as the control area, in which no programs to reduce the fear of crime were implemented.

Interviews were conducted at randomly chosen addresses in these two areas before and ten months after program implementation began. The procedures produced response rates ranging from 76 to 83 percent. Attempts to conduct interviews with a subset of households both before and after the program began produced panel response rates of approximately 70 and 64 percent, in the program and comparison areas respectively. Interviews were also conducted with owners, managers or employees of non-residential establishments. The response rates were consistently higher than 86 percent.

Survey questionnaires were designed to collect information about each of the following:

- Recalled Program Exposure
- Perceived Area Social Disorder Problems
- Perceived Area Physical Deterioration Problems
- Fear of Personal Victimization in Area
- Worry About Property Crime Victimization in Area
- Perceived Area Personal Crime Problems
- Perceived Area Property Crime Problems
- Victimization
- Evaluations of Police Service and Aggressiveness
- Defensive Behaviors to Avoid Personal Crime
- Household Crime Prevention Efforts
- Satisfaction with Area

Recorded crime data for Part 1 crimes were also collected, by month, for both areas from January 1980 through September 1984.

Analysis and Results

This evaluation examined the effects of the Newark coordinated crime prevention program in several ways:

1. Recalled program awareness and contact in both the program and comparison areas were examined to determine the extent to which respondents recalled different program components. In addition, differences in awareness across population subgroups were investigated.

2. To provide an indication of the general levels and changes demonstrated by the various survey measures in both the program and comparison aeras, simple comparisons between certain means, percentages and distributions at Wave 1 and 2 were examined.

3. To provide indicators of the possible program impact on residential respondents, two different types of analysis were conducted:

   a. An analysis of pooled cross-sectional data, to supply evidence of program impact at the broad area level, and

   b. An analysis of panel data, collected from the subset of the same persons interviewed both before and ten months after the program was implemented, to provide an indication of the program's impact on particular individuals.

4. Among members of the panel sample in the program area, comparisons of outcome measures were made between those persons who recalled being exposed to the program and those who did not.

5. To test for possible subgroup-specific program effects, the responses of members of the panel samples were subjected to treatment-covariate interaction analysis.

6. Recorded crime data were subjected to interrupted time series analysis to determine if trends or levels were affected by program implementation.

The results of each of these analyses are presented below.

Recalled Program Awareness and Contact

Among program area residents, the component with the highest level of awareness was the storefront office, which 90 percent of those interviewed recalled. Sixty-three percent said they were aware of foot patrol; 54 percent recalled bus checks; 49 percent knew about road checks; 41 percent

said they knew about the disorderly conduct enforcement operations; 41 percent had heard of the newsletter; 40 percent said that police officers had come to their door to inquire about local problems. Awareness of these components among representatives of non-residential establishments was consistently higher than among residents, probably due to the fact that much of the program activity was situated in active commercial areas. Very few persons said that they themselves had been stopped by the police in the area, either while walking or driving. Only about 12 percent of residents (26 percent of non-residential respondents) said they were aware of any local clean-up efforts.

Descriptive Data Analysis

Few sizable differences in mean scores were found across the program and comparison areas at Wave 1. Similarly, few notable differences in changes between the two waves were detected.

Survey Indicators of Program Impact

Two different types of analysis were conducted to measure possible program impact:

- o A pooled cross-sectional analysis was performed on the complete set of data obtained during both waves of surveys in both the program and comparison areas; and
- o A separate panel analysis was conducted on the data obtained from the subset of households where interviews were conducted both before and ten months after the program started.

The results indicate that the program had consistently significant results in both types of analysis on four different outcome measures:

- o In both analyses, the program was found to have been associated with significant reductions in perceived social disorder problems; that effect was somewhat stronger in the panel analysis.
- o Both analyses indicated that the program was related to significant reductions in worry about property crime; the measures of effect were virtually the same in both cases.
- o The program was shown to have been associated with significant reductions in the level of perceived area property crime problems, although the size of the effect was much greater in the panel analysis.
- o Both types of analysis showed the program to have been related to significant improvement in evaluations of police service, with both measures of effect of comparable size.

One other effect was significant only among the cross-sectional analyses. Specifically, residents of the program area reported more incidents of personal crime than did those in the comparison area.

The analyses of the panel data revealed four significant effects other than those revealed by both types of analysis:

- o Fear of personal victimizaton declined significantly;
- o Satisfaction with the area increased significantly;
- o Total victimization increased significantly; and
- o Property victimization increased significantly.

Recalled Program Exposure Effects

Within the program area panel sample, a correlational analysis of the effect of recalled exposure to various program components produced these statistically significant results:

- o Respondents who recall police officers coming to their door were more likely to have reduced levels of perceived area social disorder problems, reduced levels of perceived area property crime problems, and increased levels of perceived police aggressiveness.

- Respondents who remember calling or visiting the community service center were more likely to have increased levels of perceived area social disorder problems, increased levels of perceived area physical deterioration problems, improved evaluations of police service, increased efforts to defend themselves against personal crime, and increased efforts to install household crime prevention devices.

- Respondents who recall the neighborhood newsletter were more likely to have improved evaluations of police service.

- Respondents who recall foot patrol in the area were more likely to have improved evaluatins of police service.

- Respondents who recall the community service center were more likely to have improved their evaluation of the police service in their neighborhood.

- Respondents who recall bus checks were more likely to have increased levels of perceived personal crime problems and increased levels of satisfaction with the area.

- Respondents who recall the enforcement of disorderly conduct laws were more likely to have improved evaluations of police service and increased levels of satisfaction with the area.

On seven different measures, the program's positive program effects were stronger among females than among males. In addition, those respondents who had lived in the program area the longest showed the smalled relative increase in satisfaction with the area, the least improvement in evaluations of police service and the greatest reduction in household crime prevention efforts.

The results with respect to residents of single family homes were somewhat more complicated. Specifically, respondents living in single family homes in the program area indicated a decrease in worry about property crime, while residents in other types of housing reported an increaed level of worry. On the other hand, program area respondents in single family homes indicated a more improved evaluation of police service than did those program area respondents in other dwelling types, the

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Interrupted time series analyses indicate significant reductions in the program area in the level of (1) total Part 1 crimes, (2) personal crimes (3) auto theft and (4) crimes which occurred outside. No significant effects were found in the comparison area.

Discussion

The Newark Coordinated Community Policing program was successfully implemented as planned for ten months. The evaluation of that program reveals that many residents and persons working in the program area became aware of many of the components of the program. Examined separately, exposure to the individual program components produced few statistically significant positive effects. Taken as a whole, however, the program was successful in improving evaluations of police service and in reducing residents' perceived levels of social disorder, perceived personal crime problems, and worry about property crime. In addition, the program was

- Respondents who remember calling or visiting the community service center were more likely to have increased levels of perceived area social disorder problems, increased levels of perceived area physical deterioration problems, improved evaluations of police service, increased efforts to defend themselves against personal crime, and increased efforts to install household crime prevention devices.

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associated with a significant reduction in Part 1 crimes, particularly personal crimes and thsoe which occurred outside.

The coordination of the various program elements, therefore, appeared to produce a positive synergistic effect. By increasing the quantity and quality of contacts between police and citizens, the program was able to make the police more accessible to the community, providing reassurance to the residents and opening up a valuable channel of information for the police. Furthermore, the program gave the police the means to utilize that information to address the concerns expressed by those who live and work in the neighborhood. By creating this mutually beneficial partnership, the Newark program demonstrated that, especially in this time of austerity for many municipal governments, the best principle may be the oldest one: the most effective policing is that which derives from the support of, and works most closely with, the citizens it serves.

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COORDINATED COMMUNITY POLICING

APPENDICES

APPENDIX A

THE FEAR REDUCTION PROGRAM

THE FEAR REDUCTION PROGRAM

The program described in this report was one of several strategies tested as part of a Fear Reduction Program which was carried out in Houston, Texas, and Newark, New Jersey, in 1983 and 1984. The police departments in these two cities were invited to design and implement strategies to reduce fear of crime. The Police Foundation with funding provided by the National Institute of Justice (NIJ) provided technical assistance to the departments during the planning phase of the program and conducted rigorous evaluations of the strategies which were developed. NIJ also supported a dissemination program, in which the National Conference of Mayors, the Police Executive Research Forum, the National Organization of Black Law Enforcement Executives, and the National Sheriffs' Association sent representatives to observe the strategies in action and report on them to their members. The questions they asked and the written observations they shared with the Houston and Newark departments provided constructive criticism of the program implementation process.

Program Objectives. The overall goal of the program was to find new ways to help citizens gain a realistic picture of the crime problems facing their neighborhoods, reduce excessive fear of crime, encourage greater positive police-citizen cooperation in crime prevention, spark increased awareness among people of the steps which they could take to reduce crime, and help restore their confidence in the police and faith in the future of their communities.

In each city a number of different strategies were developed which addressed these issues. Previous research has found crime to be only one of the causes of fear and declining community morale, so those strategies addressed a broad spectrum of issues. Some focused upon reducing physical disorder, including trash and litter, abandoned buildings, graffiti, and deterioration. Others targeted social disorder, including loitering, harassment, disorderly street behavior, and violations of rules of conudct on mass transit. A number were designed to increase the two-way flow of information between citizens and the police. From the police side this included developing new mechanisms to gather information about community problems often of a seemingly "nonpolice" nature, assisting citizens in organizing to address such problems, and testing new mechanisms to "spread the word" about community programs and the things that individual citizens could do to prevent crime.

Site Selection. Houston and Newark were selected as examples of two different types of American cities. Houston is a relatively young city, with low population density and a developing municipal infrastructure, while Newark is a mature city with high population density and no significant growth. Because they are so different, some of the strategies they developed for the Fear Reduction Project were unique, but most addressed the same underlying problems and many were surprisingly similar. The two cities were also selected because of the capacity of their police departments to design and manage a complex experimental program.

Within each city, "matched" neighborhoods were selected to serve as testing grounds for the strategies. Because Newark has a predominantly black population, five physically similar areas with a homogeneous racial composition were selected. The heterogeneous nature of Houston called for the selection of neighborhoods with a population mix more closely resembling that of the city as a whole. In both cities the selected areas were approximately one square mile in size, and physically separated from each other. Site selection was guided by the 1980 Census, observations of numerous potential sites, and extensive discussions with police crime analysts and district commanders in the cities.

The Task Force Planning Process. In both cities, the program planning process had to design programs which met two constraints: they could be carried out within a one-year time limit imposed by the National Institute of Justice, and they could be supported entirely by the departments--there was no special funding available for these projects.

The planning processes themselves took different forms in the two cities. In Houston, one patrol officer from each of the four participating police districts was assigned full time for two months to a planning Task Force, which was headed by a sergeant from the Planning and Research Division. A civiiian member of the Planning and Research Division also served on the Task Force. During the planning period the group met regularly with staff members of the Police Foundation to discuss past research related to the project. They also read studies of the fear of crime, and visited other cities to examine projects which appeared relevant

to fear reduction. By April, 1983, the group had formulated a set of strategies which they believed could be implemented effectively in Houston and had the potential to reduce citizen fear.

Then, during April and May the plan was reviewed and approved by Houston's Chief of Police, the department's Director of Planning and Research, by a panel of consultants assembled by the Police Foundation, and by the Director of the National Institute of Justice.

In Newark, the Task Force included several members of the police department as well as representatives of the Mayor's office, the Board of Education, the New Jersey Administrative Office of the Courts, the Essex County Courts, the Newark Municipal Courts, the Essex County Probation Department and the Graduate School of Criminal Justice of Rutgers University. The group met once or twice a week for a month to discuss the general problems of fear, then broke into several committees to consider specific program possibilities. In April, 1983 the committees submitted lists of proposed programs to the entire task force for approval. These programs were reviewed by the panel of consultants, assembled by the Police Foundation and by the Director of the National Institute of Justice.

Technical Assistance by the Police Foundation. The Police Foundation provided the departments with technical assistance throughout the planning stages of the Fear Reduction Project. Its staff assisted the departments in locating potentially relevant projects operating in other cities, accumulated research on fear and its causes, arranged for members of the Task Forces to visit other departments, and identified consultants who

assisted the departments in program planning and implementation. This activity was supported by the National Institute of Justice.

Strategies Developed by the Task Force. In Houston, strategies were developed to foster a sense that Houston police officers were available to the public and cared about individual and neighborhood problems. Some of the strategies also were intended to encourage citizen involvement with the police and to increase participation in community affairs. The strategies included community organizing, door-to-door police visits, a police-community newsletter, recontacts with crime victims, and a police-community storefront office.

The Newark strategies were directed at the exchange of information and the reduction of social and physical disorder. The police strategies included door-to-door visits, newsletters, police-community storefronts, and the intensified enforcement and order maintenance. In association with the Board of Education, recreational alternatives to street-corner loitering were to be provided. With the cooperation of the courts system, juveniles were to be given community work sentences to clean up deteriorated areas; with the assistance of the municipal government, abandoned or deteriorated buildings were to be demolished and delivery of city services intensified.

Implementation of the Strategies. Responsibility for implementing the strategies in Houston was given to the planning Task Force, which then consisted of a sergeant, four patrol officers, and a civilian member of the department. Each of the patrol officers was directly responsible for the

execution of one of the strategies. They were joined by three additional officers; two from the Community Services Division were assigned to work on the community organizing strategy, and another was assigned to work on the door-to-door contact effort. During the implementation period, two more officers were assigned to the victim recontact program and another to the community organizing strategy.

During the nine-to-twelve month period that the strategies were operational, the original Task Force members assumed total responsibility for implementation. They conducted much of the operational work themselves and coordinated the few other officers from each patrol district who were involved in program implementation. When implementation problems required swift and unique solutions (a condition common during the start up period), the Task Force officers worked directly with the district captains and/or with the sergeant from Planning and Research who headed the Task Force. This sergeant would, in turn, take direct action or work with the Director of Planning and Research or with one of the Deputy Chiefs over the patrol districts and/or with the Assistant Chief in charge of Operatios. The amount of responsibility placed on the task force members had some of the disadvantages which can exist when the traditional chain of command is circumvented, but it had the advantage that Task Force members felt ownership of, and pride in, the program they had designed.

In Newark, responsibility for implementing each program component was assigned to one or more officers, who in turn were monitored by the program coordinator and his assistant. Those officers working in particular patrol divisions--those in the community police center and those making door-to-

door contacts--reported formally to the division Captain and informally to the program coordinator, who, at the beginning of the program was still a Lieutenant. This somewhat ambiguous reporting structure created some delays, lack of coordination and misunderstanding during the early months of program implementation; these problems were largely overcome with the cooperative efforts of the parties involved. Officers who implemented the other programs reported directly to the program coordinator, a system which worked effectively throughout the program.

The Overall Evaluation Design. All of the strategies tested in Houston and Newark were to be evaluated as rigorously as possible. Two of them--the victim recontact program in Houston and police-community newsletters in both cities--were evaluated using true experiments, in which randomly selected groups of citizens were either contacted by the program or assigned to a noncontacted control group. The other strategies, including the one reported here, were area-wide in focus, and were evaluated using pre- and post-program area surveys. Surveys were also conducted in a comparison area, in which no new programs were implemented, in each city.

APPENDIX B

THE DOOR TO DOOR QUESTIONNAIRE

APPENDIX A

POLICE DEPARTMENT NEWARK, N.J.

DIRECTED POLICE - CITIZEN CONTACT

LOCATION OF INTERVIEW				TARGET AREA:	COMMAND:	FILE NO:
NAME:				ADDRESS:		
PHONE:	SEX:	RACE:	AGE:	☐ RENT ☐ OWN HOME	TYPE OF LOCATION ☐ RESIDENCE ☐ BUSINESS	

INTERVIEW QUESTIONS

1. WHAT DO YOU THINK ARE THE BIGGEST PROBLEMS IN THIS NEIGHBORHOOD?

2. WHICH OF THESE PROBLEMS ARE THE MOST SERIOUS ? (DESCRIBE TYPE, CRIME, YOUTH, ETC..)

A. MOST SERIOUS PROBLEM:

B. SECOND MOST SERIOUS PROBLEM:

3. PROBLEM A

A. HOW HAS THIS PROBLEM AFFECTED YOU OR YOUR FAMILY?

B. WHAT DO YOU FEEL ARE THE CAUSES OF THIS PROBLEM?

C. WHAT DO YOU THINK SHOULD BE DONE TO SOLVE THIS PROBLEM?

D. OFFICER'S COMMENTS RECOMENDATIONS:

DP1; 1896 (9-83)

4. PROBLEM B

A. HOW HAS THIS PROBLEM AFFECTED YOU OR YOUR FAMILY?

B. WHAT DO YOU FEEL ARE THE CAUSES OF THIS PROBLEM?

C. WHAT DO YOU THINK SHOULD BE DONE TO SOLVE THE PROBLEM?

D. OFFICER'S COMMENTS RECOMENDATIONS:

5. COMPLAINT ADJUSTMENT FOLLOWUP

ASSIGNED TO: ASSIGNED BY:

6. ACTION(S) TAKEN

A. PROBLEM A

B. PROBLEM B

C. SUPERVISOR'S COMMENTS:

SUPERVISOR: DATE:

INTERVIEWING OFFICER(S)

NAME (PRINT)	RANK	BADGE	COMMAND
NAME (PRINT)	RANK	BADGE	COMMAND

UNIT:	DATE:	TIME OF INTERVIEW FROM: TO: TOTAL:

REVIEWING SUPERVISOR

NAME (PRINT)	RANK	BADGE	DATE	TIME

APPENDIX C

SAMPLE OF THE ACT 1 NEWSLETTER

CONTINUED

2 OF 4

ACT

Published by the
NEWARK Police Department
and Neighborhood Residents

ATTACK CRIME TOGETHER Vol. 1, No. 1, October 1983 Hubert Williams, Police Director

"From the Desk of the Police Director"

It is with great pride that I invite the citizens of Newark to join with the Newark Police Department in a full scale effort to combat crime. As members of the same community fighting for a single cause it is my conviction that only through a concerted effort can we rebuild and recreate this city to its full potential. Unlike any other urban area we are graced with a uniqueness of composition which enables us to far supersede other leading commercial and industrial centers.

In conjunction with the Police Foundation of Washington, D.C., the Newark Police Department has called upon all facets of the community to reopen and reestablish lines of communication within this city. As part of a Fear-Crime Reduction Program, the Newark Police Department and the Police Foundation join with the Mayor, representatives of the Newark Court system, members of the Educational Community, and various other community leaders to attack crime and create an environment which reflects success of all its components.

As part of this effort numerous programs have been implemented in order to confront specific issues facing this city. Bus inspections, (BUS'T CRIME), Walk and Ride Patrol (WAR), Selective Area Field Enforcement Operation (SAFE), and our ACT Newsletter are only a few of many initiatives which strive to encourage all citizens to become aware and to fully participate in the rejuvenation of Newark. In future months several of these programs will be explained in order to create an understanding between law enforcement and community members.

Join with us in creating the Newark of the future. Let us meet this challenge with pride and – ATTACK CRIME TOGETHER!

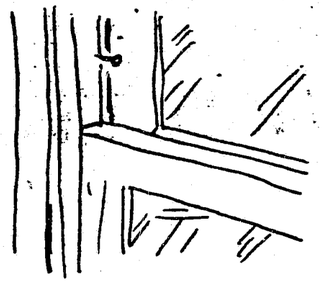
Protect Yourself in Your Home

What does $475 mean to you? A paycheck? A vacation? To a burglar it's the average value of a single haul – the TV, stereo, or tools he steals.

It doesn't take much to outsmart most burglars. They're usually not "pros." Most often they're kids taking advantage of an easy mark. So easy, in fact, that often they can go right in through an unlocked door or window. No wonder there's a burglary every 10 seconds!

Want to stop the clock on burglars? A good first step is to lock your doors, *always* – even when you're going out "for just a minute." Remember these simple tips, too:

- Check your locks – they should be the "deadbolt" type with a strong metal bar extending 1 inch into the door frame.
- Too hot to close and lock windows? Put nails in window frames so the windows can't be opened more than a few inches until you take the nails out.
- Try this simple safeguard for sliding glass doors: when you close and lock the door, put a small wooden beam or broom handle in the door track. Even if the lock is jimmied, the door will be hard to open.
- Taking a trip? Make sure your home always looks "lived-in," especially when you're not there.
- Stop newspaper and mail delivery or ask a neighbor to collect them so things won't pile up outside your door.
- Use automatic timers to turn lights and radios on and off. You can buy timers at hardware or department stores for under $10. Set different rooms at different times.
- Mark things you own that burglars like – TV, stereo, CB radios, or tools – with a personal identification number, which is something they *don't* like. Announce that fact by sticking a warning sign on your door or window. The police can help you mark your things and give you the warning sticker. Just ask about **Operation Identification.**



first was only an auto accident. Officer Morris stopped his vehicle to see if anyone needed help and was quickly informed the four men had robbed a woman, threatening her with a large club. Officer Morris quickly pursued the four men and was successful in apprehending three of them a short distance away.

These are just two recent examples of the fine work being done almost routinely by **The Men of The West District** in their efforts to make our community safe.

West District Community Council

The West District Community Council has begun its meetings again after a summer recess. The council meets the last Monday of each month at 6:30 P.M. at the West District Station, 10-17th Avenue, and is an important means of communication between the Community and the Police Department. I urge all interested persons from the West and Central Wards to attend and join our Council.

STOREFRONT TIDBITS

A new West District Community Service Center opened recently at 767 South Orange Avenue, near the intersection of South Orange and Chelsea Avenues. It will be open six (6) days a week, Monday through Saturday, from 12 noon until 10:00 P.M. The Center will be engaged in the following activities:

–Walk-in reporting of crimes.
–Reporting of less serious crimes by telephone.
–Holding of community forums
–Distribution of crime prevention information.
–Operation I.D. (Marking and Registation of valuable property).
–Dissemination of newsletters.
–Recruitment for and holding meetings of Block Watch organizations.
–Registration of bicycles.
–Provision of resources.
Division of Youth and Family Services.
–Serving as a base for door-to-door activities.

The Center is under the command of Captain George E. Dickscheid, Captain of the West District Station. The Center is staffed by one Sergeant, Sgt. Kenneth H. Williams. Assisting are two officers, Herbert Childs and George Manzella. The staff is augmented by auxiliary police volunteers.

The Community Center, will act as a liaison between police and community. Its prime purpose is to establish a working relationship between neighborhood citizens and the Newark Police Department. The facilities will be available for community forums, block association meetings, etc.

Experts in crime prevention will also use the center to address community groups on measures citizens can take to make them less likely targets for crimes, such as making windows secure and the kinds of locks to use. A Neighborhood Watch program will also be initiated in which citizens are trained to observe and report anything out of the ordinary in their community and their block. Information for police intervention will be generated by them. A registration system for identifying personal belongings will also be set up.

We are here to serve all your needs. With this we invite citizens from the area to join with us and participate in our venture. HELP US HELP YOU!

BREAK THE SILENCE!

Report a Rape to SARA IMMEDIATELY after it happens! Any detail you can give to SARA is extremely important since it can help lead to an arrest and conviction.

CALL
733-RAPE

GET INVOLVED— IN CRIME PREVENTION

Crime prevention is an important goal of the Newark Policie Department, but the police department cannot do it alone. All segments of the residential, business and government communities must be involved in crime prevention in order for it to work. The Newark Comprehensive Crime Prevention Program is calling upon citizens, community groups, business groups, and city agencies in one unified effort to prevent and reduce crime. It is a plan to make Newark a safer place to live and work. In order to achieve these goals the following activities are being implemented through this program.

Neighborhood Watchgroups

Neighborhood Watch is a citywide effort of the Newark Comprehensive Crime Prevention Program and the residents of the community to join together to deter crime in their neighborhoods.

Neighborhood Watchgroups provide a way for neighbor to help neighbor in keeping an eye on each other's property and possessions. Working in concert, a neighborhood may implement a complete program of security surveys, property marking and suspicious activity reporting. Neighborhood businesses are also encouraged to particpate in the Watchgroup.

Once you and your neighbors have an understanding of your neighborhood's problems, you can then tailor your activities to work most effectively against them. If everyone participates, A Watchgrou can work to reduce crime and make your neighborhood a safer place.

It's easy to set up a Watchgroup. All you have to do is contact your

APPENDIX D

SCALING THE RESIDENTIAL SURVEY DATA

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This report describes how analytic scales were developed for the Fear Reduction Project Evaluation's panel sample surveys. These scales measure the central outcomes of interest in this project: perceptions and fear of crime, evaluations of the quality of police service, assessments of neighborhood problems, residential satisfaction, and crime related behaviors. Each measure is a composite of responses to two or more items which were included in the surveys to tap those dimensions. Such multiple-item scales yield more reliable, general, stable measurements of peoples attitudes and experiences than do responses to single survey questions.

CRITERIA

In each case the goal was to arrive at scales with the following properties:

1. Responses to each item should be consistent (all positively correlated). This was established by examining their intercorrelations, after some items were rescaled for directionality of scoring. A summary measure of the overall consistency of responses to a set of items is Cronbach's Alpha, which is an estimate of their joint reliability in producing a scale score for an individual.
2. Item responses should be homogeneous, or single-factored (indicating they all measure "the same thing"). This was established by a principle components factor analysis of the items hypothesized to represent a single dimension. The items were judged homogeneous when

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they all loaded only on the first factor (their "principle component").

3. The items should share a substantial proportion of their variance with the hypothesized underlying dimension (perhaps precluding them from being significantly responsive to other conditions or events). This was demonstrated in two ways. Good items were those which evidenced a high correlation with others in the set. This was measured by their item-to-total correlation ("corrected" by excluding them from that particular total). Items were judged useful when, in a principal components factor analysys, the factor on which they fell accounted for a high proportion of their total variance (they had a high "communality").
4. The items on their face should seem related to a problem which is an object of one or more of the demonstration programs (suggesting they could be responsive to those interventions). Things which "scale together" based upon their naturally occurring covariation are not necessarily all useful, if they all should not be affected by the program of interest. The substantive utility of individual items cannot be statistically demonstrated; it is, rather, an argument.

The statistical analyses described above were done using SPSS-X. That system's RELIABILITY procedure generated inter-item correlations, calculated item-to-total correlations, and estimated a reliability coefficient (Cronbach's Alpha) for each set of item responses. FACTOR was used to extract the principal component from sets of items hypothesized to be unidimensional.

The scales were first developed using a random subset of the large Wave 1 survey data set. Then, all conclusions were confirmed and the scaling information presented below was calculated using the entire sample. The final scaling procedures then were duplicated separately for a number of subgroups, to examine whether or not things "went together" in the same fashion among those respondents. The scales were developed using unweighted data.

FEAR OF PERSONAL CRIME

Eight items were included in the survey to represent this general construct. Analysis of the first wave of the data indicated one should be dropped, and that the remaining set was two-factored.

The original items asked about the extent to which stranger assault, rape, and robbery were problems in the area, how worried the respondents were about being robbed, attacked, or being at home when someone broke in ("home invasion"), how safe they felt out alone in the area at night, and if there was a place nearby where they were afraid to walk.

An examination of correlations among these items indicated that worry about home invasion was only moderately correlated with the others, and excluding it from the group would improve the reliability of the resulting scale.

Excluding this item but using all of the others would yield an additive scale with a reliability of .78. However, a factor analysis of the remaining set suggested they were not unidimensional. Rather, three items asking about "how big a problem" specific personal crimes were in the area tapped a different dimension than those asking people how afraid they were and how worried they were about personally being victimized by the same types of crime. These

respondents seem to distinguish between personal risks and their general assessments of area problems. The two clusters of items loaded very distinctly on their unique factors, with high loadings.

Based upon this analysis, the following items were combined to form the "Fear of Personal Victimization in Area" measure:

Q34: How safe would you feel being outside alone in this area at night? (very safe to very unsafe)[1]

Q35: Is there any place in this areas where you would be afraid to go alone either during the day or at night? (yes or no).

Q43: [How worried are you that] someone will try to rob you or steal something from you while you are outside in this area? (very worried to not worried at all)

Q44: [How worried are you that] someone will try to attack you or beat you up while you are outside in this area? (very worried to not worried at all)

These items were added together to form a scale with a reliability of .72. The average item-total correlation of its components was .54, and the first factor explained 56 percent of the total variation in response to the items. Responses to Q35 were dichotomous, and as a result the item had only about two-thirds of the variance of Q43 and Q44, and one-half that of Q34. If such disparities are extreme, the items making up a simple additive scale will have a differential impact upon its apparent content. However, in this case there was no meaningful difference between the simple additive alpha and the alpha for a standardized scale score which equated the variances of its component parts. As a result, a simple additive scale score will be employed. A high score on this scale indicates respondents are fearful.

1. A few people who responded to Q34 that they "never go out" were rescored as "very unsafe" (see below).

The remaining items were combined to form the "Perceived Area Personal Crime Problems" scale:

[...please tell me whether you think it is a big problem, some problem, or no problem here in this area?]

Q114: People being attacked or beaten up by strangers?

Q117: People being robbed or having their money, purses or wallets taken?

Q121: Rape or other sexual assaults?

Because responses to these items all were measured on the same three-position set of response categories, the scale scores were generated by simply adding them together. As they had about the same mean and standard deviation (the rape question was somewhat lower on both), the items all contribute about equally to the total score for each individual. The factor lying behind these items accounted for 65 percent of their total variance. The reliability of the scale is .73. A high score on this issue indicates that these personal crimes were seen as "big problems in the area."

WORRY AND PERCEPTIONS ABOUT PROPERTY CRIME VICTIMIZATION IN AREA

There were five candidate items in this cluster. Three asked "how big a problem" burglary, auto theft, and auto vandalism were in the area, and two "how worried" respondents were about being victimized by burglary and auto theft or vandalism. Other research on concern about victimization or assessments of risk (see Baumer and Rosenbaum, 1981) indicates the distinction between personal and property crimes is a fundamental one, and that perceptions of the two are best gauged separately. (Auto vandalism was experimentally included among a set

of "disorder" items which included other vandalism activities, but empirically it belongs in this cluster of more serious crimes; (see below).

Although all five items clustered together, the following items were combined to for the "Worry About Property Crime Victimization in Area" scales:

Q45: [How worried are you that] someone will try to break into your home while no one is there? (Not worried at all to very worried)

Q47: [How worried are you that] someone will try to steal or damage your car in this area? (Not worried at all to very worried)

These two items were combined to form a scale. They were intercorrelated .43 and formed an additive scale with an Alpha of .60. Because the items employed similar three-category responses and they had about the same means and standard deviations, they were scaled by adding them together. A high score on this scale identifies respondents who are very worried about property crime.

The remaining three items were combined to form another scale, "Perceived Area Property Crime Problems" which, although highly correlated with the previously discussed "Worry about Property Crime" scale, omits, for theoreticial reasons, all emotive references such as "worry" or "fear." The average correlation among these items is .53; the Alpha was .77. The items were:

[...please tell me whether you think is a big problem, some problem, or no problem here in this area.]

Q68: People breaking in or sneaking into homes to steal things?

Q70: Cars being vandalized--things like windows or radio aerials being broken?

Q71: Cars being stolen?

PERCEIVED AREA SOCIAL DISORDER PROBLEMS

This is a concept introduced by Hunter (1978) (as "incivility"), and elaborated by Lewis and Salem (1981) and Skogan and Maxfield (1981). Many of its measures were first developed by Fowler and Mangione (1974). It has great currency in the research literature on the fear of crime. Recently, Wilson and Kelling (1982) have expanded its theoretical significance by linking disorders explicitly to the generation of other serious crimes, and lent it some controversy by recommending that disorders become the direct object of aggressive, neighborhood-based policing. The level of disorder has been shown to have direct consequences for aggregate levels of fear, community cohesion, and residential stability, in urban residential neighborhgoods and public housing projects (Skogan, 1983).

Seven candidate items were analyzed as part of the scale development process. They all focused upon deviant behaviors of varying illegality and seriousness, most of which take place in public locations. They were:

[...please tell me whether you think it is a big problem, some problem, or no problem at all.]

Q18: Groups of people hanging around on corners or in streets.

Q20: People saying insulting things or bothering people as they walk down the street?

Q24: People drinking in public places like on corners or in streets?

Q66: People breaking windows of buildings?

Q67: Graffiti, that is writing or painting on walls or windows?

Q113: Gangs?

Q120: Sale or use of drugs in public places?

Responses to these eight items were all positively intercorrelated (mean r=.40), and they had roughly similar means and variances. A scale "Perceived Area Social Disorder Problems," was formed by adding together responses to them. The principal component factor for these items explained 48 percent of their total variance. This scale has a reliability of .85. A high score on this scale points to areas in which these are seen as "big problems."

An additional six items included in the survey could have been included in a disorder scale. They were:

Q23: Truancy, that is, kids not being in school when they should be?

Q72: The wrong kind of people moving into the neighborhood?

Q119: Pornographic movie theaters or bookshops, massage parlors, topless bars?

Q116: Prostitutes?

Q19: Beggars or panhandlers?

Q115: Children being bothered on their way to and from school?

Responses to the these items were consistent with the others, but were excluded from the scale because they probed problems which were not explict foci of any program.

SATISFACTION WITH AREA

Satisfaction with the area was probed by two questions:

Q5: In general, since July of 1982, would you say this area has become a better place to live, gotten worse, or stayed about the same? (better, worse, or about the same)

Q14: On the whole, how do you feel about this area as a place to live? Are you... (very satisfied to very dissatisfied?)

Responses to these two questions were correlated .36, and had similar variances. Added together they formed a scale, "Satisfaction with Area," with a reliability of .50, good for a two-item measure. A high score on this scale identifies respondents who think their area is a good place to live, and has been getting better.

EVALUATIONS OF POLICE SERVICE AND AGGRESSIVENESS

A number of questions in the survey elicited evaluations of police service. Some items focused upon recent, specific police-citizen encounters which were identified in the survey, while others were "generic" and referenced more global opinions. Ten generic items were included in the questionnaire, and they revealed two distinct clusters of opinion: one referring to proactive, aggressive police action, and the other to the quality of services provided citizens and anticipated police demeanor in police-citizen encounters. A question referring to the strictness of traffic law enforcement was inconsistently correlated with most of the items, and had a low (about .10) correlation with the other measures of police aggressiveness; it was excluded completely.

Two general items consistently factored together, evidencing response patterns which differed from others focusing upon the police. Added together, they form a "Police Aggressiveness" measure. They are:

[...please tell me whether you think it is a big problem, some problem, or no problem here in this area.]

Q21: Police stopping too many people on the streets without good reason in this area?

Q26: Police being too tough on people they stop?

These two items were correlated +.50, and when factor analyzed with the remaining set (see below) formed a significant second factor with loadings of .83 and .86, respectively. They had about the same mean and standard deviation, so they were scaled by adding them together. The scale has a reliability of .66, good for a two-item measure. A high score on this scale identifies people who think these are "big problems."

The remaining items also formed a distinct factor, and make up a second additive measure, "Evaluation of Police Service." They are:

Q50: How good a job do you think [police] are doing to prevent crime? (very good to very poor job)

Q51: How good a job do you think the police in this area are doing in helping people out after they have been victims of crime? (very good to very poor job)

Q52: How good a job are the police in this area doing in keeping order on the streets and sidewalks? (very good to very poor job)

Q57: In general, how polite are the police in this area when dealing with people? (very polite to very impolite)

Q58: In general, how helpful are the police in this area when dealing with people around here? (very helpful to not helpful at all)

Q59: In general, how fair are the police in this area in dealing with people around here? (very fair to very unfair)

The simple additive combination of these items has a reliability of .86, and they were correlated an average of .56. They were single factored, and their principal factor explained 60 percent of the total variation in the items. There was some variation in the response format for these items, but differences in the variances in the items were not great enough to preclude adding them together in simple fashion to form a scale. A high score on this measure points to a favorable evaluation of the police.

PERCEIVED AREA PHYSICAL DETERIORATION PROBLEMS

Itmes in this cluster refer to the prevalance of problems with trash, abandoned buildings, and dirty streets and sidewalks. These are interesting because their frequency presumably reflects the balance of two opposing forces: the pace at which people or businesses create these problems and the efficiency

with which the city deals with them. Identical conditions can result from differing mixes of either activity.

The questions were:

[...please tell me whether you think it is a big problem, some problem, or no problem here in this area?]

Q15: The first one is dirty streets and sidewalks in this area?

Q22: Abandoned houses or other empty buildings in this area?

Q65: Vacant lots filled with trash and junk?

Responses to these questions were moderately intercorrelated (an average of .36), but single-factored. That factor explained 57 percent of the variance in the items. They had similar means and standard deviations as well as sharing a response format, so they were scaled by adding them together. This measure has a reliability of .63. A high score on this scale indicates that physical deterioration is thought to be a problem in the area.

A related survey item (Q69) asking about problems with abandoned cars would scale with these, but that problem was not a target of the clean-up program in Newark.

CRIME PREVENTION EFFORTS

There are a series of anti-crime actions taken by city residents which might be relevant for this evaluation. Four questions in the surveys probed the extent to which respondents took <u>defensive behaviors to protect themselves</u> from personal victimization in public locations. They were asked:

The next questions are about some things people might do when they go out after dark. Now think about the last time you went out in this area after dark.

Q80: Did you go with someone else to avoid crime? (yes or no)

Q81: The last time you went out after dark in this area, did you stay away from certain streets or areas to avoid crime? (yes or no)

Q82: When you last went out after dark in this area, did you stay away from certain types of people to avoid crime? (yes or no)

Q86: In general, how often do you avoid going out after dark in this area because of crime? (never go out to never avoid)

In survey questions like these, a few respondents inevitably respond that they "never go out." With the exception of the disabled this is highly unlikely, and people who answer in this way frequently are fearful and score as high "avoiders" on the other measures. For analytic purposes it proves useful (see Skogan and Maxfield, 1981) to count them along with the others. The "message" they are communicating seems to be that "it's a dangerous place out there," so we have classed them as "precaution takers" and assigned them "yes" responses to these items.

Responses to these four items were very consistent. They were correlated an average of .41, and formed a simple additive scale "Defensive Behaviors" with a reliability of .74. The last item, Q86, was rescored so that its four response categories ranged in value betwen zero and one, like the others. The items then all had similar means and standard deviations. The resulting scale is a simple additive combination of the four.

A second set of behaviors measured in the survey referred to <u>household crime prevention efforts</u>. Several elements of the program were designed to increase the frequency with which people take such measures. Questions in the survey which tapped these activities included:

The next few questions are about things that some people might do for protection from crime.

Q74: Have any special locks been installed in this home for security reasons? (yes or no)

Q75: Have any special outdoor lights been installed here to make it easier to see what's going on outside your home? (yes or no)

Q76: Are there any timers for turning your lights on and off at night? (yes or no)

Q77: Have any valuables here been marked with your name or some number? (yes or no)

Q78: Have special windows or bars been installed for protection? (yes or no)

Q85: Think about the last time when no one was home for at least a day or two. Did you ask a neighbor to watch your home? (yes or no)

Responses to these questions all were positively intercorrelated. The correlations often were low, however, probably due to the extremely skewed marginal distributions of many of them. For example, less than 20 percent reported having timers, marking their properly, and installing special security windows or bars. Nonparametric measures of association between these items--which are not affected by their skewed marginals--were more robust. Correlations between reports of the more normally distributed activities (39 percent have special locks, 30 percent outdoor lights, and 64 percent have neighbors watch their homes) were somewhat higher, averaging .20-.30. If added together, responses to these items would form a scale with a low reliability.

Also, a factor analysis of the entire set indicated they were not single-factored. Responses to Q75 and Q76, two questions about lighting, "went together" separately. So, in this evaluation analysis we simply added together the number of "yes" responses to the entire set of items, as a count of actions taken and, where relevant, analyzed the adoption of these measures separately.

DISTRIBUTION OF SCALE SCORES

Because they were to be used in multivariate regression analyses, it was important that the distribution of the scale scores described above meet the assumptions of regression. Also, one assumption in ANCOVA (carried out in this project using multiple regression) is that the relationship between pre- and post-test scores is linear, and this is also better determined if the scores themselves are fairly normally distributed. So, scale scores for both waves of each survey were examined for non-normality. Only one score for the Wave 1 panel survey was heavily skewed, (that for "Police Aggressiveness"), and it was logged for use in statistical analysis.

THE REPRODUCEABILITY OF SCALES AMONG SUBPOPULATIONS

Tables 1-3 summarize the reliability for the scales discussed above and present them for a variety of subgroups and area samples used in the evaluation. Table 1 presents the findings separately for Houston and Newark. Table 2 presents scale reliabilities for the major racial and ethnic groups surveyed in Houston--blacks, whites, and Hispanics. (In Newark, only largely black

neighborhoods were involved in the Fear Reduction Project.) Table 3 breaks the data down separately for the ten neighborhoods surveyed.

While the reliabilities presented here fluctuate from place-to-place and group-to-group, the generalizability of the scales used in the evaluation is evident. There is no evidence that special measures must be tailored for any particular group or area; rather, the various reports and analyses based upon these data can employ the same measures throughout.

A NOTE ON CALCULATING SCALE SCORES

There is a scattered amount of missing data for all of these items. There were substantially more missing data for questions dealing with the police than for generic questions about neighborhood conditions, probably reflecting many people's true ignorance of police affairs. Because a number of these scales summarize responses to several questions, if one missing element for a scale led to the complete exclusion of a respondent, the number of cases available for analysis would drop quite substantially. Because these items are single-factored and internally consistent, a better strategy is to let responses to components of a scale which <u>are</u> present "stand in" for occasional missing data. This was accomplished by basing each individual's calculated score on the sum of valid responses, standardized by the number of valid responses (scores = sum of response value/number of valid responses). Neither excluding respondents because of nonresponse nor fabricating data for them in the form of imputed values (such as means or "hot deck" values) is likely to be a superior strategy, in light of our scaling approach to measurement (cf. Kalton, 1983).

Table 1

Wave 1 Scale Reliabilities

All Respondents

Houston - Race Totals

Scale	Black	White	Hispanic
Fear of Personal Victimization in Area	.71	.71	.64
Perceived Area Personal Crime Problems	.76	.82	.79
Worry About Property Crime Victimization in Area	.63	.60	.69
Perceived Area Property Crime Problems	.79	.76	.79
Perceived Area Social Disorder Problems	.81	.82	.84
Satisfaction with Area	.51	.44	.39
Police Aggressiveness	.69	.60	.68
Evaluation of Police Service	.83	.84	.78
Perceived Area Physical Deterioration Problems	.60	.63	.61
Defensive Behaviors to Avoid Personal Crime	.69	.71	.66
(Cases)	(578)	(1091)	(443)

Table 2

Wave 1 Scale Reliabilities

All Respondents

City Totals

Scale	Total	Houston	Newark
Fear of Personal Victimization in Area	.72	.70	.74
Perceived Area Personal Crime Problems	.73	.80	.67
Worry About Property Crime Victimization in Area	.61	.62	.55
Perceived Area Property Crime Problems	.77	.77	.73
Perceived Area Social Disorder Problems	.84	.83	.77
Satisfaction with Area	.50	.44	.43
Police Aggressiveness	.66	.68	.64
Evaluation of Police Service	.86	.83	.84
Perceived Area Physical Deterioration Problems	.63	.62	.52
Defensive Behaviors to Avoid Personal Crime	.73	.69	.77
(Cases)	(4134)	(2178)	(1956)

Table 3

Wave 1 Scale Reliabilities

All Respondents

Area Totals

Scale	North line	Lang-wood	Wood Bayou	Golf Crest	Shady Acres	S-1	S-2	S-4	W-1	N-2
Fear of Personal Victimization in Area	.71	.69	.71	.68	.70	.74	.75	.74	.73	.72
Perceived Area Personal Crime Problems	.79	.80	.78	.83	.74	.68	.66	.57	.66	.72
Worry About Property Crime Victimization in Area	.65	.65	.56	.52	.67	.60	.69	.59	.63	.48
Perceived Area Property Crime Problems	.81	.78	.80	.71	.76	.77	.76	.72	.72	.74
Perceived Area Social Disorder Problems	.81	.81	.83	.84	.85	.73	.77	.77	.80	.74
Satisfaction with Area	.45	.48	.51	.42	.42			.44	.45	.45
Police Aggressiveness	.74	.66	.70	.65	.61	.71	.62	.71	.52	.60
Evaluation of Police Service	.86	.79	.83	.84	.80	.85	.82	.82	.85	.84
Perceived Area Physical Deterioration Problems	.67	.58	.62	.59	.57	.64	.52	.36	.56	.39
Defensive Behaviors to Avoid Personal Crime	.70	.67	.68	.71	.65	.73	.75	.78	.80	.76
(Cases)	(398)	(378)	(506)	(526)	(370)	(398)	(340)	(441)	(402)	(375)

APPENDIX E

SCALING THE NON-RESIDENTIAL SURVEY DATA

SCALING THE NONRESIDENTIAL SURVEY DATA

This appendix describes how analytic scales were developed for the Fear Reduction Project Evaluation's nonresidential sample surveys. These scales measure the central outcomes of interest in this project: perceptions and fear of crime, evaluations of the quality of police service, assessments of neighborhood problems, and satisfaction with business conditions in the area. As in other components of this evaluation, outcomes were measured by a composite of responses to two or more items which were included in the surveys to tap those dimensions. The item combination which was finally used to represent each outcome was determined by examining responses to the first, pre-test, surveys conducted in all areas of Houston and Newark. Scaling decisions were then verified on the post-test surveys. The pre-intervention survey with 414 business establishments was used to determine the empirical relationship between responses to survey items. They were intercorrelated and factor analyzed, and the results of those analyses informed our final scaling decisions. However, the scales also were formed based upon past research, to maintain consistency with other surveys conducted as part of the Fear Reduction evaluation, and to maintain their conceptual unity. Always, the programmatic relevance of each item played an important role in determining whether or not it would be included in the final scales.

FEAR OF PERSONAL VICTIMIZATION IN AREA

A number of items were included in the survey to represent this general construct. After examining the pre-intervention data, three measures of various forms of fear of crime were developed. The following items were combined to form a measure of "Fear of Personal Victimization in Area:

Q26: How safe would you feel while working here alone during the day? (very safe to very unsafe)

Q27: How about while working here after dark? How safe would you feel if you were to work here after dark? (very safe to very unsafe)

Q28: How safe would you feel being outside alone in this area after dark? (very safe or very unsafe)

Q42: How worried are you that someone will try to rob you or steal something from you here in this establishment? (very worried or not very worried at all)

Q43: What about outside of this establishment? How worried are you that someone will try to rob you or steal something from you somewhere else in this area? (very worried or not very worried at all)

These items were added together to form a scale with a reliability of .84. The average item-total correlation of its components was .51, and the first factor explained 61 percent of the total variation in response to the items. There was no meaningful difference between the additive alpha and the alpha for a standardized scale score which equated the variances of its component parts (also .84). Therefore, a simple additive scale was employed. A high score on the measure indicates respondents were fearful of personal victimization in and around their establishments.

Two other items were combined to form a measure of the "Perceived Concern About Crime" expressed by employees and patrons of the establishments, as reported by our respondents. They were:

Q29: In the last month, how frequently have you heard employees express concern about their personal security in this area? (very frequently to never?)

Q30: In the last month, how frequently have you heard people who come here express concern about their personal security in this area? (very frequently to never)

Responses to these items all were measured on the same four-position set of response categories. As they had about the same mean and standard deviation, the items contribute about equally to the total score for each individual. The correlation between responses to the two items was .54, and the reliability of the resulting scale was .70. These items factored separately from the previous measure of personal fear.

Two survey questions were posed to measure "Worry About Property Crime in the Area;" they asked "how worried" respondents were about being victimized by burglary and vandalism. Other research on concern about victimization or assessments of risk (see Baumer and Rosenbaum, 1981) indicates the distinction between personal and property crimes is a fundamental one, and that perceptions of the two are best gauged separately.

Q44: [How worried are you that] someone will try to break into this place to steal something? (not worried at all to very worried)

Q45: [How worried are you that] someone will try to vandalize this place? (Not worried at all to very worried)

These two items were combined to form a multiple item scale; they were substantially intercorrelated (.72) and formed an additive scale with an Alpha of .84. A high score on this measure identifies respondents who are worried about area burglary and vandalism. Another question asked, "How big a problem"

burglary of business was in the area. Responses to this item are analyzed separately.

PERCEIVED AREA SOCIAL DISORDER PROBLEMS

Six candidate items for this cluster were analyzed as part of the scale development process. They all focused upon deviant behaviors of varying illegality and seriousness, most of which takes place in public locations. They were:

[...please tell me whether you think it is a big problem, some problem, or no problem at all.]

Q15: People saying insulting things or bothering people as they walk down the street?

Q18: People drinking in public places, like on corners or in streets?

Q19: People breaking windows of buildings?

Q16: Graffiti, that is, writing or painting on walls or windows?

Q14: Gangs?

Q25: Sale or use of drugs in public places?

Responses to these items were all positively intercorrelated (mean r=.39). They had roughly similar means and variances, so the scale was formed by adding together responses to them. The principal component factor for these items explained 50 percent of their total variance. This scale has a reliability of .80. A high score on this measure points to areas in which these are seen as "big problems."

In addition, several items included in the survey could have been included in a disorder scale. They were:

Q17: Truancy, that is, kids no being in school when they should be?

Q24: Prostitutes?

Q13: Beggars or panhandlers?

Responses to these items were consistent with the others, but were excluded from the scale because they probed problems which were not the explicit focus of any of the Fear Reduction programs.

Two items were combined to form a measure of "Perceived Area Physical Deterioration Problems." They were:

Q20: [How big a problem here in this area?] Abandoned stores or other empty buildings? (No problem to big problem)

Q23: [How big a problem here in this area?] Dirty streets and sidewalks? (no problem to big problem)

Responses to these two items were correlated .44, and combined they formed an additive scale with a reliability of .61, good for a two-item measure. A high score on this measure identifies respondents who thought that these forms of physical decay were "big problems" in their area.

SATISFACTION WITH AREA

Two measures of satisfaction with neighborhood conditions were developed. The first probed general satisfaction with the area:

Q7: On the whole, how do you feel about this area as a place for this establishment? Are you (very satisfied to very dissatisfied)

Q8: Since July of 1982, would you say this area has generally become a better place to be located, gotten worse, or stayed about the same?

Responses to these two questions were correlated .34, and had similar variances. Added together they formed a scale with a reliability of .48, only marginally acceptable. A high score on this measure identifies respondents who think their area is a good place to work, and has been getting to be a better place to be located.

A second measure points directly to perceived changes in the business environment in the recent past. Respondents were asked if, "since July of 1982" (the onset of the program):

Q9: ...has the number of people who come here increased, decreased, or stayed about the same?

Q12: What about the amount of business done here? Compared to last year, has that increased, decreased, or stayed about the same?

Responses to these items were correlated .58, and formed an additive scale with a reliability of .73, very high for a 2-item scale. These two items factored separately from the previous set measuring general perceptions of the area.

EVALUATION OF POLICE SERVICE

A number of questions in the survey gathered evaluations of police service. Some items focused upon recent, specific encounters between the police and those interviewed in the nonresidential survey, while others were "generic" and referenced more global opinions. Six generic items were included in the questionnaire, and they revealed one distinct cluster of opinion concerning the quality of services provided citizens and anticipated police demeanor in police-citizen encounters.

Q46: How good a job are the police in this area doing to prevent crime to businesses and other establishments? (very good to very poor job)

Q47: How good a job do you think the police are doing in helping busineses and other establishments out after they have been victims of crime? (very good to very poor job)

Q50: How good a job are the police in this area doing in keeping order on the streets and sidewalks? (very good to very poor job)

Q53: In general, how polite are the police in this area when dealing with people in businesses and other establishments? (very polite to very impolite)

Q54: In general, how helpful are the police in this area when dealing with people in business and other establishments? (very helpful to not helpful at all)

Q55: In general, how fair are the police in this area in dealing with people in business and other establishments? (very fair to very unfair)

The simple additive combination of these items has a reliability of .89, and they were correlated an average of .57. They were single factored. There was some variation in the wording of the response format for these items, but differences in the variances in the items were not great enough to preclude adding them together in simple fashion. A high score on this measure points to a favorable evaluation of the police.

THE REPRODUCEABILITY OF SCALES AMONG AREAS

Table 1 summarizes the reliabilities for the scales discussed above, and presents them for the area samples used in the evaluation. The non-residential survey samples for individual areas were quite small, so the reliabilities presented there fluctuate from place-to-place. However, the generalizability of the scales used in the evaluation is evident. The only notable exception is the general area satisfaction measure for the Langwood area in Houston, and the

two items which go into it will be analyzed separately for that area. There is no evidence in Table 1 that other special measures must be tailored for any particular area; rather, the various reports and analyses based upon this data can employ the same measures throughout.

A NOTE ON CALCULATING SCALE SCORES

There is a scattered amount of missing data for all of these items. There were substantially more missing data for questions dealing with the police than for generic questions about neighborhood conditions, probably reflecting many people's true ignorance of police affairs. Because a number of these scales summarize responses to several questions, if one missing element for a scale led to the complete exclusion of a respondent, the number of cases available for analysis would drop quite substantially. Because these items are single-factored and internally consistent, a better strategy is to let responses to components of a scale which <u>are</u> present "stand in" for occasional missing data. This was accomplished by basing each individual's calculated score on the sum of valid responses, standardized by the number of valid responses (score = sum of responses values/number of valid responses). Neither excluding respondents, because of nonresponse nor fabricating data for them in the form of imputed values (such as means or "hot deck" values) is likely to be a superior strategy, in light of our scaling approach to measurement (cf, Kalton, 1983).

SCALE RELIABILITY SUMMARY

Non-Residential Survey

Scale	All Areas		South 1		West 1		South 4		Northline		Langwood		Golfcrest		Shady Acres	
	Wave 1	Wave 2	Wave 1	Wave 2	Wave 1	Wave 2	Wave 1	Wave 2	Wave 1	Wave 2	Wave 1	Wave 2	Wave 1	Wave 2	Wave 1	Wave 2
Fear of Personal Victimization in Area	.84	.84	.83	.79	.80	.85	.86	.90	.81	.82	.80	.74	.84	.87	.85	.86
Evaluation of Police Service	.89	.86	.90	.86	.88	.87	.92	.91	.86	.89	.84	.80	.87	.84	.63	.86
Perceived Social Disorder Problems	.80	.79	.64	.78	.71	.79	.74	.65	.76	.55	.81	.51	.85	.83	.65	.71
Business Change	.73	.78	.61	.82	.68	.65	.33	.85	.80	.77	.76	.76	.82	.83	.54	.62
Satisfaction With Area	.48	.54	.57	.43	.69	.31	.67	.72	.54	.57	.00	.68	.44	.53	.35	.44
Worry About Property Crime	.84	.80	.97	.93	.88	.72	.92	.78	.76	.84	.86	.94	.84	.66	.90	.77
Employee-Patrol Concern	.70	.81	.82	.09	.66	.57	.84	.82	.68	.78	.54	.82	.67	.79	.56	.40
(N)*	(414)	(283)	(34)	(47)	(26)	(28)	(35)	(32)	(44)	(41)	(37)	(27)	(67)	(66)	(39)	(42)

* Ns vary slightly from scale to scale; figure here is for fear scale

APPENDIX F

CHARACTERISTICS OF RESPONDENTS IN PROGRAM AND COMPARISON AREAS AT WAVES ONE AND TWO

(ALL RESIDENTIAL RESPONDENTS)

Table F-1

Characteristics of Respondents in Program and Comparison Areas at Waves One and Two

(All Residential Respondents)

Percent who are:	W-1 Program Area Wave 1	W-1 Program Area Wave 2	S-4 Comparison Area Wave 1	S-4 Comparison Area Wave 2
Sex				
Males	43	42	32	33
Females	57	58	68	67
	(419)	(446)	(450)	(435)
	$p < .90$		$p < .90$	
Race				
Black	91	91	98	98
White	6	5	1	1
Hispanic	1	2	-	1
Other	1	2	-	1
	(417)	(446)	(448)	(435)
	$p < .98$		$p < .98$	
Housing				
Own	49	53	36	36
Rent	51	47	64	64
	(416)	(442)	(445)	(425)
	$p < .30$		$p < .90$	
Education				
Not High School	30	31	34	33
High School Graduate	70	69	66	67
	(415)	(445)	(445)	(431)
	$p < .80$		$p < .80$	
Income				
Under $15,000	50	38	52	53
Over $15,000	50	62	48	47
	(379)	(418)	(390)	(430)
	$p < .001$		$p < .90$	
Age Category				
15-24	18	17	16	14
25-49	60	61	59	62
50-98	22	22	25	25
	(417)	(444)	(441)	(427)
	$p < .95$		$p < .70$	

continued

Characteristics of Respondents in Program and Comparison Area at Waves One and Two

(All Residential Respondents)

Percent who are:	W-1 Program Area Wave 1	W-1 Program Area Wave 2	S-4 Comparison Area Wave 1	S-4 Comparison Area Wave 2
Children at Home				
None	33	32	38	39
One	24	24	26	24
Two +	43	44	36	36
	(418)	(446)	(449)	(434)
	$p < .98$		$p < .80$	
Number of Adults in Household				
One	26	24	36	33
Two	40	43	42	45
Three+	34	33	22	22
	$p < .70$		$p < .70$	
Marital Status				
Single	57	54	57	52
Married*	43	46	43	48
	(407)	(439)	(440)	(430)
	$p < .70$		$p < .20$	
Employment				
Work full-part time	65	68	62	66
Other	35	32	38	34
	(410)	(444)	(438)	(432)
	$p < .50$		$p < .30$	
Length of Residence				
0-2 years	28	25	35	30
3-5 years	22	22	20	23
6-9 years	22	20	12	13
10 years +	28	33	33	34
	(418)	(441)	(446)	(432)
	$p < .50$		$p < .50$	

* Includes "Living with someone as partners"

Chi-square tests of significance.

APPENDIX G:

DESCRIPTIVE DATA ANALYSIS: RESIDENTIAL SAMPLES

Coordinated Community Policing

Wave One - Wave Two Outcome Measures

All Respondents

Fear of Personal Victimization in Area

	West 1 Program Area Wave 1	West 1 Program Area Wave 2	South 4 Comparison Area Wave 1	South 4 Comparison Area Wave 2
Scale Score				
Mean	1.77	1.72	2.01	1.96
(sd)	(.62)	(.57)	(.55)	(.61)
[N]	[419]	[446]	[450]	[435]
Sigf.	p < .25		p < .25	
Q34 Unsafe Alone*				
Mean	2.76	2.58	3.11	2.83
(sd)	(1.04)	(1.03)	(.92)	(1.03)
[N]	[417]	[444]	[449]	[435]
Sigf.	p < .01		p < .001	
Q35 Place Fear to Go				
Mean	.49	.61	.67	.66
(sd)	(.50)	(.49)	(.47)	(.47)
[N]	[408]	[442]	[444]	[433]
Sigf.	p < .001		p < .40	
Q43 Worry robbery				
Mean	2.00	1.91	2.22	2.21
(sd)	(.76)	(.76)	(.72)	(.73)
[N]	[416]	[442]	[449]	[434]
Sigf.	p < .05		p < .50	
Q44 Worry assault				
Mean	1.82	1.79	2.02	2.14
(sd)	(.77)	(.74)	(.74)	(.76)
[N]	[414]	[444]	[449]	[434]
Sigf.	p < .40		p < .01	

Note: One-tailed t-tests of significance

*rescored so high score indicates fear

Coordinated Community Policing

Wave One - Wave Two Outcome Measures

All Respondents

Perceived Area Personal Crime Problems

	West 1 Program Area Wave 1	West 1 Program Area Wave 2	South 4 Comparison Area Wave 1	South 4 Comparison Area Wave 2
Scale Score				
Mean	1.74	1.65	1.91	1.74
(sd)	(.56)	(.59)	(.50)	(.53)
[N]	[410]	[441]	[443]	[432]
Sigf.	p < .025		p < .001	
Q114 Stranger Assault a big problem				
Mean	1.78	1.73	2.00	1.86
(sd)	(.74)	(.74)	(.68)	(.70)
[N]	[394]	[413]	[425]	[411]
Sigf.	p < .25		p = < .005	
Q117 Robbery a big problem				
Mean	2.12	1.90	2.28	2.04
(sd)	(.74)	(.78)	(.66)	(.70)
[N]	[399]	[415]	[428]	[418]
Sigf.	p < .001		p < .001	
Q121 Rape a big problem				
Mean	1.21	1.26	1.38	1.24
(sd)	(.50)	(.59)	(.58)	(.55)
[N]	[349)	[371]	[375]	[388]
Sigf.	p <.25		p < .001	

Note: One-tailed t-tests of significance

*Rescored so high score indicates fear

Coordinated Community Policing

Wave One - Wave Two Outcome Measures

All Respondents

Perceived Area Property Crime Problems

	West 1 Program Area		South 4 Comparison Area	
	Wave 1	Wave 2	Wave 1	Wave 2
Scale Score Mean	2.05	1.94	2.09	2.10
(sd)	(.64)	(.68)	(.60)	(.65)
[N]	[418]	[439]	[446]	[430]
Sigf.	p < .01		p < .10	
Q68 Burglary problem Mean	2.24	1.99	2.31	2.10
(sd)	(.75)	(.77)	(.70)	(.75)
[N]	[407]	[421]	[438]	[418]
Sigf.	p < .001		p < .001	
Q70 Auto vandalism problem Mean	1.94	1.85	1.93	2.02
(sd)	(.80)	(.80)	(.74)	(.78)
[N]	[405]	[442]	[432]	[417]
Sigf.	p < .10		p < .05	
Q71 Auto theft problem Mean	2.00	1.99	2.04	2.22
(sd)	(.81)	(.86)	(.77)	(.79)
[N]	[402]	[420]	[423]	[415]
Sigf.	p < .50		p < .001	

Note: One-tailed t-tests of significance

Coordinated Community Policing

Wave One - Wave Two Outcome Measures

All Respondents

Worry About Property Crime Victimization in Area

	West 1 Program Area		South 4 Comparison Area	
	Wave 1	Wave 2	Wave 1	Wave 2
Scale Score Mean	2.24	2.11	2.21	2.33
(sd)	(.69)	(.70)	(.64)	(.68)
[N]	[418]	[446]	[450]	[435]
Sigf.	p < .005		p < .10	
Q45 Burglary worry Mean	2.34	2.16	2.32	2.37
(sd)	(.76)	(.82)	(.71)	(.75)
[N]	[417]	[444]	[448]	[432]
Sigf.	p < .001		p < .25	
Q47 Auto theft worry Mean	2.16	2.09	2.07	2.32
(sd)	(.79)	(.80)	(.78)	(.78)
[N]	[351]	[389]	[359]	[336]
Sigf.	p < .25		p < .001	

Note: One-tailed t-tests of significance

Coordinated Community Policing

Wave One - Wave Two Outcome Measures

All Respondents

Perceived Area Social Disorder Problems

	West 1 Program Area Wave 1	West 1 Program Area Wave 2	South 4 Comparison Area Wave 1	South 4 Comparison Area Wave 2
Scale Score				
Mean	1.91	1.80	2.04	2.04
(sd)	(.52)	(.50)	(.47)	(.49)
[N]	[419]	[446]	[449]	[434]
Sigf.	p < .001		p < .50	
Q18 Groups hanging around on corners				
Mean	2.50	2.29	2.60	2.57
(sd)	(.75)	(.81)	(.65)	(.69)
[N]	[411]	[431]	[443]	[431]
Sigf.	p < .001		p < .40	
Q20 People saying insulting things				
Mean	1.48	1.47	1.50	1.55
(sd)	(.72)	(.73)	(.67)	(.73)
[N]	[403]	[429]	[432]	[424]
Sigf.	p < .50		p < .25	
Q24 Drinking in public place				
Mean	2.31	2.05	2.28	2.35
(sd)	(.82)	(.86)	(.77)	(.78)
[N]	[404]	[421]	[435]	[427]
Sigf.	p < .001		p < .10	
Q66 Breaking Windows				
Mean	1.57	1.57	1.99	1.75
(sd)	(.73)	(.70)	(.83)	(.80)
[N]	[415]	[435]	[439]	[426]

Coordinated Community Policing

Wave One - Wave Two Outcome Measures

All Respondents

Perceived Area Social Disorder Problems
(continued)

	West 1 Program Area Wave 1	West 1 Program Area Wave 2	South 4 Comparison Area Wave 1	South 4 Comparison Area Wave 2
Q67 Graffiti				
Mean	1.69	1.64	1.99	1.99
(sd)	(.77)	(.78)	(.83)	(.85)
[N]	[416]	[442]	[439]	[431]
Sigf.	p < .25		p < .50	
Q118 Gang				
Mean	1.85	1.55	1.70	1.74
(sd)	(.85)	(.76)	(.78)	(.79)
[N]	[391]	[423]	[410]	[417]
Sigf.	p < .001		p < .25	
Q120 Sale or use of drugs in public places				
Mean	2.08	2.11	2.35	2.30
(sd)	(.81)	(.85)	(.72)	(.80)
[N]	[379]	[387]	[404]	[416]
Sigf.	p < .40		p < .25	

Note: One-tailed t-tests of significance

Coordinated Community Policing

Wave One - Wave Two Outcome Measures

All Respondents

Satisfaction With Area

	West 1 Program Area Wave 1	West 1 Program Area Wave 2	South 4 Comparison Area Wave 1	South 4 Comparison Area Wave 2
Scale Score Mean	2.12	2.35	1.85	2.10
(sd) [N]	(.66) [418]	(.69) [446]	(.61) [449]	(.70) [435]
Sigf.	p < .001		p < .001	
Q5 Area getting better Mean	1.50	1.90	1.37	1.61
(sd) [N]	(.59) [396]	(.70) [424]	(.54) [436]	(.62) [412]
Sigf.	p < .001		p = < .001	
Q14 Satisfied with the area Mean	2.66	2.76	2.30	2.54
(sd) [N]	(.87) [416]	(.96) [445]	(.87) [447]	(.98) [434]
Sigf.	p < .10		p < .001	

Note: One-tailed t-tests of significance

Coordinated Community Policing

Wave One - Wave Two Outcome Measures

All Respondents

Evaluations of Police Service

	West 1 Program Area Wave 1	West 1 Program Area Wave 2	South 4 Comparison Area Wave 1	South 4 Comparison Area Wave 2
Scale Score Mean	2.53	3.13	2.51	2.70
(sd) [N]	(.71) [399]	(.70) [438]	(.67) [442]	(.77) [428]
Sigf.	p < .001		p < .001	
Q50 Good job at preventing crime Mean	2.47	3.22	2.42	2.67
(sd) [N]	(.95) [376]	(1.06) [410]	(.94) [428]	(1.06) [410]
Sigf.	p < .001		p = < .001	
Q51 Good job of helping victims Mean	2.43	3.08	2.42	2.69
(sd) [N]	(1.00) [326]	(1.09) [361]	(.88) [391]	(1.09) [396]
Sigf.	p < .001		p < .001	
Q52 Good job keeping order on street Mean	2.41	3.14	2.33	2.66
(sd) [N]	(.97) [379)	(1.02) [418]	(.92) [430]	(1.10) [418]
Sigf.	p <.001		p < .001	

Coordinated Community Policing

Wave One - Wave Two Outcome Measures

All Respondents

Evaluations of Police Service
(continued)

	West 1 Program Area		South 4 Comparison Area	
	Wave 1	Wave 2	Wave 1	Wave 2
Q57 Polite in dealing with people				
Mean	2.77	3.26	2.85	2.90
(sd)	(.81)	(.68)	(.73)	(.75)
[N]	[320]	[367]	[352]	[341]
Sigf.	$p < .001$		$p < .25$	
Q58 Helpful in dealing with people				
Mean	2.60	3.03	2.53	2.66
(sd)	(.88)	(.72)	(.86)	(.84)
[N]	[322]	[383]	[385]	[374]
Sigf.	$p < .001$		$p = < .025$	
Q59 Fair in dealing with people				
Mean	2.70	3.07	2.73	2.78
(sd)	(.82)	(.64)	(.79)	(.76)
[N]	[313]	[370]	[362]	[362]
Sigf.	$p < .001$		$p < .25$	

Note: One-tailed t-tests of significance

Coordinated Community Policing

Wave One - Wave Two Outcome Measures

All Respondents

Perceived Police Aggressiveness

	West 1 Program Area		South 4 Comparison Area	
	Wave 1	Wave 2	Wave 1	Wave 2
Scale Score				
Mean	1.23	1.20	1.18	1.19
(sd)	(.47)	(.48)	(.46)	(.43)
[N]	[371]	[422]	[427]	[415]
Sigf.	$p < .25$		$p < .40$	
Q21 Stop too many without good reason				
Mean	1.24	1.19	1.20	1.19
(sd)	(.58)	(.51)	(.53)	(.49)
[N]	[355]	[405]	[412]	[404]
Sigf.	$p < .25$		$p = < .40$	
Q26 Too tough on people they stop				
Mean	1.20	1.21	1.16	1.19
(sd)	(.50)	(.53)	(.49)	(.49)
[N]	[318]	[377]	[379]	[390]
Sigf.	$p < .40$		$p < .25$	

Note: One-tailed t-tests of significance

Coordinated Community Policing

Wave One - Wave Two Outcome Measures

All Respondents

Crime Prevention Efficacy

	West 1 Program Area Wave 1	West 1 Program Area Wave 2	South 4 Comparison Area Wave 1	South 4 Comparison Area Wave 2
Q79 Efficacy of home prevention				
Mean	2.15	2.25	2.04	2.16
(sd)	(.63)	(.66)	(.61)	(.66)
[N]	[407]	[439]	[439]	[418]
Sigf.	p < .025		p < .005	
Q83 Efficacy of defensive behavior				
Mean	2.17	2.29	2.08	2.19
(sd)	(.62)	(.63)	(.62)	(.63)
[N]	[407]	[439]	[440]	[432]
Sigf.	p < .005		p < .005	

Note: One-tailed t-tests of significance

Coordinated Community Policing

Wave One - Wave Two Outcome Measures

All Respondents

Defensive Behaviors to Avoid Personal Crime

	West 1 Program Area Wave 1	West 1 Program Area Wave 2	South 4 Comparison Area Wave 1	South 4 Comparison Area Wave 2
Scale Score				
Mean	.53	.53	.56	.57
(sd)	(.35)	(.34)	(.35)	(.35)
[N]	[419]	[446]	[448]	[434]
Sigf.	p < .50		p < .40	
Q80 Go with escort*				
Mean	.51	.46	.49	.51
(sd)	(.50)	(.50)	(.50)	(.50)
[N]	[419]	[445]	[448]	[434]
Sigf.	p < .10		p < .40	
Q81 Avoid certain areas*				
Mean	.62	.61	.63	.65
(sd)	(.49)	(.49)	(.48)	(.48)
[N]	[419]	[444]	[446]	[434]
Sigf.	p < .40		p < .40	
Q82 Avoid types of people				
Mean	.68	.69	.69	.72
(sd)	(.47)	(.46)	(.46)	(.45)
[N]	[419]	[445]	[446]	[434]
Sigf.	p < .40		p < .25	
Q86 Avoid going out after dark				
Mean	1.92	2.08	2.17	2.24
(sd)	(.78)	(1.01)	(.81)	(.92)
[N]	[418]	[443]	[447]	[428]
Sigf.	p < .005		p < .25	

Note: One-tailed t-tests of significance

Coordinated Community Policing

Wave One - Wave Two Outcome Measures

All Respondents

Household Crime Prevention Efforts

	West 1 Program Area Wave 1	West 1 Program Area Wave 2	South 4 Comparison Area Wave 1	South 4 Comparison Area Wave 2
Total Count*				
Mean	1.51	1.49	1.57	1.42
(sd)	(1.29)	(1.30)	(1.40)	(1.18)
[N]	[419]	[446]	[450]	[435]
Sigf.	p < .50		p < .05	
Q73 Security Inspection				
Mean	.02	.07	.02	.01
(sd)	(.13)	(.25)	(.13)	(.11)
[N]	[419]	[442]	[446]	[435]
Sigf.	p < .001		p < .25	
Q74 Special locks				
Mean	.43	.33	.48	.24
(sd)	(.49)	(.47)	(.50)	(.43)
[N]	[417]	[446]	[448]	[435]
Sigf.	p < .005		p < .001	
Q75 Outdoor lights				
Mean	.23	.22	.22	.16
(sd)	(.42)	(.41)	(.41)	(.36)
[N]	[419]	[445]	[445]	[434]
Sigf.	p < .40		p < .025	
Q76 Timers for lights				
Mean	.08	.10	.11	.07
(sd)	(.27)	(.30)	(.31)	(.26)
[N]	[416]	[442]	[447]	[434]

Coordinated Community Policing

Wave One - Wave Two Outcome Measures

All Respondents

Household Crime Prevention Efforts
(continued)

	West 1 Program Area Wave 1	West 1 Program Area Wave 2	South 4 Comparison Area Wave 1	South 4 Comparison Area Wave 2
Q77 Valuables marked				
Mean	.14	.16	.14	.10
(sd)	(.35)	(.37)	(.35)	(.30)
[N]	[417]	[443]	[447]	[435]
Sigf.	p < .25		p < .005	
Q78 Windows or bars				
Mean	.08	.11	.15	.09
(sd)	(.27)	(.31)	(.35)	(.29)
[N]	[419]	[445]	[448]	[435]
Sigf.	p < .10		p < .005	
Q85 Ask Neighbors watch home				
Mean	.56	.58	.49	.77
(sd)	(.50)	(.49)	(.50)	(.42)
[N]	[415]	[444]	[445]	[430]
Sigf.	p < .40		p < .001	

One-tailed t-tests of significance

* Includes Q74, Q78 and Q85

Coordinated Community Policing

Victimization by Crimes in the Area

All Respondents

Percent Victimized in Past Six Months	West 1 Program Area Wave 1	Wave 2	South 4 Comparison Area Wave 1	Wave 2
All Incidents				
Percent Victims	49	55	46	43
Sigf.	p < .10		p < .50	
Personal Crimes (1)				
Percent Victims	18	27	24	24
Sigf.	p < .01		p < .95	
Property Crimes (2)				
Percent Victims	41	42	34	33
Sigf.	p < .95		p < .80	
Included Above:				
Burglary: (3)				
Percent Victims	18	16	11	14
Sigf.	p < .50		p < .20	
Motor Vehicle Crime: (4)				
Percent Victims	17	16	10	13
Sigf.	p < .80		p < .10	
Other Theft: (5)				
Percent Victims	19	19	12	12
Sigf.	p < .99		p < .80	
Number of cases	(419)	(446)	(450)	(435)

Chi-square tests of significance

Note: 1 includes V13-V19
2 includes V1-V6, V8-V10, V12
3 includes V1 and V2
4 includes V8-V10
5 includes V3-V5, V12

APPENDIX H:

DESCRIPTIVE DATA ANALYSIS: RESIDENTIAL PANEL SAMPLES

Wave One - Wave Two Outcome Measures

Panel Respondents Only

Scale Score	West 1 Program Area Wave 1	West 1 Program Area Wave 2	South 4 Comparison Area Wave 1	South 4 Comparison Area Wave 2
Fear of Personal Victimization in Area				
Mean	1.80	1.70	2.03	1.96
(sd)	(.63)	(.58)	(.55)	(.61)
[N]	[269]		[275]	
Sigf.	p < .01		p < .04	
Perceived Area Personal Crime Problems				
Mean	1.76	1.67	1.91	1.75
(sd)	(.56)	(.60)	(.47)	(.49)
[N]	[260]		[271]	
Sigf.	p < .025		p < .001	
Perceived Area Property Crime Problems				
Mean	2.07	1.94	2.11	2.17
(sd)	(.65)	(.68)	(.59)	(.62)
[N]	[265]		[272]	
Sigf.	p < .003		p < .11	
Worry About Property Crime Victimization in Area				
Mean	2.25	2.10	2.24	2.34
(sd)	(.69)	(.73)	(.61)	(.66)
[N]	[268]		[275]	
Sigf.	p < .002		p < .03	

Coordinated Community Policing

Wave One - Wave Two Outcome Measures
(continued)

Panel Respondents Only

Scale Score	West 1 Program Area Wave 1	West 1 Program Area Wave 2	South 4 Comparison Area Wave 1	South 4 Comparison Area Wave 2
Evaluations of Police Service				
Mean	2.50	3.14	2.50	2.69
(sd)	(.72)	(.66)	(.70)	(.80)
[N]	[253]		[272]	
Sigf.	p < .001		p < .001	
Police Aggressiveness Scale				
Mean	1.21	1.20	1.14	1.20
(sd)	(.45)	(.47)	(.38)	(.42)
[N]	[229]		[251]	
Sigf.	p < .40		p < .025	
Satisfaction with Area				
Mean	2.06	2.35	1.87	2.06
(sd)	(.64)	(.68)	(.62)	(.67)
[N]	[269]		[275]	
Sigf.	p < .001		p < .001	
Perceived Area Social Disorder Problems				
Mean	1.92	1.81	2.05	2.04
(sd)	(.51)	(.51)	(.48)	(.46)
[N]	[269]		[275]	
Sigf.	p < .002		p < .50	

Coordinated Community Policing

Wave One - Wave Two Outcome Measures
(continued)

Panel Respondents Only

Scale Score	West 1 Program Area Wave 1	West 1 Program Area Wave 2	South 4 Comparison Area Wave 1	South 4 Comparison Area Wave 2
Defensive Behaviors to Avoid Personal Crime				
Mean	.54	.52	.55	.59
(sd)	(.34)	(.33)	(.35)	(.34)
[N]	[269]		[273]	
Sigf.	p < .13		p < .04	
Household Crime Prevention Efforts				
Mean	.99	1.51	1.14	1.43
(sd)	(1.09)	(1.32)	(1.22)	(1.19)
[N]	[269]		[275]	
Sigf.	p < .001		p < .001	

Note: One-tailed significance test based on paired-sample t-test.

APPENDIX I

TYPES OF ESTABLISMENTS IN PROGRAM AND COMPARISON AREAS
AT WAVES ONE AND TWO

Types of Establishments in Program and Comparison Areas at Which Interviews Were Completed At Waves One and Two

(Non-Residential Establishments)

Type of Establishment	Program Area (W-1)						Comparison Area (S-4)					
	Establishments Where Interviews Completed				Establishments Where Reinterviews Occurred		Establishments Where Interviews Completed				Establishments Where Reinterviews Occurred	
	Wave 1		Wave 2				Wave 1		Wave 2			
	N	%	N	%	N	%	N	%	N	%	N	%
Construction	1	2.6	1	2.1	1	2.9	0	0.0	0	0.0	0	0.0
Manufacturing	0	0.0	0	0.0	0	0.0	0	0.0	1	2.9	0	0.0
Wholesale	0	0.0	0	0.0	0	0.0	0	0.0	1	2.9	1	3.9
Hardware & Garden Supply	1	2.6	1	2.1	1	2.9	1	2.8	0	0.0	0	0.0
Grocery and Food Services Stores	4	10.5	7	14.9	3	8.6	6	16.2	6	17.1	6	23.1
Restaurant/Fast Food	1	2.6	2	4.3	1	2.9	5	13.5	3	8.6	2	7.7
Liquor Stores/Bars/Lounges	7	18.4	6	12.8	6	17.1	3	8.1	2	5.7	2	7.7
Furniture & Clothing/ Department Stores	4	10.5	5	10.6	4	11.4	2	5.4	5	14.3	3	11.5
Speciality Shops/Book Stores/Drug Stores	0	0.0	1	2.1	1	2.9	1	2.8	0	0.0	0	0.0
Electronic & Video Sales	0	0.0	0	0.0	0	0.0	1	2.8	1	2.9	1	3.8
Finance, Insurance, Real Estate	0	0.0	4	2.1	3	8.6	4	10.8	5	4.3	5	19.2
Auto Sales & Repair Shops	1	2.6	1	2.1	1	2.9	1	2.8	1	2.9	0	0.0
Electronic/Appliance Service	0	0.0	1	2.1	0	0.0	0	0.0	0	0.0	0	0.0
Personal and Medical Service	5	13.2	6	12.8	1	2.9	5	13.5	3	8.6	3	11.5
Cleaners	3	7.9	4	8.5	3	8.6	2	5.4	2	5.7	2	7.7
Hotel/Motel	1	2.6	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Public Association/Organization	10	26.3	11	23.4	10	28.6	5	13.5	3	8.6	1	3.8
Other	0	0.0	0	0.0	0	0.0	1	2.8	2	5.7	0	0.0
Total	38	100.0	47	100.0	35	100.0	37	100.0	35	100.0	26	100.0

Table I

APPENDIX J:

DESCRIPTIVE DATA ANALYSIS: NON-RESIDENTIAL SAMPLES

Non-Residential Survey

Fear of Personal Victimization in Area

	West 1 Program Area		South 4 Comparison Area	
	Wave 1	Wave 2	Wave 1	Wave 2
Scale Score				
Mean	2.34	2.25	2.06	2.19
(sd) [N]	(.69) [28]	(.74) [32]	(.70) [37]	(.80) [35]
Sigf.	$p < .40$		$p < .25$	
Q26 Fear working during the day				
Mean	2.07	1.94	1.92	2.06
(sd) [N]	(.86) [28]	(.91) [32]	(.79) [37]	(.87) [35]
Sigf.	$p < .40$		$p < .25$	
Q27 Fear Working at night				
Mean	2.73	2.57	2.36	2.69
(sd) [N]	(.96) [26]	(.92) [28]	(.99) [36]	(1.06) [32]
Sigf.	$p < .40$		$p < .10$	
Q28 Fear outside after dark				
Mean	2.75	2.83	2.54	2.74
(sd) [N]	(1.00) [28]	(1.08) [30]	(.99) [37]	(1.11) [34]
Sigf.	$p < .40$		$p < .25$	
Q42 Worry about robbery in establishment				
Mean	2.14	2.00	1.78	1.74
(sd) [N]	(.89) [28]	(.84) [32]	(.83) [36]	(.74) [35]
Sigf.	$p < .40$		$p < .50$	
Q43 Worry about robbery outside in area				
Mean	2.07	2.06	1.75	1.89
(sd) [N]	(.77) [28]	(.84) [32]	(.77) [36]	(.77) [35]
	$p < .50$		$p < .25$	

One-tailed t-tests of significance for small samples

Wave One - Wave Two Outcome Measures

Non-Residential Survey

Perceived Area Property Crime Problems

	West 1 Program Area		South 4 Comparison Area	
	Wave 1	Wave 2	Wave 1	Wave 2
Q21 Burglary of establishments a problem				
Mean	2.07	2.10	2.17	1.85
(sd)	(.73)	(.66)	(.85)	(.70)
[N]	[27]	[30]	[36]	[34]
Sigf.	$p < .50$		$p < .05$	

One-tailed t-tests of significance for small samples

Coordinated Community Policing

Wave One - Wave Two Outcome Measures

Non-Residential Survey

Worry About Property Crime Victimization in Area

	West 1 Program Area		South 4 Comparison Area	
	Wave 1	Wave 2	Wave 1	Wave 2
Scale Score				
Mean	2.27	1.94	1.64	2.01
(sd)	(.76)	(.76)	(.76)	(.70)
[N]	[28]	[32]	[37]	[35]
Sigf.	$p < .10$		$p < .025$	
Q44 Worry about burglary of establishment				
Mean	2.30	1.94	1.65	2.00
(sd)	(.82)	(.91)	(.82)	(.84)
[N]	[27]	[32]	[37]	[35]
Sigf.	$p < .10$		$p < .05$	
Q45 Worry about vandalism of establishment				
Mean	2.21	1.94	1.62	2.03
(sd)	(.79)	(.80)	(.76)	(.71)
[N]	[28]	[32]	[37]	[35]
Sigf.	$p < .25$		$p < .025$	

One-tailed t-tests of significance for small samples

Wave One - Wave Two Outcome Measures

Non-Residential Survey

Employee and Patrons Concern About Crime

	West 1 Program Area		South 4 Comparison Area	
	Wave 1	Wave 2	Wave 1	Wave 2
Scale Score				
Mean	2.52	2.25	2.43	2.24
(sd)	(.86)	(.89)	(.97)	(1.02)
[N]	[28]	[32]	[37]	[35]
Sigf.	$p < .25$		$p < .25$	
Q29 Frequency employees express concern				
Mean	2.58	1.93	2.26	2.26
(sd)	(.97)	(1.00)	(1.09)	(1.09)
[N]	[24]	[31]	[35]	[31]
Sigf.	$p < .025$		$p < .50$	
Q30 Frequency patrons express concern				
Mean	2.61	2.47	2.56	2.20
(sd)	(.83)	(1.04)	(1.03)	(1.16)
[N]	[28]	[32]	[36]	[35]
Sigf.	$p < .40$		$p < .10$	

One-tailed t-tests of significance for small samples

Coordinated Community Policing

Wave One - Wave Two Outcome Measures

Non-Residential Survey

Perceived Area Social Disorder Problems

	West 1 Program Area		South 4 Comparison Area	
	Wave 1	Wave 2	Wave 1	Wave 2
Scale Score				
Mean	1.68	1.91	1.68	1.73
(sd)	(.50)	(.53)	(.50)	(.49)
[N]	[28]	[32]	[37]	[35]
Sigf.	$p < .05$		$p < .40$	
Q15 People saying insulting things				
Mean	1.11	1.47	1.26	1.41
(sd)	(.32)	(.78)	(.51)	(.66)
[N]	[28]	[30]	[34]	[32]
Sigf.	$p < .025$		$p < .25$	
Q18 Drinking in public place				
Mean	2.00	2.50	2.00	1/94
(sd)	(.75)	(.72)	(.77)	(.85)
[N]	[26]	[32]	[35]	[34]
Sigf.	$p < .01$		$p < .40$	
Q19 Breaking Windows				
Mean	1.89	1.70	1.81	1.62
(sd)	(.80)	(.78)	(.75)	(.79)
[N]	[27]	[27]	[37]	[32]
Sigf.	$p < .25$		$p < .25$	

Coordinated Community Policing

Wave One - Wave Two Outcome Measures

Non-Residential Survey

Perceived Area Social Disorder Problems
(continued)

	West 1 Program Area Wave 1	West 1 Program Area Wave 2	South 4 Comparison Area Wave 1	South 4 Comparison Area Wave 2
Q16 Graffiti				
Mean	1.75	2.31	1.78	1.89
(sd) [N]	(.70) [28]	(.64) [32]	(.83) [36]	(.90) [35]
Sigf.	p < .005		p < .40	
Q14 Gangs				
Mean	1.58	1.45	1.31	1.61
(sd) [N]	(.64) [26]	(.74) [29]	(.69) [32]	(.79) [33]
Sigf.	p < .40		p < .10	
Q25 Sale or use of drugs in public places				
Mean	1.95	1.93	2.00	1.94
(sd) [N]	(.76) [20]	(.72) [28]	(.88) [24]	(.88) [32]
Sigf.	p < .50		p < .50	

Note: One-tailed t-tests of significance for small samples

Coordinated Community Policing

Wave One - Wave Two Outcome Measures

Non-Residential Survey

General Satisfaction with the Area

	West 1 Program Area Wave 1	West 1 Program Area Wave 2	South 4 Comparison Area Wave 1	South 4 Comparison Area Wave 2
Scale Score				
Mean	2.12	2.73	2.27	2.59
(sd) [N]	(.83) [28]	(.58) [32]	(.80) [37]	(.74) [35]
Sigf.	p < .001		p < .05	
Q7 Satisfaction with area				
Mean	2.59	3.28	2.92	3.11
(sd) [N]	(1.15) [27]	(.81) [32]	(1.01) [37]	(.96) [35]
Sigf.	p < .01		p < .25	
Q8 Area getting better since July 1982				
Mean	1.67	2.19	1.48	2.00
(sd) [N]	(.62) [27]	(.70) [31]	(.56) [35]	(.72) [32]
Sigf.	p < .005		p < .001	

One-tailed t-tests of significance for small samples

Coordinated Community Policing

Wave One - Wave Two Outcome Measures

Non-Residential Survey

Changes in Business Conditions

	West 1 Program Area		South 4 Comparison Area	
	Wave 1	Wave 2	Wave 1	Wave 2
Scale Score				
Mean	2.12	2.39	2.43	2.06
(sd)	(.62)	(.51)	(.50)	(.70)
[N]	[28]	[31]	[37]	[34]
Sigf.	$p < .05$		$p < .01$	
Q9 Number of people coming is increasing				
Mean	2.07	2.45	2.43	2.00
(sd)	(.73)	(.62)	(.65)	(.78)
[N]	[27]	[31]	[35]	[34]
Sigf.	$p < .025$		$p < .01$	
Q12 Amounts of business done here increasing				
Mean	2.22	2.30	2.38	2.12
(sd)	(.67)	(.54)	(.60)	(.74)
[N]	[23]	[27]	[34]	[33]
Sigf.	$p < .40$		$p < .10$	

One-tailed t-tests of significance for small samples

Coordinated Community Policing

Wave One - Wave Two Outcome Measures

Non-Residential Survey

Evaluations of Police Service

	West 1 Program Area		South 4 Comparison Area	
	Wave 1	Wave 2	Wave 1	Wave 2
Scale Score				
Mean	2.23	3.93	2.81	3.01
(sd)	(.99)	(.79)	(.88)	(.87)
[N]	[26]	[32]	[36]	[35]
Sigf.	$p < .001$		$p < .25$	
Q46 Good job at preventing crime to business/ establishments				
Mean	2.04	3.28	2.53	2.80
(sd)	(1.21)	(1.08)	(1.06)	(1.16)
[N]	[25]	[32]	[36]	[30]
Sigf.	$p < .001$		$p = < .25$	
Q47 Good job of helping business/ establishment victims				
Mean	2.29	3.24	2.92	2.97
(sd)	(1.16)	(1.02)	(1.14)	(1.11)
[N]	[24]	[29]	[33]	[29]
Sigf.	$p < .001$		$p < .50$	
Q50 Good job keeping order on street				
Mean	2.08	3.30	2.76	3.18
(sd)	(.95)	(.95)	(1.16)	(1.06)
[N]	[25]	[30]	[34]	[34]
Sigf.	$p < .001$		$p < .10$	

Coordinated Community Policing

Wave One - Wave Two Outcome Measures

Non-Residential Survey

Evaluations of Police Service
(continued)

	West 1 Program Area		South 4 Comparison Area	
	Wave 1	Wave 2	Wave 1	Wave 2
Q53 Polite in dealing with establishments				
Mean	2.89	3.61	3.30	3.15
(sd)	(.76)	(.71)	(.53)	(.77)
[N]	[18]	[31]	[33]	[27]
Sigf.	p < .001		p < .25	
Q54 Helpful in dealing with establishments				
Mean	2.26	3.22	2.65	2.97
(sd)	(1.05)	(.83)	(1.01)	(.93)
[N]	[23]	[32]	[34]	[30]
Sigf.	p < .001		p = < .25	
Q55 Fair in dealing with establishments				
Mean	2.17	3.50	2.87	3.15
(sd)	(1.09)	(.51)	(.88)	(.77)
[N]	[24]	[32]	[31]	[27]
Sigf.	p < .001		p < .25	

Note: One-tailed t-tests of significance for small samples

Coordinated Community Policing

Wave One - Wave Two Outcome Measures

Non-Residential Survey

Police Aggressiveness

	West 1 Program Area		South 4 Comparison Area	
	Wave 1	Wave 2	Wave 1	Wave 2
Q22 Stop too many without good reason				
Mean	1.04	1.15	1.00	1.03
(sd)	(.20)	(.46)	(.00)	(.18)
[N]	[25]	[26]	[32]	[31]
Sigf.	p < .25		p = < .25	

One-tailed t-tests of significance for small samples

Coordinated Community Policing

Wave One - Wave Two Outcome Measures

Non-Residential Survey

Perceived Area Physical Deterioration Problems

	West 1 Program Area		South 4 Comparison Area	
	Wave 1	Wave 2	Wave 1	Wave 2
Scale Score				
Mean	2.02	1.98	2.16	1.74
(sd)	(.58)	(.64)	(.62)	(.61)
[N]	[27]	[32]	[37]	[35]
Sigf.	$p < .50$		$p < .005$	
Q20 Abandoned buildings a problem				
Mean	1.92	1.66	1.94	1.44
(sd)	(.64)	(.77)	(.80)	(.56)
[N]	[25]	[29]	[35]	[32]
Sigf.	$p < .10$		$p < .005$	
Q23 Dirty streets and sidewalks a problem				
Mean	2.15	2.34	2.38	1.97
(sd)	(.66)	(.74)	(.68)	(.86)
[N]	[27]	[32]	[37]	[35]
Sigf.	$p < .25$		$p < .025$	

One-tailed t-tests of significance for small samples

Victimization

Coordinated Community Policing

Victimization by Crimes in the Area

Non-Residential Survey

Percent Victimized in Past Six Months	West 1 Program Area Wave 1	Wave 2	South 4 Comparison Area Wave 1	Wave 2
Robbery or Attempted Robbery[1]				
No	82	91	89	94
Yes	18	9	11	6
[N]	[28]	[32]	[37]	[35]
	$p < .70$		$p < .50$	
Burglary or Attempted Burglary[2]				
No	46	75	70	74
Yes	54	25	30	26
[N]	[28]	[32]	[37]	[35]
	$p < .05$		$p < .80$	
Vandalism[3]				
No	79	62	68	60
Yes	21	38	32	40
[N]	[28]	[32]	[37]	[35]
	$p < .30$		$p < .70$	

Chi square tests

1 Questions 67, 70
2 Questions 61, 64
3 Question 73

APPENDIX K

A COMPARISON OF INCLUDING ALL CASES VERSUS EXCLUDING MISSING VALUE CASES

Table K-1

A Comparison of Including All Cases Versus
Excluding Missing Value Cases

b (and sigf.) For Area-Treatment Interaction

	All Cases		Exclude Missing Values	
	b	Sigf.	b	Sigf.
Fear of Personal Victimization in Area	-.12	.02	-.12	.03
Perceived Area Personal Crime Problems	-.14	.01	-.14	.01
Worry About Property Crime Victimization in Area	-.11	.10	-.11	.10
Perceived Area Property Crime Problems	-.21	.01+	-.21	.01
Satisfaction with Area	.13	.02	.11	.05
Evaluations of Police Service	.09	.13	.06	.32
Police Aggressiveness	-.04	.04	-.03	.13
Perceived Area Physical Deterioration Problems	-.09	-.08	-.10	.06
Defensive Behaviors to Avoid Personal Crime	-.03	.32	-.04	.26
Household Crime Prevention Efforts	-.19	.10	-.29	.02
Total Victimization	-.15	.01	-.15	.01
Property Victimization	-.15	.01	-.16	.01
Personal Victimization	-.06	.08	-.06	.11
[N]	[1893]		[1718]	

Note: Controls for 18 covariates; panel analysis also controls for pretest and pre-intervention victimization. Missing data coded to medians and mid-range values.

APPENDIX L:

RECALLED PROGRAM EXPOSURE EFFECT RESULTS

Coordinated Community Policing

Relationship Between Self-Reported Program Exposure and Outcome Measures

Q60-61: Saw a Police Officer Recently?

Panel Respondents in Program Area Only

Scale Score Outcome	Correlation (and significance level) between recall exposure measure and outcome scores controlling for other factors: Simple correlation only		Partial correlation controlling for pretest		Partial correlation controlling for sixteen factors**		[N]
	r	(sigf)	r	(sigf)	r	(sigf)	
Fear of Personal Victimization in Area	-.11	(.08)	-.09	(.15)	-.05	(.46)	[265]
Perceived Area Personal Crime Problems	-.00	(.93)	-.04	(.53)	-.04	(.51)	[256]
Worry About Property Crime Victimization in Area	-.06	(.32)	-.05	(.42)	-.05	(.41)	[264]
Perceived Area Property Crime Problems	.07	(.29)	.05	(.44)	.02	(.78)	[261]
Satisfaction With Area	.10	(.10)	.09	(.14)	.10	(.12)	[265]
Perceived Area Social Disorder Problems	.04	(.47)	.03	(.66)	.02	(.81)	[265]
Evaluations of Police Service	.15	(.02)	.14	(.03)	.15	(.02)	[249]
Police Aggressiveness (Log)	-.12	(.07)	-.13	(.05)	-.11	(.12)	[225]
Defensive Behaviors to Avoid Personal Crime	-.04	(.43)	-.02	(.72)	.03	(.66)	[265]
Household Crime Prevention Efforts	-.04	(.47)	-.04	(.55)	-.04	(.49)	[265]

**includes indications of age, race, sex, income education, length of residence, marital status, household organization and size, renter status, building size, personal victimization, knowledge of local crime victims, and the pretest.

Coordinated Community Policing

Relationship Between Self-Reported Program Exposure and Outcome Measures

Q100: Police Officer Came to the Door?

Panel Respondents in Program Area Only

Scale Score Outcome	Correlation (and significance level) between recall exposure measure and outcome scores controlling for other factors: Simple correlation only		Partial correlation controlling for pretest		Partial correlation controlling for sixteen factors**		[N]
	r	(sigf)	r	(sigf)	r	(sigf)	
Fear of Personal Victimization in Area	-.04	(.46)	-.08	(.21)	-.09	(.15)	[261]
Perceived Area Personal Crime Problems	-.11	(.07)	-.12	(.06)	-.07	(.26)	[252]
Worry About Property Crime Victimization in Area	-.03	(.67)	-.02	(.77)	-.05	(.40)	[260]
Perceived Area Property Crime Problems	-.13	(.04)	-.13	(.04)	-.13	(.05)	[257]
Satisfaction With Area	.03	(.55)	.04	(.47)	.09	(.15)	[261]
Perceived Area Social Disorder Problems	-.14	(.02)	-.15	(.02)	-.16	(.01)	[261]
Evaluations of Police Service	.14	(.02)	.15	(.02)	.11	(.08)	[245]
Police Aggressiveness (Log)	.13	(.04)	.13	(.06)	.14	(.03)	[221]
Defensive Behaviors to Avoid Personal Crime	.00	(.97)	.02	(.81)	.05	(.42)	[261]
Household Crime Prevention Efforts	.06	(.31)	.06	(.30)	.06	(.33)	[261]

**includes indications of age, race, sex, income education, length of residence, marital status, household organization and size, renter status, building size, personal victimization, knowledge of local crime victims, and the pretest.

Coordinated Community Policing

Relationship Between Self-Reported Program Exposure and Outcome Measures

Q64: Aware of Small Police Station?

Panel Respondents in Program Area Only

Scale Score Outcome	Correlation (and significance level) between recall exposure measure and outcome scores controlling for other factors: Simple correlation only r	(sigf)	Partial correlation controlling for pretest r	(sigf)	Partial correlation controlling for sixteen factors** r	(sigf)	[N]
Fear of Personal Victimization in Area	-.04	(.54)	-.04	(.54)	-.00	(.98)	[260]
Perceived Area Personal Crime Problems	-.11	(.08)	-.14	(.02)	-.07	(.27)	[251]
Worry About Property Crime Victimization in Area	.02	(.76)	.01	(.85)	.01	(.87)	[259]
Perceived Area Property Crime Problems	-.11	(.07)	-.11	(.06)	-.10	(.12)	[256]
Satisfaction With Area	-.01	(.93)	.02	(.80)	.02	(.73)	[260]
Perceived Area Social Disorder Problems	-.03	(.60)	-.05	(.46)	-.04	(.59)	[260]
Evaluations of Police Service	.20	(.001)	.26	(.001)	.24	(.001)	[244]
Police Aggressiveness (Log)	-.02	(.70)	-.00	(.94)	-.02	(.76)	[221]
Defensive Behaviors to Avoid Personal Crime	.02	(.70)	.01	(.85)	.07	(.28)	[260]
Household Crime Prevention Efforts	-.00	(.99)	-.02	(.80)	-.01	(.92)	[260]

**includes indications of age, race, sex, income education, length of residence, marital status, household organization and size, renter status, building size, personal victimization, knowledge of local crime victims, and the pretest.

Coordinated Community Policing

Relationship Between Self-Reported Program Exposure and Outcome Measures

N18: Aware of Foot Patrol?

Panel Respondents in Program Area Only

Scale Score Outcome	Correlation (and significance level) between recall exposure measure and outcome scores controlling for other factors						
	Simple correlation only		Partial correlation controlling for pretest		Partial correlation controlling for sixteen factors**		[N]
	r	(sigf)	r	(sigf)	r	(sigf)	
Fear of Personal Victimization in Area	-.04	(.50)	-.04	(.47)	-.02	(.75)	[265]
Perceived Area Personal Crime Problems	-.02	(.70)	-.05	(.39)	-.08	(.22)	[256]
Worry About Property Crime Victimization in Area	-.05	(.46)	-.05	(.43)	-.04	(.50)	[264]
Perceived Area Property Crime Problems	-.03	(.68)	-.04	(.52)	-.04	(.56)	[261]
Satisfaction With Area	.01	(.81)	.08	(.19)	.09	(.17)	[265]
Perceived Area Social Disorder Problems	.07	(.24)	.03	(.58)	.01	(.85)	[265]
Evaluations of Police Service	.24	(.001)	.26	(.001)	.28	(.001)	[249]
Police Aggressiveness (Log)	.00	(.99)	.01	(.86)	.04	(.55)	[225]
Defensive Behaviors to Avoid Personal Crime	-.04	(.53)	-.05	(.39)	-.00	(.99)	[265]
Household Crime Prevention Efforts	-.09	(.12)	-.11	(.08)	-.09	(.16)	[265]

**includes indications of age, race, sex, income education, length of residence, marital status, household organization and size, renter status, building size, personal victimization, knowledge of local crime victims, and the pretest.

Coordinated Community Policing

Relationship Between Self-Reported Program Exposure and Outcome Measures

N8: Aware of Bus Checks?

Panel Respondents in Program Area Only

Scale Score Outcome	Correlation (and significance level) between recall exposure measure and outcome scores controlling for other factors: Simple correlation only r	(sigf)	Partial correlation controlling for pretest r	(sigf)	Partial correlation controlling for sixteen factors** r	(sigf)	[N]
Fear of Personal Victimization in Area	-.03	(.68)	-.02	(.79)	.05	(.46)	[253]
Perceived Area Personal Crime Problems	.10	(.10)	.10	(.13)	.15	(.02)	[245]
Worry About Property Crime Victimization in Area	.00	(.95)	-.01	(.89)	.01	(.83)	[252]
Perceived Area Property Crime Problems	.10	(.10)	.07	(.26)	.07	(.28)	[249]
Satisfaction With Area	.14	(.02)	.17	(.01)	.17	(.01)	[252]
Perceived Area Social Disorder Problems	.10	(.11)	.08	(.21)	.08	(.20)	[253]
Evaluations of Police Service	.09	(.14)	.15	(.02)	.08	(.20)	[238]
Police Aggressiveness (Log)	-.02	(.76)	.03	(.66)	-.01	(.91)	[214]
Defensive Behaviors to Avoid Personal Crime	.02	(.80)	-.16	(.01)	.05	(.44)	[253]
Household Crime Prevention Efforts	.08	(.22)	-.01	(.90)	.08	(.22)	[253]

**includes indications of age, race, sex, income education, length of residence, marital status, household organization and size, renter status, building size, personal victimization, knowledge of local crime victims, and the pretest.

Coordinated Community Policing

Relationship Between Self-Reported Program Exposure and Outcome Measures

Q54: Aware of Road Checks?

Panel Respondents in Program Area Only

Scale Score Outcome	Correlation (and significance level) between recall exposure measure and outcome scores controlling for other factors: Simple correlation only r	(sigf)	Partial correlation controlling for pretest r	(sigf)	Partial correlation controlling for sixteen factors** r	(sigf)	[N]
Fear of Personal Victimization in Area	-.07	(.28)	-.04	(.54)	.02	(.81)	[264]
Perceived Area Personal Crime Problems	.03	(.58)	.02	(.72)	.06	(.38)	[256]
Worry About Property Crime Victimization in Area	.01	(.84)	.00	(.99)	-.00	(.96)	[263]
Perceived Area Property Crime Problems	.08	(.18)	.04	(.48)	.04	(.50)	[260]
Satisfaction With Area	.03	(.62)	.05	(.39)	.03	(.56)	[264]
Perceived Area Social Disorder Problems	.01	(.81)	-.01	(.83)	-.02	(.69)	[264]
Evaluations of Police Service	.08	(.19)	.15	(.02)	.07	(.31)	[249]
Police Aggressiveness (Log)	.03	(.61)	.01	(.90)	.06	(.35)	[225]
Defensive Behaviors to Avoid Personal Crime	-.00	(.97)	-.18	(.01)	.09	(.14)	[264]
Household Crime Prevention Efforts	.13	(.03)	-.01	(.81)	.09	(.14)	[264]

**includes indications of age, race, sex, income education, length of residence, marital status, household organization and size, renter status, building size, personal victimization, knowledge of local crime victims, and the pretest.

Coordinated Community Policing

Relationship Between Self-Reported Program Exposure and Outcome Measures

Q55: Aware of Police Clearing Streets?

Panel Respondents in Program Area Only

Scale Score Outcome	Correlation (and significance level) between recall exposure measure and outcome scores controlling for other factors						
	Simple correlation only		Partial correlation controlling for pretest		Partial correlation controlling for sixteen factors**		[N]
	r	(sigf)	r	(sigf)	r	(sigf)	
Fear of Personal Victimization in Area	-.14	(.03)	-.12	(.06)	-.05	(.47)	[259]
Perceived Area Personal Crime Problems	.03	(.61)	-.01	(.82)	.01	(.87)	[250]
Worry About Property Crime Victimization in Area	-.04	(.51)	-.05	(.45)	-.03	(.61)	[258]
Perceived Area Property Crime Problems	.13	(.03)	.10	(.12)	.08	(.19)	[255]
Satisfaction With Area	.11	(.08)	.14	(.03)	.14	(.02)	[259]
Perceived Area Social Disorder Problems	.06	(.36)	.01	(.90)	-.02	(.76)	[259]
Evaluations of Police Service	.23	(.001)	.24	(.001)	.24	(.001)	[244]
Police Aggressiveness (Log)	-.04	(.50)	-.02	(.74)	.02	(.75)	[222]
Defensive Behaviors to Avoid Personal Crime	-.02	(.76)	.02	(.68)	.10	(.13)	[259]
Household Crime Prevention Efforts	.12	(.05)	.08	(.21)	.09	(.17)	[259]

**includes indications of age, race, sex, income education, length of residence, marital status, household organization and size, renter status, building size, personal victimization, knowledge of local crime victims, and the pretest.

APPENDIX M:

TREATMENT-COVARIATE ANALYSIS RESULTS

CONTINUED

3 OF 4

COORDINATED COMMUNITY POLICING

Regression Analysis of Impact of Program Area of Residence Upon Subgroups

	Higher Income		Females		Victims		Age		Live Alone		High School Grads		Renters	
Wave 2 Outcome	Sign	Sigf	Sign	Sigf	Sign	Sigf	Sign	Sigf	Sign	Sigf	Sign	Sigf	Sign	Sigf
Fear of Personal Victimization in Area	-	.08	-	.01	-	.65	+	.15	+	.09	+	.35	-	.99
Perceived Area Personal Crime Problems	-	.94	-	.001	+	.04	-	.97	+	.06	+	.95	-	.71
Worry About Property Crime Victimization in Area	-	.41	-	.04	+	.50	+	.04	+	.001	+	.60	+	.67
Perceived Area Property Crime Problems	-	.77	-	.03	+	.57	-	.80	+	.06	-	.69	+	.24
Perceived Area Social Disorder Problems	+	.04	-	.01	+	.57	+	.14	+	.23	+	.29	-	.04
Satisfaction With Area	-	.17	+	.68	+	.12	-	.25	-	.77	-	.01	+	.01
Evaluations of Police Service	-	.95	+	.45	-	.98	-	.08	-	.02	-	.48	+	.14
Police Aggressiveness	+	.27	+	.42	-	.45	+	.25	+	.69	-	.92	-	.70
Defensive Behaviors to Avoid Personal Crime	-	.06	-	.01	+	.14	-	.80	+	.03	-	.98	+	.54
Household Crime Prevention Efforts	+	.54	-	.01	-	.69	+	.22	+	.38	-	.57	+	.65
Total Victimization*	+	.59	-	.20	+	.52	-	.12	+	.95	+	.13	+	.55
Personal Victimization*			-	.20	+	.50	-	.72	-	.83	+	.43	-	.27
Property Victimization*			-	.62	-	.77	-	.33	+	.47	+	.17	+	.06

Note: "N" approximately 544 for all analyses

*Dichotomy--victim or non-victim

Regression analysis includes pretest, area of residence, subgroup membership, and an area-subgroup interaction term. This table reports the sign associated with the interaction term and its significance.

APPENDIX N

INTERRUPTED TIME SERIES ANALYSIS RESULTS

Univariate analyses were conducted using this general model:

$$Y_t = \omega I_t + N_t$$

where Y_t is the number of crimes reported in an area in the t^{th} month; where I_t is a dummy variable equal to zero prior to September, 1983 and equal to one thereafter; and where N_t is a statistically "best AutoRegressive Integrated Moving Average (ARIMA) error term. With the model defined in this way, the parameter ω is interpreted as the causal effect (in crimes per month) of the experimental program. The null hypothesis of no effect,

$$H_0: \quad \omega = 0$$

is rejected if the estimate of ω is not statistically different than zero. To the extent that the experimental programs had any impact on officially recorded crimes, it can be expected that the null hypotheses will be rejected for time series from the South-1 and West-1 districts. Since South-4 had no program, time series from this area serve as quasi-experimental controls. Since no effect is expected in South-4, if the null hypothesis is rejected for any South-4 time series, effects in the South-1 and West-1 must be suspected of being attributable to external factors other than the program. The rationale for such a quasi-experimental approach is discussed in Cook and Campbell (1979, Chapter 5) and Glass, Willson, and Gottman (1975).

Monthly recorded crime data for each of the three areas were available for the 59 months from January, 1980 to September, 1984. The length of these time series makes analysis difficult, since they are only a few months longer than the absolute minimum required for analysis; this presents interpretational problems which we address shortly. Nevertheless, analysis proceeded in the standard procedure recommended by Box and Jenkins (1976; see also, McCleary and Hay, 1980: Chapter 2.11); that is, ARIMA noise components were identified for each series, parameters were estimated with an appropriate nonlinear software

package (Liu and Hudak, 1983), and residuals were diagnosed. The statistically "best" models for each series are presented in an appendix. The effect estimates derived from the analyses are summarized in Table 1.

Table 1 - Effect Estimates: Univariate Analyses

	South-1		West-1		South-4	
	Mean	Change	Mean	Change	Mean	Change
Total	32.9	-6.8*	27.6	-6.7*	22.9	-4.1
Person	12.1	-2.9*	7.3	-2.0*	8.5	-2.4*
Burglary	9.0	-3.9*	8.4	- .9	7.2	-2.5
Larceny	5.6	- .1	4.7	- .2	3.5	-1.0
Auto theft	5.1	+1.8*	6.4	-2.1*	3.9	+.4
Outside	17.0	- .5*	14.9	-6.1*	10.4	+.2

*Statistically significant at $p \leq .05$

Overall, the results of the analyses support the conclusion that the two experimental programs had a significant salutary impact on officially recorded crime. As Table 1 shows, the effects range as high as 40 percent (e.g., South-1 Burglaries) and, generally, are statistically significant in the South-1 and West-1 areas but not in the South-4 area. But a caveat is in order here. New programs often have "placebo" effects and we suspect that these series reflect this phenomenon. Note, for example, that the program impact estimates in South-4, though statistically insignificant, are reductions. McCleary and Riggs (1982) have developed statistical models for controlling "placebo" effects but these time series, unfortunately, are too short for correction. While the statistics in Table 1 suggest that the experimental programs had real impacts on crime in the South-1 and West-1 areas, reliable estimates of their magnitude must wait until longer time series are available.

Magnitude notwithstanding, the effect estimates in Table 1 illustrate several problems attributable to the (short) length of these time series. A three percent impact in South-1 (Outside Crimes) is statistically significant, for example, while an 18 percent impact in South-4 (Total Crimes) is not. This

reflects the range of variability in these series. As a rule, it is easier to (statistically) detect a small impact in a "smooth" time series than to detect a large impact in a "rough" time series. Series level (or mean) presents a similar problem. The Total Crime impacts for South-1 and West-1 are nearly identical, for example, yet because the series levels are unequal (32.9 versus 27.6 Total Crimes per month), the two effects have drastically different power characteristics. Finally, the levels of some of these series are so small (e.g., South-4 Larcenies) that our analyses have to overcome "floor effects." McCleary and Musheno (1980) have developed a method for controlling "floor effects" but, again, due to the short lengths of these series, the method is unfeasible.

But the most serious shortcoming of the analysis is posed by the sheer number of series analyzed. First, the series are not independent; all of the other crime categories, for instance, are components of Total Part 1 crime; in addition, several of the types of crimes are combined to create the "outside crimes" category. Thus, the appearance of a systematic pattern of effects in Table 1 may be only an appearance. Second, however, even if all eighteen series were independent, our nominal .05 significance level would have to be adjusted to reflect sequential hypothesis testing. Cook and Campbell (1979: Chapter 4) call this threat to statistical conclusion validity the "fishing rate error." Put simply, this threat means that we are not really testing the null hypothesis of no program impact at the nominal .05 significance level but, rather, at a much lower level.

To control this threat, we replicated our analysis with the multivariate ARIMA model:

$$Y_t = \phi^{-1}\theta\alpha_t$$

Here Y_t is a column vector whose elements are the crime times series and dummy variable; α is a column vector of white noise shocks; and ϕ and θ are matrices of autoregressive and moving average polynomials. See McCleary and McDowall (1985) for an introduction to multivariate ARIMA time series analysis. By partitioning ϕ and constraining the column corresponding to the dummy variable, we are able to test all effects simultaneously, thereby controlling the threat to statistical conclusion validity.

But the multivariate ARIMA model controls an implied threat to external validity as well: Displacement. In theory, the experimental programs in South-1 and West-1 reduce crime in an absolute sense; that is, a proportion of the crimes that "would have occurred" are prevented. But suppose instead that the experimental programs only displace crimes. Note, for example, that auto thefts in South-1 actually increased after September, 1983. Is it possible that South-1 burglars have simply shifted to auto theft? More to the point, is it possible that South-1 and West-1 criminals have simply moved to South-4?

To test this (perhaps implausible) hypothesis, the series must be given a common metric. To accomplish this, we subtracted means and divided by standard deviations to transform the series into Z-scores. With this transformation, each series has a zero-mean and unit variance and, hence, effects can be compared across series. The first analysis estimated the (standardized) impact of the experimental programs under the assumption that the impact was identical across series. If the program reduced burglaries by, say, .5 (standardized) units, that is, it would also reduce auto thefts (and every other series) by .5

Table 2 - Multivariate Analyses: Effect Estimates

		South-1	West	South-4
Constrained		- .140*	- .082*	- .021
Total		- .868*	-1.014*	- .561
Person		- .827*	- .847*	- .539
Burglary		- .722*	- .216	- .435
Larceny		- .085	- .137	- .088
Autotheft		.238	- .711*	.236
Outside		- .563	-1.122*	.045
Total	Mean	31.246	25.947	21.579
	S.D.	7.996	6.059	5.965
Person	Mean	11.368	6.772	7.860
	S.D.	4.029	3.239	3.436
Burglary	Mean	8.070	6.228	8.228
	S.D.	4.336	3.765	3.319
Larceny	Mean	5.526	3.316	4.667
	S.D.	2.630	1.957	2.139
Autotheft	Mean	5.597	3.947	5.860
	S.D.	3.066	2.123	2.994
Outside	Mean	16.825	10.526	13.351
	S.D.	4.589	3.234	4.651

* Statistically significant at $p \leq .05$

units. As shown in Table 2, the impacts estimated under this constraint amount to statistically significant reductions in South-1 and West-1 but not in South-4. We conclude from this result, again, that the experimental programs had a significant salutary impact on officially recorded crime.

Of course, the assumption of a constrained impact is unrealistic. For theoretical reasons, we expect the experimental programs to have differential impacts on the various series. But the constrained analyses rule out the "displacement" hypothesis with a high degree of confidence. If the experimental programs were simply displacing crimes from one category to another (e.g., from Burglary to Autotheft), we would expect statistically insignificant impacts for South-1 and West-1. Instead, the impacts are statistically significant. For the same reason, if the experimental programs were simply displacing crimes from one district to another, we would expect an increase in South-1. Instead, we find a (statistically insignificant) decrease.

The next six rows of effects in Table 2 are estimated without constraints. That is, we allow the experimental programs to have different effects on different series. In the common Z-score metric, the effects can be directly compared across series and across district. Outside Crimes in South-1 South-4 drop by approximately -.56 (standardized) units, for example, so these effects --- though in different districts and on different series --- are of more or less the same magnitude; neither is statistically different than zero. Finally, in the standardized Z-score metric, we see that the program's impact was significantly larger in West-1 than in South-1; and that the impact on Outside Crimes was statistically significant in West-1 but not in South-1.

To translate these effects from the Z-score metric to the raw metric, we simply multiply the standarized effect by the standard deviation; means and standard deviations are given at the bottom of Table 2. The total Crime effect

in West-1, for example, is equal to -1.014 x 6.059 or a reduction of 6.144 Total Crimes per month; this raw effect in turn can be divided by the series mean (25.947) to give an approximate percent effect, 23.7 percent in this case. Raw or percentage effects are generally more understandable; but for purposes of comparing effects across series or districts, the Z-score effects are more useful.

All in all, the effects in Table 2 are the "final, best" estimates of the experimental program impact. Adding a cross-sectional dimension to the analysis --- analyzing the series in a multivariate model, i.e. --- compensates to some extent for the shortness of the series. Nevertheless, we must honestly recognize that our analyses are based on short time series and, hence, that the generality of our findings are subject to reinterpretation. The relative size of the (putative) "placebo" effect is especially germane here. It would be tempting to use the South-4 effects as estimate of the "placebo" effect and this can be done informally. Formally, however, we must wait until the post-intervention series is longer. A year from now, when more data are available these analyses should be replicated. Until then, on the basis of the best available data, our analyses demonstrate a substantial impact. We have found no statistical evidence to the contrary.

RECORDED CRIME DATA (South-1 Area)

MONTH	TOTAL	PERSON	BURGL.	LARCENY	AUTO	OUTSIDE
1	26	11	9	4	2	11
2	32	14	5	4	8	19
3	25	7	5	7	4	13
4	23	6	7	4	5	14
5	22	10	5	3	4	9
6	29	10	12	3	4	13
7	27	10	5	2	9	15
8	27	14	7	5	1	13
9	37	10	15	5	6	18
10	37	14	9	5	8	21
11	33	12	11	4	5	18
12	33	10	10	2	10	18
13	40	14	13	7	5	21
14	42	13	17	3	5	13
15	33	12	11	8	2	14
16	32	10	8	9	5	16
17	31	7	7	5	9	20
18	43	16	9	12	5	25
19	42	19	12	7	3	20
20	31	8	9	7	5	15
21	39	16	13	7	3	18
22	35	7	8	2	17	21
23	44	21	17	2	2	17
24	41	8	19	6	7	16
25	18	8	4	1	5	11
26	35	13	13	2	6	17
27	47	20	14	7	5	21
28	46	22	10	7	6	22
29	50	16	18	8	5	23
30	37	12	12	4	9	24
31	30	9	8	8	4	18
32	23	9	5	5	3	11
33	33	13	8	8	4	15
34	43	14	10	13	4	25
35	26	12	2	8	3	17
36	27	7	7	6	6	17
37	24	10	4	5	4	14
38	36	17	11	5	2	18
39	32	17	8	3	4	16
40	28	11	9	5	3	13
41	33	9	8	10	2	15
42	30	13	2	8	5	19
43	20	9	2	3	6	13
44	28	9	4	8	7	20
45	32	14	6	4	8	20
46	40	12	6	9	13	28
47	21	6	7	2	6	11
48	24	9	2	5	8	18
49	17	8	1	2	6	12
50	26	5	7	8	5	9
51	28	16	1	6	5	21
52	32	12	2	6	10	22
53	19	4	8	3	4	10
54	31	11	5	9	6	18
55	19	5	5	6	3	7
56	18	10	3	2	3	10
57	24	7	5	6	15	24

RECORDED CRIME DATA (South-4 Area)

MONTH	TOTAL	PERSON	BURGL.	LARCENY	AUTO	OUTSIDE
1	25	7	11	3	4	10
2	27	11	7	5	4	9
3	33	7	13	7	5	12
4	22	2	11	5	4	10
5	21	4	9	5	3	6
6	26	4	13	3	6	10
7	33	12	9	9	3	16
8	22	11	4	3	4	10
9	33	11	11	4	6	15
10	25	11	10	2	2	8
11	28	9	14	2	3	10
12	36	6	20	6	4	9
13	20	3	11	3	3	6
14	24	8	8	4	4	11
15	24	9	8	3	4	9
16	19	5	2	3	9	14
17	25	8	5	3	9	16
18	24	6	10	3	5	11
19	17	11	2	1	3	10
20	17	9	4	0	4	8
21	30	17	7	2	4	17
22	24	11	4	1	8	16
23	17	7	3	6	1	8
24	33	10	7	10	4	15
25	23	17	2	2	2	11
26	26	8	10	3	5	11
27	28	12	8	2	6	18
28	18	7	4	3	3	8
29	24	9	4	7	4	13
30	18	3	6	4	4	6
31	21	12	5	2	2	9
32	33	15	9	6	3	16
33	15	11	2	1	1	10
34	20	11	7	2	0	7
35	25	9	7	6	0	8
36	18	4	4	1	8	11
37	16	7	4	2	2	10
38	10	4	2	3	1	7
39	19	8	4	3	4	13
40	16	5	6	2	3	5
41	16	6	3	3	4	12
42	15	6	1	2	6	7
43	15	5	5	3	2	6
44	12	7	1	0	4	9
45	18	6	8	3	1	8
46	25	5	7	3	9	14
47	18	6	7	1	4	10
48	18	4	5	2	7	12
49	15	5	3	3	4	8
50	18	7	4	5	2	9
51	18	8	3	2	5	11
52	23	10	5	3	4	13
53	17	6	1	3	7	13
54	18	7	4	3	3	12
55	16	5	3	3	5	10
56	11	1	5	4	1	3
57	22	13	3	4	3	14

RECORDED CRIME DATA (West-1 Area)

MONTH	TOTAL	PERSON	BURGL.	LARCENY	AUTO	OUTSIDE
1	33	8	13	6	5	15
2	29	11	7	2	9	19
3	19	5	6	1	7	12
4	22	8	8	3	3	11
5	45	14	13	5	12	24
6	29	6	12	3	8	15
7	34	7	11	5	10	18
8	35	13	10	8	4	19
9	23	7	7	2	6	11
10	33	11	6	9	6	18
11	24	9	6	6	3	14
12	35	11	5	9	10	24
13	29	12	5	4	8	21
14	26	9	4	4	8	18
15	24	8	4	0	12	16
16	28	8	6	8	5	15
17	29	13	5	6	4	19
18	33	6	15	7	4	13
19	34	6	10	7	10	18
20	27	4	8	8	7	15
21	24	9	8	3	3	13
22	23	8	9	2	3	9
23	35	8	10	7	10	20
24	27	11	7	5	4	15
25	31	6	7	1	16	19
26	21	7	6	2	6	12
27	27	6	15	3	2	6
28	24	2	7	5	9	14
29	21	6	8	3	4	7
30	26	6	6	8	5	11
31	23	5	5	5	8	15
32	29	9	11	4	5	15
33	22	8	5	4	2	10
34	12	2	1	4	4	8
35	23	4	9	5	5	10
36	28	8	14	3	3	10
37	24	5	9	5	5	12
38	35	15	6	7	7	23
39	30	4	17	5	4	10
40	25	1	13	5	6	11
41	34	3	13	6	12	17
42	25	5	11	4	5	14
43	27	8	10	4	5	14
44	15	5	2	4	3	8
45	20	4	7	2	6	7
46	24	4	11	6	3	9
47	21	5	7	6	3	8
48	24	7	8	2	7	11
49	21	4	7	5	5	8
50	27	9	10	4	4	13
51	20	3	6	6	5	10
52	15	2	6	2	5	7
53	27	7	8	4	7	14
54	17	7	4	5	1	6
55	19	4	11	2	1	5
56	17	1	5	7	4	10
57	25	2	9	8	6	15

Time Series Models Results

Univariate Models

South-1, Total Crimes
South-1, Person Crimes
South-1, Burglaries
South-1, Larcenies
South-1, Autothefts
South-1, Outside Crimes

West, Total Crimes
West, Person Crimes
West, Burglaries
West, Larcenies
West, Autothefts
West, Outside Crimes

South-4, Total Crimes
South-4, Person Crimes
South-4, Burglaries
South-4, Larcenies
South-4, Autothefts
South-4, Outside Crimes

Multivariate Models

South-1: All Six Series
West: All Six Series
South-4: All Six Series

South-1: Total Crimes

$S_{11} = \theta_0 + (1 - \theta_1 B)a_t$

	PARAMETER LABEL	VARIABLE NAME	NUM./ DENOM.	FACTOR	ORDER	VALUE	STD ERROR	T VALUE
1	C		CNST	1	0	32.8547	1.3908	23.62
2	W0	D	NUM.	1	0	-6.7955	2.7687	-2.45
3	THETA1	S11	MA	1	1	-.3026	.1252	-2.42

TOTAL SUM OF SQUARES	0.364456D+04
TOTAL NUMBER OF OBSERVATIONS	57
RESIDUAL SUM OF SQUARES.	0.277136D+04
R-SQUARE	0.760
RESIDUAL VARIANCE ESTIMATE	0.486204D+02
RESIDUAL STANDARD ERROR.	0.697283D+01

AUTOCORRELATIONS

1- 12	.02	.03	-.11	.07	.16	.13	-.02	.07	-.23	.14	-.08	.08
ST.E.	.13	.13	.13	.13	.13	.14	.14	.14	.14	.15	.15	.15
Q	.0	.1	.9	1.2	2.9	4.0	4.0	4.3	8.1	9.6	10.1	10.5
13- 24	-.10	-.14	.01	-.04	.05	.07	-.13	-.04	-.13	-.12	-.05	-.04
ST.E.	.15	.15	.15	.15	.15	.16	.16	.16	.16	.16	.16	.16
Q	11.3	12.8	12.8	12.9	13.1	13.4	15.0	15.1	16.7	18.0	18.3	18.4

South-1: Person Crimes

$S_{12} = \theta_0 + a_t$

	PARAMETER LABEL	VARIABLE NAME	NUM./ DENOM.	FACTOR	ORDER	VALUE	STD ERROR	T VALUE
1	C		CNST	1	0	12.0930	.5831	20.74
2	W0	D	NUM.	1	0	-2.9502	1.1766	-2.51

TOTAL SUM OF SQUARES	0.925263D+03
TOTAL NUMBER OF OBSERVATIONS	57
RESIDUAL SUM OF SQUARES.	0.833342D+03
R-SQUARE	0.901
RESIDUAL VARIANCE ESTIMATE	0.146200D+02
RESIDUAL STANDARD ERROR.	0.382362D+01

AUTOCORRELATIONS

1- 12	.03	-.11	-.19	-.07	.14	.06	-.01	-.03	-.03	.07	.06	.03
ST.E.	.13	.13	.13	.14	.14	.14	.14	.14	.14	.14	.14	.14
Q	.1	.8	3.1	3.4	4.7	4.9	4.9	4.9	5.0	5.4	5.6	5.7
13- 24	-.01	-.12	-.07	.02	.04	.02	.07	-.08	.00	-.12	-.04	-.05
ST.E.	.14	.14	.15	.15	.15	.15	.15	.15	.15	.15	.15	.15
Q	5.7	6.9	7.3	7.4	7.5	7.5	7.9	8.5	8.5	9.9	10.1	10.3

South-1: Burglaries

$S_{13} = \theta_0 + (1 - \theta_1 B - \theta_{13} B^{13}) a_t$

	PARAMETER LABEL	VARIABLE NAME	NUM./ DENOM.	FACTOR	ORDER	VALUE	STD ERROR	T VALUE
1	C		CNST	1	0	8.9729	.8667	10.35
2	W0	D	NUM.	1	0	-3.8786	1.6903	-2.29
3	THETA1	S13	MA	1	1	-.3446	.1187	-2.90
4	THETA3	S13	MA	1	3	-.2877	.1209	-2.38

TOTAL SUM OF SQUARES	0.107172D+04
TOTAL NUMBER OF OBSERVATIONS	57
RESIDUAL SUM OF SQUARES.	0.726544D+03
R-SQUARE	0.678
RESIDUAL VARIANCE ESTIMATE	0.127464D+02
RESIDUAL STANDARD ERROR.	0.357021D+01

AUTOCORRELATIONS

1- 12	-.06	.00	-.02	-.06	.25	.02	-.00	-.02	.00	.21	-.15	-.05
ST.E.	.13	.13	.13	.13	.13	.14	.14	.14	.14	.14	.15	.15
Q	.2	.2	.2	.4	4.6	4.7	4.7	4.7	4.7	7.8	9.5	9.7
13- 24	-.10	-.02	.22	-.14	.13	-.08	-.15	-.01	-.08	-.21	-.00	-.02
ST.E.	.15	.15	.15	.16	.16	.16	.16	.16	.16	.16	.17	.17
Q	10.4	10.4	14.4	16.1	17.5	18.1	19.9	19.9	20.6	24.9	24.9	25.0

South-1: Larcenies

$S_{14} = \theta_0 + a_t$

	PARAMETER LABEL	VARIABLE NAME	NUM./ DENOM.	FACTOR	ORDER	VALUE	STD ERROR	T VALUE
1	C		CNST	1	0	5.5581	.4010	13.86
2	W0	D	NUM.	1	0	-.1296	.8090	-.16

TOTAL SUM OF SQUARES	0.394210D+03
TOTAL NUMBER OF OBSERVATIONS	57
RESIDUAL SUM OF SQUARES.	0.394033D+03
R-SQUARE	1.000
RESIDUAL VARIANCE ESTIMATE	0.691286D+01
RESIDUAL STANDARD ERROR.	0.262923D+01

AUTOCORRELATIONS

1- 12	.09	.14	.06	-.04	-.07	-.08	-.10	-.07	-.16	.00	-.10	-.12
ST.E.	.13	.13	.14	.14	.14	.14	.14	.14	.14	.14	.14	.14
Q	.5	1.7	2.0	2.1	2.4	2.8	3.5	3.8	5.7	5.7	6.5	7.5
13- 24	.16	-.03	.03	.12	.13	.10	-.02	-.00	.02	-.14	.04	-.01
ST.E.	.15	.15	.15	.15	.15	.15	.15	.15	.15	.15	.16	.16
Q	9.4	9.5	9.5	10.7	12.1	12.9	12.9	12.9	13.0	14.9	15.1	15.1

South-1: Autothefts

$S_{15} = \theta_0 + (1 - \theta_1 B)a_t$

	PARAMETER LABEL	VARIABLE NAME	NUM./ DENOM.	FACTOR	ORDER	VALUE	STD ERROR	T VALUE
1	C		CNST	1	0	5.1270	.3401	15.08
2	W0	D	NUM.	1	0	1.8323	.6982	2.62
3	THETA1	S15	MA	1	1	.2290	.1337	1.71

TOTAL SUM OF SQUARES	0.535719D+03
TOTAL NUMBER OF OBSERVATIONS	57
RESIDUAL SUM OF SQUARES.	0.471289D+03
R-SQUARE	0.880
RESIDUAL VARIANCE ESTIMATE	0.826823D+01
RESIDUAL STANDARD ERROR.	0.287545D+01

AUTOCORRELATIONS

1- 12	-.01	.05	-.03	-.06	.15	-.01	-.14	-.04	-.14	.02	-.06	.04
ST.E.	.13	.13	.13	.13	.13	.14	.14	.14	.14	.14	.14	.14
Q	.0	.1	.2	.4	1.9	1.9	3.2	3.2	4.7	4.7	5.0	5.1
13- 24	-.02	-.03	.13	-.06	-.03	.06	-.09	.07	-.05	.00	-.01	.11
ST.E.	.14	.14	.14	.14	.14	.14	.15	.15	.15	.15	.15	.15
Q	5.1	5.2	6.6	6.8	6.9	7.2	7.9	8.3	8.5	8.5	8.5	9.8

South-1: Outside Crimes

$S_{16} = \theta_0 + a_t$

	PARAMETER LABEL	VARIABLE NAME	NUM./ DENOM.	FACTOR	ORDER	VALUE	STD ERROR	T VALUE
1	C		CNST	1	0	16.9535	.6989	24.26
2	W0	D	NUM.	1	0	-.5249	1.4103	-.37

TOTAL SUM OF SQUARES	0.120025D+04
TOTAL NUMBER OF OBSERVATIONS	57
RESIDUAL SUM OF SQUARES.	0.119734D+04
R-SQUARE	0.998
RESIDUAL VARIANCE ESTIMATE	0.210059D+02
RESIDUAL STANDARD ERROR.	0.458322D+01

AUTOCORRELATIONS

1- 12	.11	-.06	-.06	-.15	.00	.16	-.03	.06	-.07	-.04	.06	.11
ST.E.	.13	.13	.13	.14	.14	.14	.14	.14	.14	.14	.14	.14
Q	.8	1.0	1.3	2.8	2.8	4.6	4.6	4.9	5.3	5.4	5.6	6.6
13- 24	-.10	-.21	.01	.09	.12	.16	-.10	-.09	-.13	-.10	.01	.05
ST.E.	.15	.15	.15	.15	.15	.15	.16	.16	.16	.16	.16	.16
Q	7.3	10.8	10.8	11.5	12.7	15.0	15.8	16.6	18.3	19.3	19.3	19.6

West: Total Crimes

$W_1 = \theta_0 + a_t$

	PARAMETER LABEL	VARIABLE NAME	NUM./ DENOM.	FACTOR	ORDER	VALUE	STD ERROR	T VALUE
1	C		CNST	1	0	27.6046	.8110	34.04
2	W0	D	NUM.	1	0	-6.7473	1.6364	-4.12

TOTAL SUM OF SQUARES	0.209284D+04
TOTAL NUMBER OF OBSERVATIONS	57
RESIDUAL SUM OF SQUARES.	0.161199D+04
R-SQUARE	0.770
RESIDUAL VARIANCE ESTIMATE	0.282806D+02
RESIDUAL STANDARD ERROR.	0.531795D+01

AUTOCORRELATIONS

1- 12	.01	.02	.03	-.07	.14	.01	.14	.00	-.04	-.08	.09	.05
ST.E.	.13	.13	.13	.13	.13	.14	.14	.14	.14	.14	.14	.14
Q	.0	.0	.1	.4	1.6	1.6	2.9	2.9	3.0	3.5	4.0	4.2
13- 24	.06	-.08	-.07	-.19	-.09	.18	-.08	.01	-.16	-.02	-.01	-.16
ST.E.	.14	.14	.14	.14	.15	.15	.15	.15	.15	.16	.16	.16
Q	4.5	5.1	5.5	8.3	9.0	11.9	12.4	12.4	14.7	14.8	14.8	17.4

West: Person Crimes

$W_2 = \theta_0 + (1 - \theta_6 B^6 - \theta_{12} B^{12} - \theta_{18} B^{18}) a_t$

	PARAMETER LABEL	VARIABLE NAME	NUM./ DENOM.	FACTOR	ORDER	VALUE	STD ERROR	T VALUE
1	C		CNST	1	0	7.3159	.5565	13.15
2	W0	D	NUM.	1	0	-2.0452	.9638	-2.12
3	THETA6	W2	MA	1	6	-.3096	.1380	-2.24
4	THETA12	W2	MA	1	12	-.5445	.1299	-4.19
5	THETA18	W2	MA	1	18	.2343	.1541	1.52

TOTAL SUM OF SQUARES	0.598035D+03
TOTAL NUMBER OF OBSERVATIONS	57
RESIDUAL SUM OF SQUARES.	0.364130D+03
R-SQUARE	0.609
RESIDUAL VARIANCE ESTIMATE	0.638824D+01
RESIDUAL STANDARD ERROR.	0.252750D+01

AUTOCORRELATIONS

1- 12	.07	.00	.10	-.05	.17	.01	.06	.06	-.01	-.01	.05	-.00
ST.E.	.13	.13	.13	.13	.13	.14	.14	.14	.14	.14	.14	.14
Q	.3	.3	1.0	1.2	2.9	2.9	3.2	3.4	3.4	3.4	3.6	3.6
13- 24	-.07	-.03	.06	.08	-.01	-.06	-.09	-.07	.09	.04	-.08	-.03
ST.E.	.14	.14	.14	.14	.14	.14	.14	.14	.14	.14	.14	.15
Q	3.9	4.0	4.3	4.7	4.7	5.1	5.8	6.2	6.9	7.1	7.8	7.9

West: Burglaries

$W_3 = \theta_0 + (1 - \theta_6 B^6)a_t$

	PARAMETER LABEL	VARIABLE NAME	NUM./ DENOM.	FACTOR	ORDER	VALUE	STD ERROR	T VALUE
1	C		CNST	1	0	8.4234	.3797	22.18
2	W0	D	NUM.	1	0	-.8716	.8785	-.99
3	THETA6	W3	MA	1	6	.2544	.1357	1.87

TOTAL SUM OF SQUARES	0.628035D+03
TOTAL NUMBER OF OBSERVATIONS	57
RESIDUAL SUM OF SQUARES.	0.575660D+03
R-SQUARE	0.917
RESIDUAL VARIANCE ESTIMATE	0.100993D+02
RESIDUAL STANDARD ERROR.	0.317794D+01

AUTOCORRELATIONS

1- 12	.15	-.03	.08	.08	-.05	-.00	-.05	-.24	.01	-.00	-.11	-.02
ST.E.	.13	.14	.14	.14	.14	.14	.14	.14	.14	.14	.14	.15
Q	1.3	1.4	1.7	2.1	2.3	2.3	2.5	6.3	6.3	6.3	7.2	7.2
13- 24	.01	.07	-.16	-.05	.02	.14	.07	.02	.08	.03	.03	-.13
ST.E.	.15	.15	.15	.15	.15	.15	.15	.15	.15	.15	.15	.15
Q	7.2	7.6	9.8	10.0	10.1	11.6	12.1	12.1	12.7	12.8	12.9	14.5

West: Larcenies

$W_4 = \theta_0 + a_t$

	PARAMETER LABEL	VARIABLE NAME	NUM./ DENOM.	FACTOR	ORDER	VALUE	STD ERROR	T VALUE
1	C		CNST	1	0	4.7209	.3258	14.49
2	W0	D	NUM.	1	0	-.2209	.6574	-.34

TOTAL SUM OF SQUARES	0.260667D+03
TOTAL NUMBER OF OBSERVATIONS	57
RESIDUAL SUM OF SQUARES.	0.260151D+03
R-SQUARE	0.998
RESIDUAL VARIANCE ESTIMATE	0.456406D+01
RESIDUAL STANDARD ERROR.	0.213637D+01

AUTOCORRELATIONS

1- 12	.01	.00	-.06	-.00	-.24	-.02	.05	-.04	-.13	.07	.13	.08
ST.E.	.13	.13	.13	.13	.13	.14	.14	.14	.14	.14	.14	.15
Q	.0	.0	.2	.2	4.0	4.1	4.3	4.4	5.5	5.8	7.1	7.7
13- 24	-.10	-.22	-.20	-.05	-.17	.09	.17	.05	-.02	.07	.15	-.06
ST.E.	.15	.15	.15	.16	.16	.16	.16	.17	.17	.17	.17	.17
Q	8.4	12.2	15.4	15.7	18.0	18.7	21.2	21.4	21.4	21.9	24.1	24.5

West: Autothefts

$W_5 = \theta_0 + a_t$

	PARAMETER LABEL	VARIABLE NAME	NUM./ DENOM.	FACTOR	ORDER	VALUE	STD ERROR	T VALUE
1	C		CNST	1	0	6.3720	.4355	14.63
2	W0	D	NUM.	1	0	-2.0863	.8788	-2.37

TOTAL SUM OF SQUARES	0.510877D+03
TOTAL NUMBER OF OBSERVATIONS	57
RESIDUAL SUM OF SQUARES.	0.464904D+03
R-SQUARE	0.910
RESIDUAL VARIANCE ESTIMATE	0.815620D+01
RESIDUAL STANDARD ERROR.	0.285591D+01

AUTOCORRELATIONS

1- 12	-.10	-.12	.08	-.11	.02	.03	.02	-.07	-.07	.21	-.07	.02
ST.E.	.13	.13	.14	.14	.14	.14	.14	.14	.14	.14	.14	.15
Q	.6	1.6	1.9	2.7	2.7	2.8	2.8	3.2	3.5	6.6	7.0	7.0
13- 24	.17	-.24	-.11	.16	-.11	.13	-.09	.04	-.11	.01	.10	-.19
ST.E.	.15	.15	.16	.16	.16	.16	.16	.16	.16	.17	.17	.17
Q	9.2	13.9	14.9	17.1	18.1	19.6	20.4	20.5	21.6	21.6	22.6	26.3

West: Outside Crimes

$W_6 = \theta_0 + (1 - \theta_7 B^7)a_t$

	PARAMETER LABEL	VARIABLE NAME	NUM./ DENOM.	FACTOR	ORDER	VALUE	STD ERROR	T VALUE
1	C		CNST	1	0	14.8834	.8080	18.42
2	W0	D	NUM.	1	0	-6.0679	1.4812	-4.10
4	THETA7	W6	MA	1	7	-.4952	.1246	-3.98

TOTAL SUM OF SQUARES	0.123298D+04
TOTAL NUMBER OF OBSERVATIONS	57
RESIDUAL SUM OF SQUARES.	0.768236D+03
R-SQUARE	0.623
RESIDUAL VARIANCE ESTIMATE	0.134778D+02
RESIDUAL STANDARD ERROR.	0.367122D+01

AUTOCORRELATIONS

1- 12	.00	.00	.17	-.08	.17	.09	-.02	.02	.03	.06	-.03	.04
ST.E.	.13	.13	.13	.14	.14	.14	.14	.14	.14	.14	.14	.14
Q	.0	.0	1.7	2.1	4.0	4.6	4.6	4.7	4.8	5.0	5.1	5.2
13- 24	.10	-.16	.11	-.18	-.22	.12	-.11	-.15	-.11	-.22	-.03	-.14
ST.E.	.14	.14	.15	.15	.15	.16	.16	.16	.16	.16	.17	.17
Q	6.0	7.9	8.8	11.4	15.6	16.8	17.8	19.8	20.8	25.6	25.7	27.6

South-4: Total Crimes

$S_{41} = \theta_0 + (1 - \theta_3 B^3 - \theta_5 B^5)a_t$

	PARAMETER LABEL	VARIABLE NAME	NUM./ DENOM.	FACTOR	ORDER	VALUE	STD ERROR	T VALUE
1	C		CNST	1	0	22.8638	1.1742	19.47
2	W0	D	NUM.	1	0	-4.1459	2.2191	-1.87
3	THETA3	S41	MA	1	3	-.3418	.1190	-2.87
4	THETA5	S41	MA	1	5	-.3233	.1201	-2.69

TOTAL SUM OF SQUARES	0.202789D+04
TOTAL NUMBER OF OBSERVATIONS	57
RESIDUAL SUM OF SQUARES.	0.140220D+04
R-SQUARE	0.691
RESIDUAL VARIANCE ESTIMATE	0.246000D+02
RESIDUAL STANDARD ERROR.	0.495983D+01

AUTOCORRELATIONS

1- 12	.13	.05	.05	.00	-.00	.12	.03	.04	-.05	.01	.02	-.03
ST.E.	.13	.13	.13	.14	.14	.14	.14	.14	.14	.14	.14	.14
Q	1.0	1.1	1.3	1.3	1.3	2.2	2.3	2.4	2.6	2.6	2.6	2.7
13- 24	-.07	.13	.15	-.19	-.06	.06	-.03	.07	.06	.10	.09	-.03
ST.E.	.14	.14	.14	.14	.15	.15	.15	.15	.15	.15	.15	.15
Q	3.1	4.5	6.2	9.1	9.4	9.7	9.8	10.3	10.6	11.5	12.3	12.3

South-4: Person Crimes

$S_{42} = \theta_0 + (1 - \theta_9 B^9)a_t$

	PARAMETER LABEL	VARIABLE NAME	NUM./ DENOM.	FACTOR	ORDER	VALUE	STD ERROR	T VALUE
1	C		CNST	1	0	8.4757	.4671	18.15
2	W0	D	NUM.	1	0	-2.3656	1.1185	-2.11
3	THETA1	S42	MA	1	1	-.2759	.1293	-2.13
4	THETA9	S42	MA	1	9	.3610	.1398	2.58

TOTAL SUM OF SQUARES	0.672877D+03
TOTAL NUMBER OF OBSERVATIONS	57
RESIDUAL SUM OF SQUARES.	0.535441D+03
R-SQUARE	0.796
RESIDUAL VARIANCE ESTIMATE	0.939371D+01
RESIDUAL STANDARD ERROR.	0.306492D+01

AUTOCORRELATIONS

1- 12	.02	.13	-.10	-.07	-.10	-.03	.11	.04	-.03	.12	-.07	.00
ST.E.	.13	.13	.13	.14	.14	.14	.14	.14	.14	.14	.14	.14
Q	.0	1.0	1.7	2.0	2.6	2.7	3.5	3.6	3.6	4.6	5.0	5.0
13- 24	.01	-.05	-.18	-.10	-.09	.05	-.17	-.03	-.25	-.10	.11	-.01
ST.E.	.14	.14	.14	.15	.15	.15	.15	.15	.15	.16	.16	.16
Q	5.0	5.2	7.7	8.6	9.2	9.4	12.0	12.0	17.7	18.6	19.9	19.9

South-4: Burglaries

$$S_{43} = \theta_0 + (1 - \theta_1 B - \theta_2 B^2 - \theta_6 B^6)a_t$$

	PARAMETER LABEL	VARIABLE NAME	NUM./ DENOM.	FACTOR	ORDER	VALUE	STD ERROR	T VALUE
1	C		CNST	1	0	7.2277	.8925	8.10
2	W0	D	NUM.	1	0	-2.4981	1.5865	-1.57
3	THETA1	S43	MA	1	1	-.5166	.0983	-5.25
4	THETA2	S43	MA	1	2	-.3235	.0919	-3.52
5	THETA6	S43	MA	1	6	-.6266	.0864	-7.25

TOTAL SUM OF SQUARES	0.808035D+03
TOTAL NUMBER OF OBSERVATIONS	57
RESIDUAL SUM OF SQUARES.	0.426660D+03
R-SQUARE	0.528
RESIDUAL VARIANCE ESTIMATE	0.748527D+01
RESIDUAL STANDARD ERROR.	0.273592D+01

AUTOCORRELATIONS

1- 12	.00	.11	.21	-.24	.01	-.01	-.15	.16	.12	-.08	.10	.02
ST.E.	.13	.13	.13	.14	.15	.15	.15	.15	.15	.15	.16	.16
Q	.0	.7	3.4	7.1	7.2	7.2	8.7	10.5	11.6	12.1	12.9	12.9
13- 24	-.07	.03	.04	-.14	.03	-.05	-.06	.09	.02	.01	.08	-.09
ST.E.	.16	.16	.16	.16	.16	.16	.16	.16	.16	.16	.16	.16
Q	13.3	13.4	13.5	15.2	15.2	15.4	15.8	16.5	16.6	16.6	17.2	18.0

South-4: Larcenies

$$S_{44} = \theta_0 + (1 - \theta_{13} B^{13})a_t$$

	PARAMETER LABEL	VARIABLE NAME	NUM./ DENOM.	FACTOR	ORDER	VALUE	STD ERROR	T VALUE
1	C		CNST	1	0	3.5036	.2242	15.63
2	W0	D	NUM.	1	0	-.9965	.6043	-1.65
3	THETA13	S44	MA	1	13	.3287	.1443	2.28

TOTAL SUM OF SQUARES	0.218316D+03
TOTAL NUMBER OF OBSERVATIONS	57
RESIDUAL SUM OF SQUARES.	0.192902D+03
R-SQUARE	0.884
RESIDUAL VARIANCE ESTIMATE	0.338425D+01
RESIDUAL STANDARD ERROR.	0.183963D+01

AUTOCORRELATIONS

1- 12	.05	-.02	-.00	-.10	.16	.09	-.04	.06	-.05	-.15	.12	-.05
ST.E.	.13	.13	.13	.13	.13	.14	.14	.14	.14	.14	.14	.14
Q	.1	.1	.1	.8	2.5	3.0	3.2	3.4	3.6	5.3	6.4	6.6
13- 24	-.01	-.05	-.13	-.10	.09	-.09	-.04	.02	.16	.11	-.06	-.09
ST.E.	.14	.14	.15	.15	.15	.15	.15	.15	.15	.15	.16	.16
Q	6.6	6.9	8.3	9.0	9.8	10.5	10.7	10.7	13.2	14.3	14.7	15.5

South-4: Autothefts

$S_{45} = \theta_0 + a_t$

	PARAMETER LABEL	VARIABLE NAME	NUM./ DENOM.	FACTOR	ORDER	VALUE	STD ERROR	T VALUE
1	C		CNST	1	0	3.8605	.3229	11.96
2	W0	D	NUM.	1	0	.3538	.6515	.54

TOTAL SUM OF SQUARES	0.256842D+03
TOTAL NUMBER OF OBSERVATIONS	57
RESIDUAL SUM OF SQUARES.	0.255520D+03
R-SQUARE	0.995
RESIDUAL VARIANCE ESTIMATE	0.448281D+01
RESIDUAL STANDARD ERROR.	0.211726D+01

AUTOCORRELATIONS

1- 12	-.01	.08	-.10	-.00	.16	.07	-.00	-.18	-.03	.17	-.05	.02
ST.E.	.13	.13	.13	.13	.13	.14	.14	.14	.14	.14	.15	.15
Q	.0	.4	1.0	1.0	2.8	3.1	3.1	5.4	5.5	7.6	7.7	7.7
13- 24	-.09	-.03	-.07	-.10	-.17	-.16	.04	.06	-.06	.03	-.09	.14
ST.E.	.15	.15	.15	.15	.15	.15	.16	.16	.16	.16	.16	.16
Q	8.4	8.4	8.9	9.8	12.2	14.3	14.4	14.7	15.1	15.1	16.0	18.0

South-4: Outside Crimes

$S_{46} = \theta_0 + (1 - \theta_5 B^5)a_t$

	PARAMETER LABEL	VARIABLE NAME	NUM./ DENOM.	FACTOR	ORDER	VALUE	STD ERROR	T VALUE
1	C		CNST	1	0	10.3851	.6046	17.18
2	W0	D	NUM.	1	0	.2131	1.1279	.19
3	THETA5	S46	MA	1	5	-.3519	.1308	-2.69

TOTAL SUM OF SQUARES	0.596210D+03
TOTAL NUMBER OF OBSERVATIONS	57
RESIDUAL SUM OF SQUARES.	0.531557D+03
R-SQUARE	0.892
RESIDUAL VARIANCE ESTIMATE	0.932557D+01
RESIDUAL STANDARD ERROR.	0.305378D+01

AUTOCORRELATIONS

1- 12	-.05	-.02	-.02	-.12	.02	-.02	.14	.04	-.06	.09	-.03	-.02
ST.E.	.13	.13	.13	.13	.13	.13	.13	.14	.14	.14	.14	.14
Q	.1	.2	.2	1.1	1.1	1.2	2.4	2.5	2.7	3.4	3.4	3.4
13- 24	-.16	.02	.08	-.14	-.12	.12	-.12	.00	-.02	-.01	-.13	-.05
ST.E.	.14	.14	.14	.14	.15	.15	.15	.15	.15	.15	.15	.15
Q	5.4	5.5	6.0	7.5	8.8	9.9	11.2	11.2	11.2	11.2	12.9	13.1

South-1: Multivariate Model

$\Phi_1 S1_t = \theta_0 + (I - \theta_1 B - \theta_4 B^4 - \theta_5 B^5)\alpha_t$

CONSTANT VECTOR		PHI(1) VECTOR CONSTRAINED		PHI(1) VECTOR UNCONSTRAINED	
-0.078	(0.168)	-0.140	(0.070)	-0.868	(0.335)
-0.075	(0.158)	-0.140	(0.070)	-0.827	(0.342)
-0.092	(0.169)	-0.140	(0.070)	-0.722	(0.351)
-0.035	(0.119)	-0.140	(0.070)	-0.085	(0.298)
-0.007	(0.113)	-0.140	(0.070)	0.238	(0.281)
-0.027	(0.133)	-0.140	(0.070)	-0.563	(0.313)
0.214	(0.055)	--	---	—	—

ESTIMATES OF THETA(1) MATRIX

.239	-.290	-.200	--	--	--	--
-.150	.038	--	--	--	--	--
.572	-.530	-.330	--	--	-.078	--
--	--	--	.108	--	--	--
--	--	--	--	.142	--	--
-.043	--	--	--	--	--	--
--	--	--	--	--	--	--

ESTIMATES OF THETA(4) MATRIX

--	--	-.306	--	--	--	--
--	--	-.407	--	--	--	--
--	--	--	--	--	--	--
--	--	-.385	--	--	--	--
--	--	--	--	--	--	--
--	--	-.374	--	--	--	--
--	--	--	--	--	--	--

ESTIMATES OF THETA(5) MATRIX

--	--	-.330	--	--	--	--
-.220	--	.053	--	--	--	--
--	--	-.330	--	--	--	--
--	--	-.072	--	--	--	--
--	--	--	--	--	--	--
--	--	--	--	--	--	--
--	--	--	--	--	--	--

West: Multivariate Model

$\Phi_1 W1_t = \theta_0 + (I - \theta_1 B - \theta_5 B^5)\alpha_t$

CONSTANT VECTOR		PHI(1) VECTOR CONSTRAINED		PHI(1) VECTOR UNCONSTRAINED	
-0.021	(0.153)	-0.082	(0.037)	-1.014	(0.304)
-0.021	(0.160)	-0.082	(0.037)	-0.847	(0.319)
-0.027	(0.133)	-0.082	(0.037)	-0.216	(0.310)
-0.025	(0.135)	-0.082	(0.037)	-0.137	(0.317)
-0.004	(0.143)	-0.082	(0.037)	-0.711	(0.319)
-0.012	(0.166)	-0.082	(0.037)	-1.122	(0.332)
0.250	(0.058)	--	---	--	---

ESTIMATES OF THETA(1) MATRIX

--	--	--	--	--	--	--
--	--	--	--	--	-.032	--
--	--	--	--	--	--	--
--	--	--	-.022	--	--	--
--	--	--	--	-.052	--	--
--	--	--	--	--	-.162	--
--	--	--	--	--	--	--

ESTIMATES OF THETA(5) MATRIX

-.147	--	--	--	--	-.074	--
-.330	-.054	--	--	--	--	--
--	--	--	--	--	--	--
--	--	--	--	-.058	--	--
--	--	--	--	--	--	--
-.212	--	--	--	--	--	--
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South-4: Multivariate Model

$$\Phi_1 S1_t = \Theta_0 + (I - \theta_1 B - \theta_3 B^3 - \theta_5 B^5)\alpha_t$$

CONSTANT VECTOR		PHI(1) VECTOR CONSTRAINED		PHI(1) VECTOR UNCONSTRAINED	
0.009	(0.168)	-0.021	(0.037)	-0.561	(0.348)
0.016	(0.130)	-0.021	(0.037)	-0.539	(0.286)
-0.005	(0.159)	-0.021	(0.037)	-0.435	(0.340)
0.028	(0.159)	-0.021	(0.037)	-0.088	(0.356)
-0.033	(0.147)	-0.021	(0.037)	0.236	(0.328)
-0.002	(0.146)	-0.021	(0.037)	0.045	(0.321)
0.250	(0.058)	--	---	--	---

ESTIMATES OF THETA(1) MATRIX

-.084	--	--	--	--	--	--
--	-.060	--	--	--	--	--
--	--	-.103	--	--	--	--
--	--	--	-.096	--	--	--
--	--	--	--	-.098	--	--
--	--	--	--	--	--	--
--	--	--	--	--	--	--

ESTIMATES OF THETA(3) MATRIX

-.363	--	--	.020	--	--	--
--	--	--	--	--	--	--
-.390	--	.024	--	--	--	--
-.211	--	-.109	--	--	--	--
--	--	--	--	--	--	--
--	--	--	--	--	--	--
--	--	--	--	--	--	--

ESTIMATES OF THETA(5) MATRIX

.005	--	.009	--	-.177	.035	--
--	--	--	--	-.296	--	--
--	--	--	--	--	--	--
--	--	--	--	--	--	--
--	--	--	--	--	--	--
.046	--	--	--	-.350	.022	--
--	--	--	--	--	--	--

END

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4 OF 4