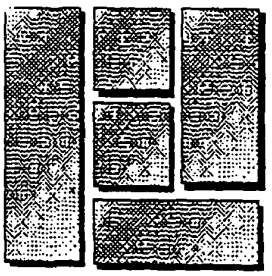
PATTERNS OF VIOLENT CRIME COMMITTED AGAINST JUVENILES IN THE DISTRICT OF COLUMBIA

Final Report



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Introduction

Growing violent juvenile crime in the early part of the decade has drawn attention to understanding the causes of juvenile crime and the methods of prevention. Congress has made funding for studies on violent juvenile crime a high priority. This research focuses on the District of Columbia, a city with a multitude of factors that come together to create one of the highest juvenile victimization rates in the country. There is no doubt that D.C.--being a highly concentrated urban area--is a special case when compared to states or counties. In 1992, 22 percent of all juveniles in the U.S. lived in poverty, compared to 25 percent in D.C. D.C. had the highest proportion of children living in single-parent families in 1990: 57 percent compared to number two ranking Mississippi at 33 percent. When compared to states, D.C. also has one of the highest dropout rates in the country (Underclass Data Base, The Urban Institute).

This report serves as a starting point for understanding the patterns and distribution of violent juvenile victimizations in the District of Columbia. Our goal is to describe the aggregate characteristics of violent juvenile victimizations in the hope of detecting patterns and trends that will add to our knowledge and be useful in aiding law enforcement, city planners, and neighborhood organizers in resource allocation.

For this report, violent crimes include the following: homicide, rape, robbery, and aggravated assault. Homicide includes murder (first and second degree), involuntary manslaughter and any other felony murder, including manslaughter (neglect). Rape includes all categories of rapes, statutory rape and attempted rapes. Robbery includes all robbery categories: purse snatching, carjacking, and attempted robberies. Aggravated assaults are the more serious assaults that include assaults with dangerous weapons or resulting in injury, and assault with intent to kill, rape, or rob.

The Data

Data were collected from two sources:

1. The Metropolitan Police Department, Office of Planning and Development database on victims of violent crimes. Data on non-fatal victimizations came from this database. Variables include age, race and sex of victim, time of day, day of week, and address, police district and police beat of victimization. 1993-1994.

2. The Metropolitan Police Department, Homicide Division. These data include variables such as: age, race, and sex of victim, motive, cause, if the decease was armed, day and time to approximate closest day and time of death of the victim. 1993-1995.

Because data collection began for this project in 1995, only victimization data for 1993 and 1994 were collected at that time. As the data were cleaned and analyzed, we discovered that

large amounts of data were missing the designation of age, and in place of an age, a value of zero was given. These zeros included both youth and adult victimizations. As we began to attack this problem, we realized that resource constraints for this project and in the District of Columbia would hinder us from getting 1995 and 1996 data after a large proportion of time was spent "cleaning" 1993 and 1994 data. The missing age problem for non-fatal victimizations is laid out in Table I-1. However, we were able to analyze *homicide* victimizations through *1995*, because data came from a separate database with very few missing data items.

A random sample of five percent of the cases was selected from the missing age cases for robbery and assault. The percent found to be juveniles ranged from 6 percent for robbery in 1993, to almost 14 percent for assault in 1994. For the table below, we estimated the number of cases that could be juveniles (last column). However, for this report, we used only the original cases not missing an age value, with the exception of the 24 cases of rape that were found to be juvenile victims.[1] These rape cases are included in the data used in this report.

Table I-1. Description of Missing Data Problem for Age of Victim

1993	Number of Juvenile Victimizations Not Missing Age Value	Number of Victimizations with Age=0	Five Percent Sample Taken	Percent Found to be Juveniles	Estimate of Missing Data That Could be Juveniles	
Rape	120	17	17 (100% sample)	35.3%	6*	126
Robbery	386	824	41	6%	49	435
Assault	1043	950	47	11.1%	104	1,147
1994	1549					
Rape	122	38	38 (100% sample)	47.4%	18*	140
Robbery	374	920	46	7%	64	438
Assault	902 / 1395	1541	77	13.7%	200	1,102

* These data are juveniles and have been added to our final sample.

[1]Data found to be juveniles for rape were taken from a 100 percent sample. The data found to be juveniles for robbery and assault contained other missing data items, and often did not specify the youth's age. Therefore these data were not included in the report.

Highlights from the Report

- During 1993 there were 1,555 non-fatal violent victimizations of youth. During 1994 there were 1,416 non-fatal violent victimizations of youth.

- Although rape increased by 11 percent from 1993 to 1994, the year-to-year decrease in total victimizations primarily reflects a 13.5 percent decrease in the much larger assault category.

- During 1993, 95 percent of youth victims of all non-fatal violent crimes were black--1,476 black youth, as compared to 79 white youth. In 1994, 94 percent of youth victims of non-fatal violent crimes were black--1,326 black youths as compared to 90 white youth. For assault, only 3 percent of the victims were white in 1993, and 3.8 percent in 1994. In 1993, 56.5 percent of the victims were boys. In 1994, 58.5 percent were boys.

- Nearly 40 percent of youth victimizations for which age was available occurred to 16- and 17-year olds. However, looking at rape victimizations, young women ages 13-15 are at the greatest risk of being raped. In 1994, girls ages 14 and 15 were almost twice as likely to report being raped as girls ages 16 and 17.

- For the three non-fatal violent crimes, tract 74.04 emerges as a high risk zone for juvenile violence--it is the highest risk tract for rape and assault of juveniles in 1993 and 1994, and in the highest risk category for juvenile robbery victimizations in 1993. This tract is the Douglas neighborhood of Southeast whose western border is St. Elizabeth's Hospital. This tract has a poverty rate of 41 percent, compared to 17 percent for D.C. as a whole. In addition, 86 percent of the households in this tract were single parent (female-headed) households.

- Juvenile homicide victimization accounted for 10 percent of all homicide victimizations between 1993 and 1995. During this period, sixteen (12.5 percent) of the juvenile victims were female and all but one victim were black.

- Ten percent of juvenile homicide victims were eleven years of age or younger, and nearly 69 percent were ages 16 or 17. Approximately 85 percent of these victims were murdered by a firearm and 7 percent were stabbed.

- In 1993, almost half of all juvenile homicide victimizations occurred between the hours of 7 a.m. and 5 p.m.: only 22 percent of victimizations occurred between the hours of 10 p.m. and 2 a.m.

- Victimization patterns for all violent crimes during the school year were different from victimization patterns during the summer break. During the school year, victimizations peaked at 3 p.m., whereas during the summer, victimizations were highest at 10 p.m. and peaked again at 1 a.m.

- The locations of victimizations showed a clear pattern of association with the location of schools. That is, a disproportionate share of juvenile victimizations occurred in, near or around schools.

- In selected high violence Census tracts, we found evidence that fear of walking alone in certain blockfaces was weakly correlated with previous victimization levels, but not with indicators of physical disorder on those blockfaces.

This report is organized into four chapters. Chapter 1 discusses the overall incidence of non-fatal violence committed against juveniles and describes patterns at the Census tract level. Chapter 2 reports on the incidence of juvenile homicides. Chapter 3 takes a more in depth look at victimizations during the times youth are commuting to and from school and the time youth are in school; and Chapter 4 outlines and provides a brief summary of an exploratory analysis of block physical disorder indicators and victimizations at the block face level for three high crime areas (Census tracts) within D.C.

Chapter 1

Non-Fatal Victimizations

The following data on victimizations portray D.C. youth — age 17 and under — as victims of non-fatal violent crimes. Overall, during 1993 there were 1,555 non-fatal violent victimizations to youth. During 1994 there were 1,416 violent victimizations. The breakdown is shown in Table 1-1 along with the percent change in victimizations from 1993 to 1994. The category of violent crime with the greatest percent change was rape, increasing by 11 percent from 1993 to 1994. Figure 1-1 highlights that although rape increased by 11 percent, the overall year-to-year trend primarily reflects a 13.5 percent decrease in the much larger assault category.

Table 1-1. Youth Victimizations by Violent Crime, 1993, 1994

	1993		1994		
	N	Rate per 1000 Juveniles	N	Rate per 1000 Juveniles	Percent Change
Rape	126	1.1	140	1.2	11.1
Robbery	386	3.31	374	3.21	-3.1
Assault	1043	8.9	902	7.73	-13.5
Total	**1555**	**13.33**	**1416**	**12.14**	**-8.9**

1 What was the national trend

why not include estimates?

Figure 1-1. Non-Fatal Youth Victimizations, 1993, 1994

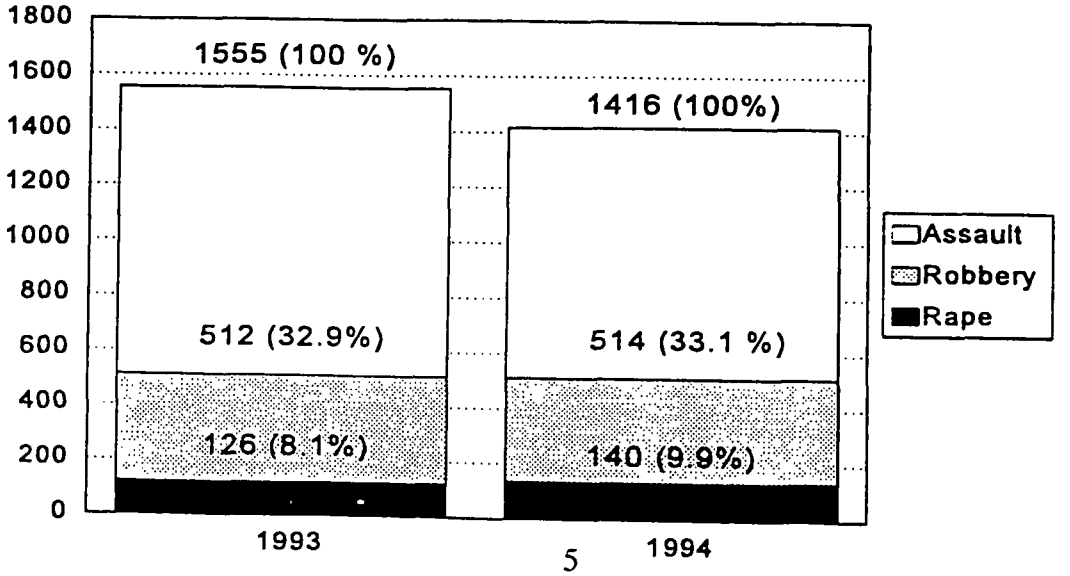


Table 1-2 shows the breakdown of non-fatal violent victimizations by race and sex. During 1993, 95 percent of youth victims were black--1,476 black youth, as compared to 79 white youth. In 1994, 94 percent of youth victims were black--1,326 black youths as compared to 90 white youth. For assault, only 3 percent of the victims were white in 1993 and 3.8 percent in 1994. In 1993, 878 young boys (56.5 percent) were victims of a non-fatal violent crime, compared to 677 girls (43.5 percent). In 1994, 829 victimizations happened to boys (58.5 percent), 587 to girls (41.5 percent).

% white & black youth in DC these yrs?

Table 1-2. Youth Victimizations by Crime, Race, and Sex of Victim

	1993				1994			
	Race		Sex		Race		Sex	
	Black	White	Male	Female	Black	White	Male	Female
Rape	117	9	0	126	123	17	5	135
Robbery	348	38	292	94	335	39	309	65
Assault	1011	32	586	457	868	34	515	387
Total	**1476**	**79**	**878**	**677**	**1326**	**90**	**829**	**587**

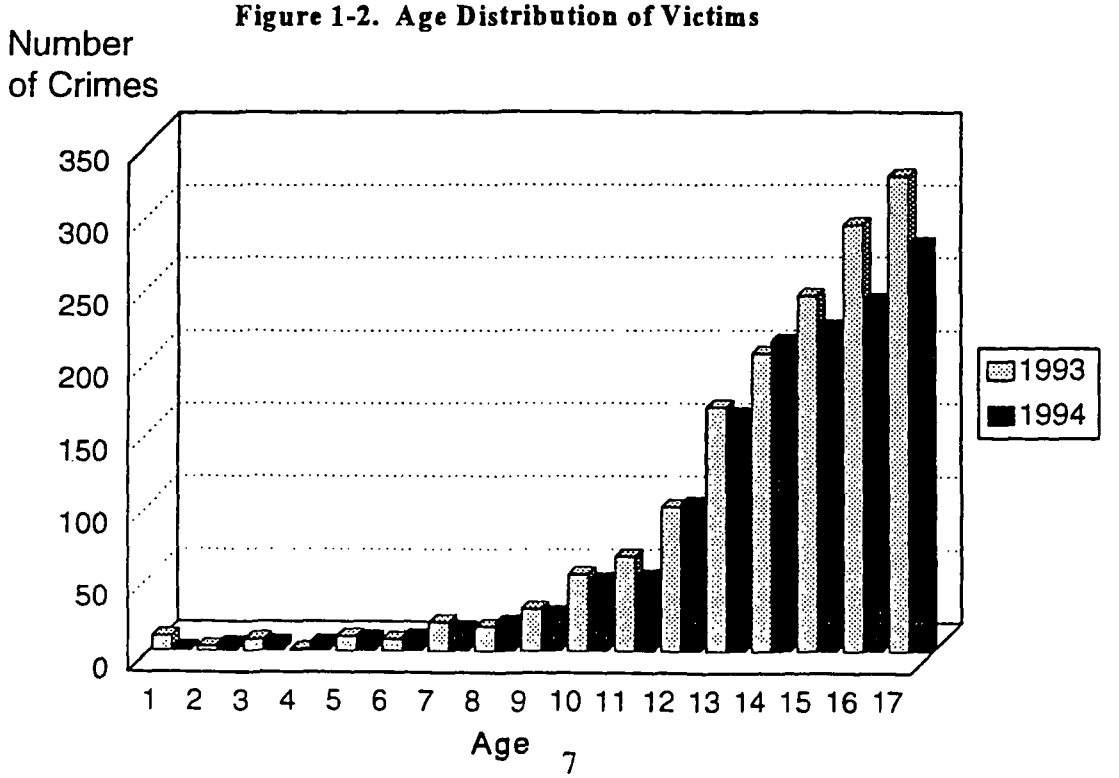
Table 1-3 shows the age distribution by type of non-fatal violent crime. Keeping in mind that the cells for robbery and assault do not include the cases missing data on age, if one assumes that the missing ages are distributed like the recorded ones, the table would show that the risk of victimization for assault increases steadily as a youth gets older. Nearly 40 percent of youth victimizations for which age was available occurred to 16- and 17-year olds. However, looking at rape victimizations, young women ages 13-15 are at the greatest risk of being raped. In 1994, girls ages 14 and 15 were almost twice as likely to report being raped as girls ages 16 and 17. Focusing on the youth over age 11--the age group of youth who attend middle school, junior high school, or high school--there were 1,331 non-fatal violent victimizations in 1993 (85.6 percent), and 1,216 (85.9 percent) in 1994. Figure 1-2 displays the age distribution of non-fatal youth victimizations for the three crimes combined.

occurred among youth overall?

Table 1-3. Age Distribution of Youth Victims, by Crime, 1993, 1994

	1993			1994		
Age	Rape	Robbery	Assault	Rape	Robbery	Assault
1	0	2	8	0	0	2
2	0	0	3	0	0	5
3	0	1	7	1	0	5
4	0	0	1	0	1	5
5	1	0	9	1	2	6
6	2	3	3	3	0	7
7	2	1	17	3	2	11
8	3	3	11	2	4	14
9	0	10	19	2	13	11
10	3	20	30	2	24	23
11	7	18	40	1	25	25
12	11	34	54	13	25	63
13	28	39	100	20	45	97
14	22	50	132	34	58	120
15	21	60	162	29	60	133
16	14	57	221	15	53	172
17	12	88	226	14	62	203
Total	**126**	**386**	**1043**	**140**	**374**	**902**

Figure 1-2. Age Distribution of Victims



Census Tract-Level Analysis of Victimization

Tables 1-4 through 1-6 show the distribution of victimizations among the Census tracts[2] for the three non-fatal violent crimes--rape, robbery, and assault--for 1993 and 1994.[3] Maps, corresponding to the tables, can be found at the end of this chapter. The maps provide a clearer picture of the tract changes from 1993 to 1994. Population figures were based on 1990 Census Bureau data. The total population of youth under 18 years of age in 1990 was 116,624. We did not use 1995 updated numbers because 1995 population figures were not available by Census tract.

The tract distributions for rape victimizations (Table 1-4) show that the tracts with the highest rape victimization (over four rape victimizations per tract) housed roughly 1 percent of the juvenile population (one tract) in 1993 and 3 percent in 1994 (two tracts), and they accounted for shares of victimization that were about twice as large. Tract 74.04 showed up as the highest risk rape victimization tract in both 1993 and 1994. It had seven rapes in 1993, and five in 1994. In 1994, tract 98.06 joined tract 74.04 in the highest risk category with five rapes. Tract 98.06 is in the Washington Highland neighborhood near South Capitol Street, SE, and in 1990, had 2,102 juveniles and a total population of 5,921. (See Maps 1-1a and 1-1b for a display of rape victimizations by tract.)

The tract distributions for robbery victimizations (Table 1-5) show three tracts in the highest category in 1993 with eleven or more robberies each year, and two tracts in that category for 1994. Tract 76.01 is represented as having the most robberies in 1993 and again with 12 in 1994. This tract is in Anacostia, bordered by the Anacostia River on the north, S Street and part of Good Hope Road on the southern border. This tract also includes Anacostia High School. The tract houses a juvenile population of almost 1,300. Tract 78.07 is also a high-risk robbery tract, with 13 robberies in 1994. This tract is in Northeast and borders Prince Georges County. Tract 78.04, also in the Northeast quadrant, and tract 74.04, mentioned above as a high-risk rape tract, were in the high-risk category for 1993. (See Maps 1-2a and 1-2b for a display of robbery victimizations by tract.)

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[2]Census tract boundaries are used as proxies for neighborhoods. Tracts are defined with natural boundaries such as highways and waterways in mind, and are intended to encompass a relatively equal number of residents.

[3]All cases, with the exception of one robbery in 1993--recorded as 000 Water Street--were geocoded into Census tracts. The number (n) of each of the violent victimizations is higher for the Census tract analysis in this section and the discussion of the tract-level analysis of homicide victimization in Chapter 2 because there were addresses coded as the intersections of two streets that actually sit on the border of two (or, in some cases, more than two) Census tracts. We chose to count these cases as one crime for each tract, as opposed to dividing the crime up among shared tracts (e.g., giving the score of .5 to two tracts). During 1993, 41 addresses of victimizations were geocoded into more than one Census tract. During 1994, 44 addresses of victimizations were geocoded into more than one Census tract. However, we do not believe that this small amount of double-counting distorts the geographic distributions.

Table 1-6 shows the distribution of assault victimizations. One tract--tract 74.04--falls in the highest category with 43 assaults in 1993 and 31 in 1994. Even allowing for double-counted assaults on the tract boundary each year, this tract had, by far, the largest number of assaults per year, with the next highest risk tract in 1993 recording only 26 assaults per year, and 23 assaults per year in 1994. (The corresponding maps are Maps 1-3a and 1-3b.)

Looking at the three categories of non-fatal violent crimes, tract 74.04 emerges as a hotbed of juvenile violence--it is the highest risk tract for rape and assault of juveniles in 1993 and 1994, and in the highest risk category for juvenile robbery victimizations in 1993. This is the location of the Stanton Terrace Crew, one of the 12 largest gangs in D.C. that police officers have identified in recent years (and was reported on in the Washington Post in March, 1997). Police officials have admitted that limited resources have prevented them from targeting gangs. This tract of 4,100 residents in Southeast had a 1990 poverty rate of 41 percent (mean poverty rate for all D.C. is 17 percent) and an unemployment rate of 17 percent (D.C. mean is 7.2 percent); 86 percent of the households were female-headed households (compared to a D.C. mean of 54 percent), and only one-half of the people older than 24 years old in the tract completed high school. In addition, the percentage of 16-19 year-olds neither enrolled in, nor graduated from high school, was 25 percent. Another striking characteristic is that the percentage of owner-occupied housing is less than ten percent, compared to 39 percent for D.C. as a whole. (A discussion of Census characteristics for D.C. neighborhoods can be found in Hayes and Turner, "Patterns of High-Poverty Neighborhoods in the Washington Metropolitan Region," The Urban Institute, in progress.)

Table 1-4. Tract Distribution of Juvenile Victimizations (Rape), 1993, 1994

Juvenile Victims of Rape Per Tract	Number of Tracts (n=192)	Percent of Juvenile Population	Cumulative Percent of Juvenile Population	Percent of Total Juvenile Rape Victimizations	Cumulative Percent of Juvenile Rape Victimizations
1993					
5+	1	1.3%	1.3%	5.5%	5.5%
3-4	7	6.7	8.0	18.1	23.6
2	24	19.0	27.0	37.8	61.4
1	49	31.0	58.0	38.6	100
0	111	41.9	100	--	--
1994					
5+	2	3.0%	3.0%	7%	7%
3-4	13	11.1	14.1	31.4	38.4
2	20	14.4	28.5	28.6	67.0
1	46	27.7	56.2	33.0	100
0	111	43.8	100	--	--

Not very useful because of missing data.

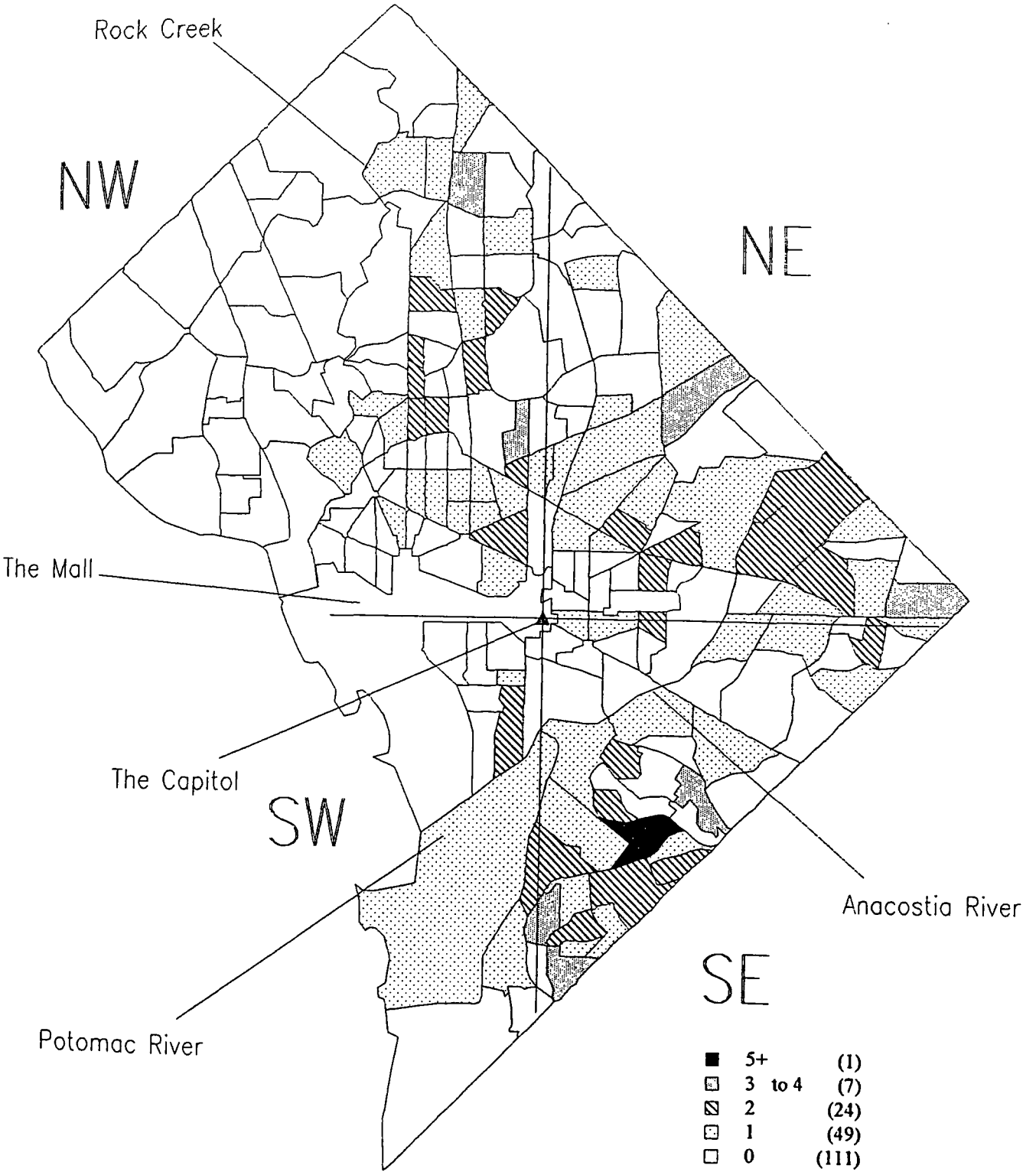
Table 1-5. Tract Distribution of Juvenile Victimizations (Robbery), 1993, 1994

Juvenile Victims of Robbery per Tract	Number of Tracts (n=192)	Percent of Juvenile Population	Cumulative Percent of Juvenile Population	Percent of Total Juvenile Robbery Victimizations	Cumulative Percent of Juvenile Robbery Victimizations
1993					
11+	3	3.3%	3.3%	9.0%	9.0%
6-10	11	6.3	9.6	18.7	27.7
1-5	127	71.2	80.8	72.3	100
0	51	19.2	100	--	--
1994					
11+	2	1.7%	1.7%	6.0%	6.0%
6-10	4	11.3	12.0	25.0	31.0
1-5	121	67.1	79.1	69.0	100
0	55	20.0	100	--	--

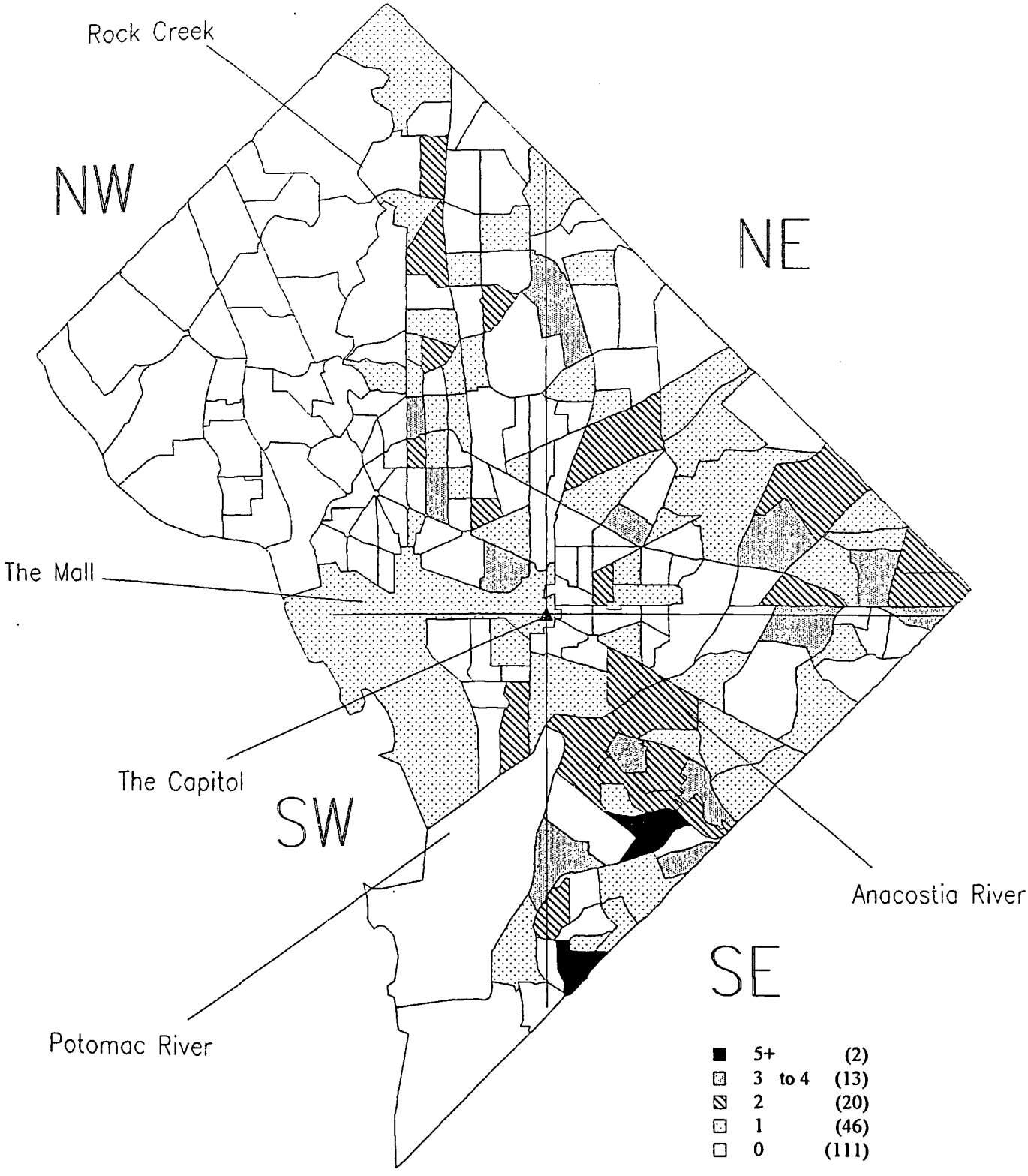
Table 1-6. Tract Distribution of Juvenile Victimizations (Assault), 1993, 1994

Juvenile Victims of Assault per Tract	Number of Tracts (n=192)	Percent of Juvenile Population	Cumulative Percent of Juvenile Population	Percent of Total juvenile Assault Victimizations	Cumulative Percent of Juvenile Assault Victimizations
1993					
30+	1	1.3%	1.3%	4.0%	4.0%
20-29	4	4.4	5.7	8.5	12.5
10-19	37	31.6	37.3	44.8	57.3
1-9	104	48.9	86.2	42.7	100
0	46	13.8	100	--	--
1994					
30+	1	1.3%	1.3%	3.3%	3.3%
20-29	3	3.4	4.7	7.2	10.5
10-19	30	25.6	30.3	41.5	52.0
1-9	110	55.1	85.4	48.0	100
0	48	14.6	100	--	--

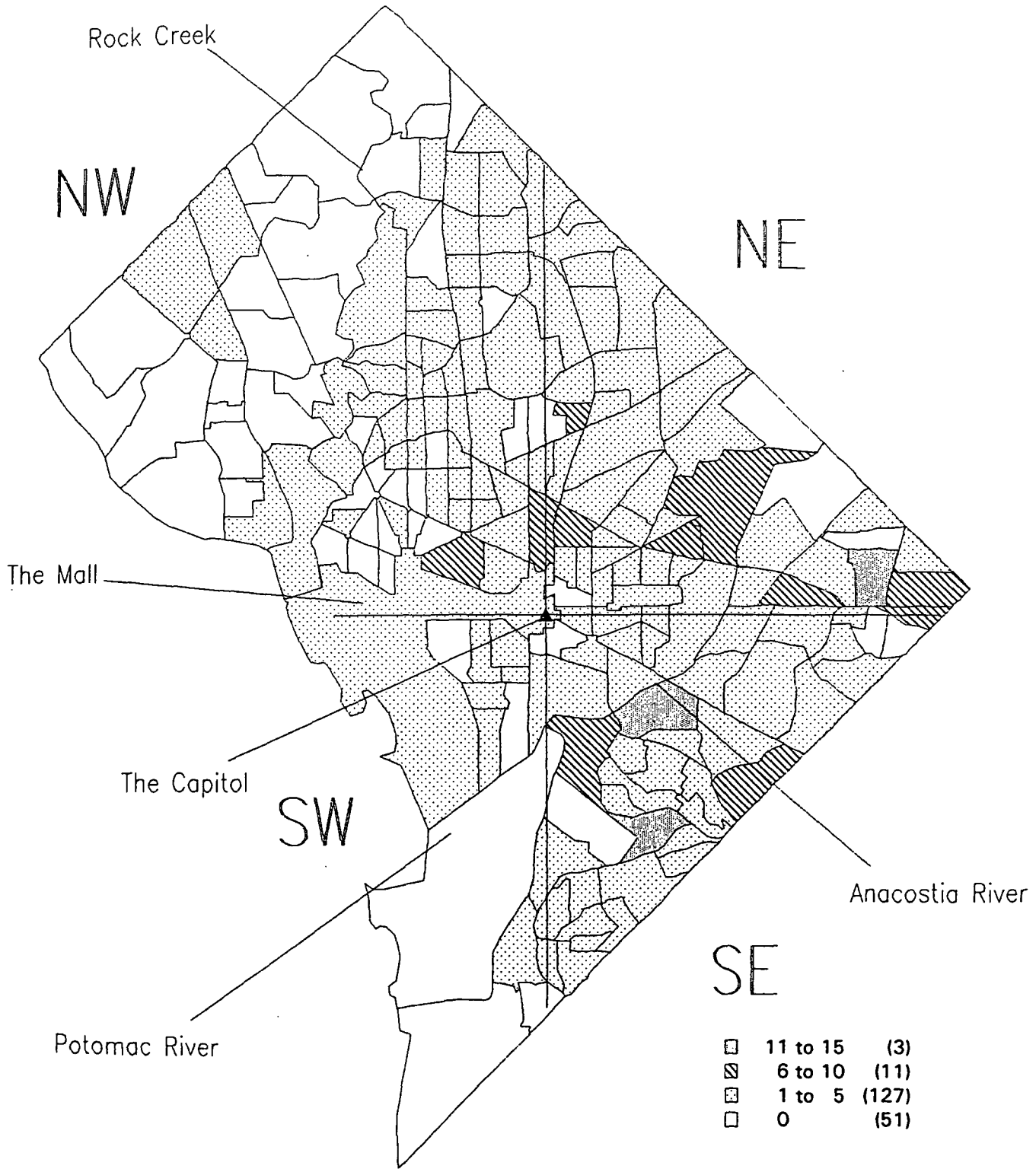
Map 1-1a. Tract Distribution of Juvenile Rape Victimizations, 1993



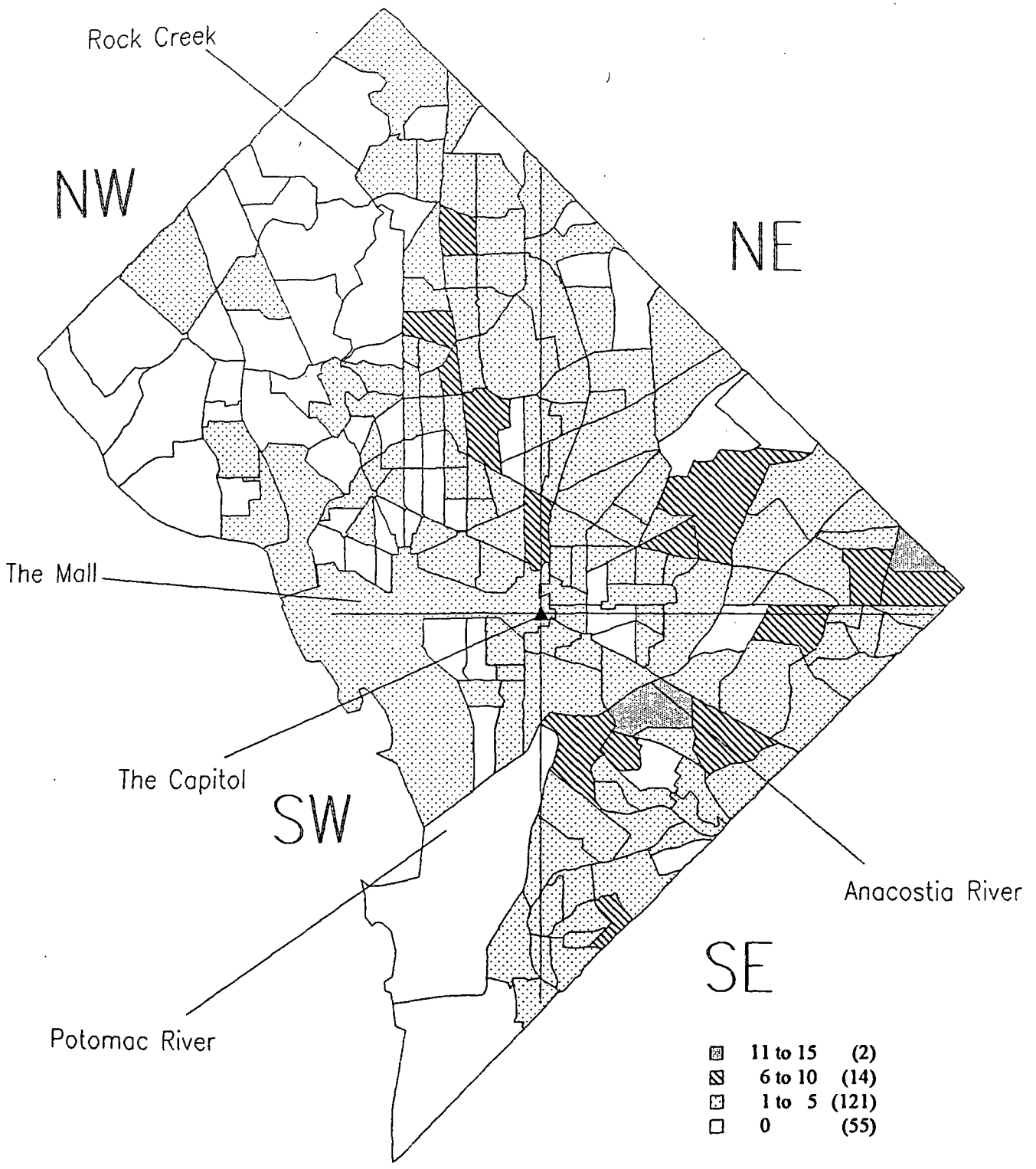
Map 1-1b. Tract Distribution of Juvenile Rape Victimizations, 1994



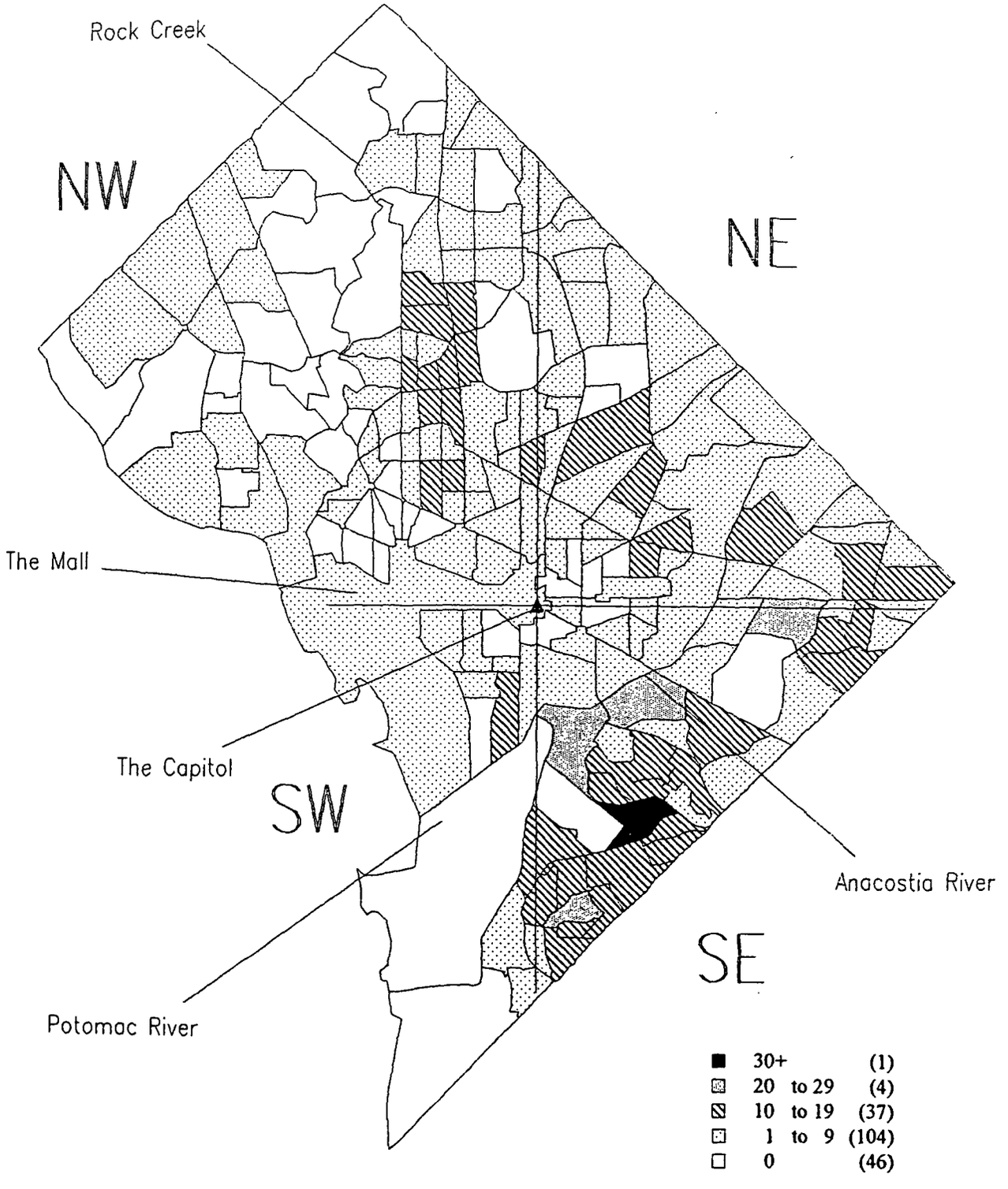
Map 1-2a. Tract Distribution of Juvenile Robbery Victimizations, 1993



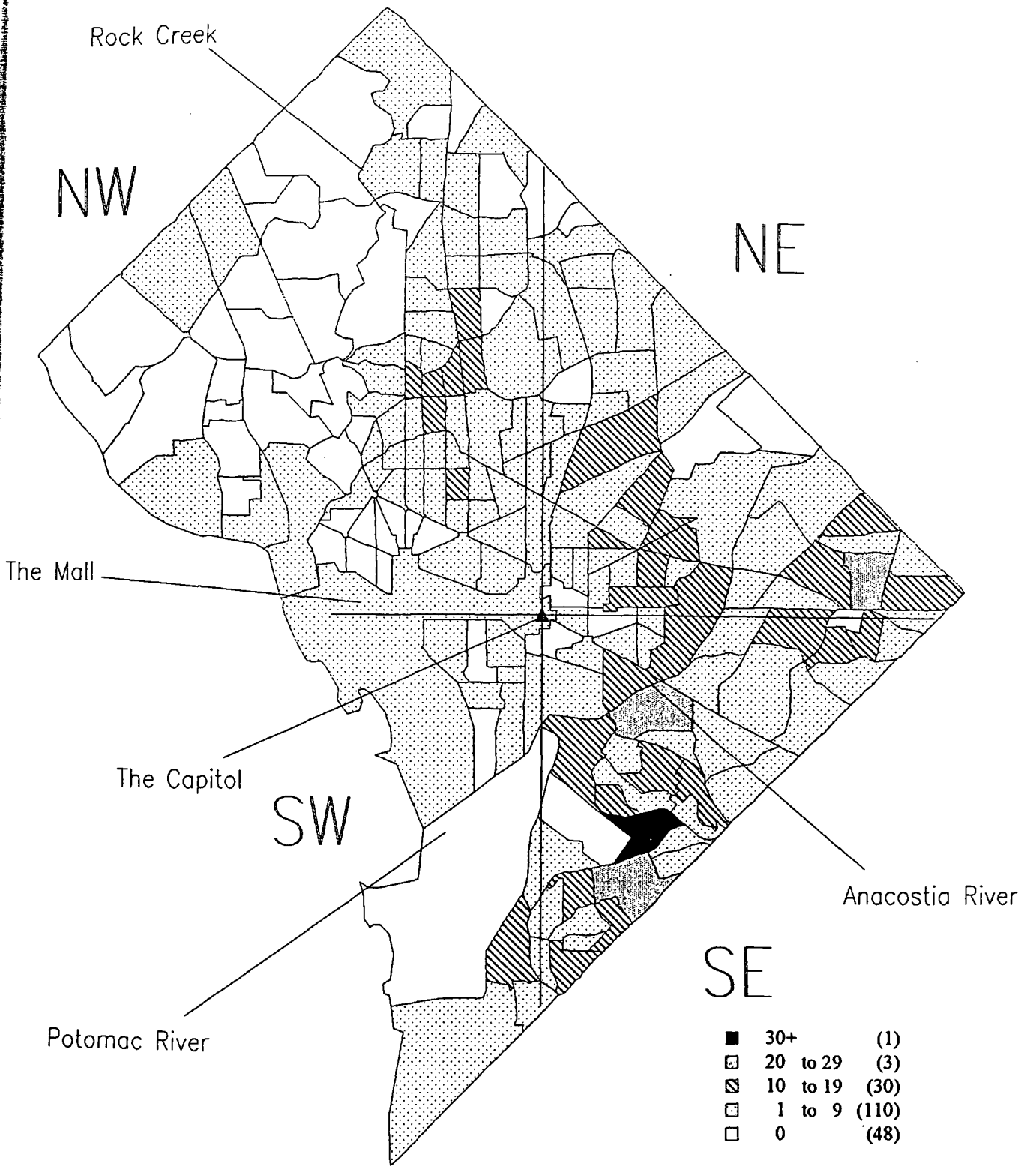
Map 1-2b. Tract Distribution of Juvenile Robbery Victimizations, 1994



Map 1-3a. Tract Distribution of Juvenile Assault Victimizations, 1993



Map 1-3b. Tract Distribution of Juvenile Assault Victimizations, 1994



Chapter 2

Homicide Victimizations

From January, 1993 to December, 1995, there were 128 homicides of youth under age 18 (as recorded by the Homicide Division of the Metropolitan Police Department). Juvenile homicide victimization accounted for 10 percent of all homicide victimizations between 1993 and 1995 (Table 2-1). Although the number of juvenile victims decreased over the three-year period, the percentage of victims that were juveniles remained nearly 11 percent. During this period, sixteen (12.5 percent) of the juvenile victims were female and all but one victim were black (Table 2-2).[4] Ten percent of these victims were eleven years of age or younger, and nearly 69 percent were ages 16 and 17 (Table 2-3).[5] Approximately 85 percent of juvenile homicide victims were murdered by a firearm of some sort, 7 percent were stabbed, and the remaining 8 percent were killed by some other means (see Figure 2-1).[6] Data on motive of homicide contained 30 percent missing data and therefore were not analyzed.[7]

Table 2-1. Juvenile Homicide Victimizations As a Percentage of Total Homicides

	1993	1994	1995	Total
Adult	416	379	341	1136
Juvenile	51 (11%)	38 (9%)	39 (10%)	128 (10%)
Total	**467**	**417**	**380**	**1264**

[4]The only other juvenile victim was Hispanic.

[5]Two cases were not used to derive this percentage. The first case was listed in the juvenile database but after recalculating age using date of birth, we identified one case with age=18. The second case was a known juvenile, but no age information was listed.

[6]A report issued by the Office of Juvenile Justice and Delinquency Prevention (OJJDP), *Juvenile Offenders and Victims: 1996 Update on Violence*, showed that between 1993 and 1994 roughly 65 percent of juvenile murder victims were killed with a firearm of some sort.

[7]The reliability of the data on motive are in question. It is possible that decision rules for determining motive changed over time within the department. Changes in decision rules may be partially responsible for the largely different number of cases in the "unknown" motive category over the three years. The "unknown" category ranges from 20 percent of the homicides in 1993 to almost 40 percent in 1995. In addition, there is no variable or value for gang-related homicides. The state of the homicide data is unfortunate because information on what types of homicides are more and less common is essential to prevention and investigation.

Table 2-2. Juvenile Homicide Victimizations by Sex and Race of Victim

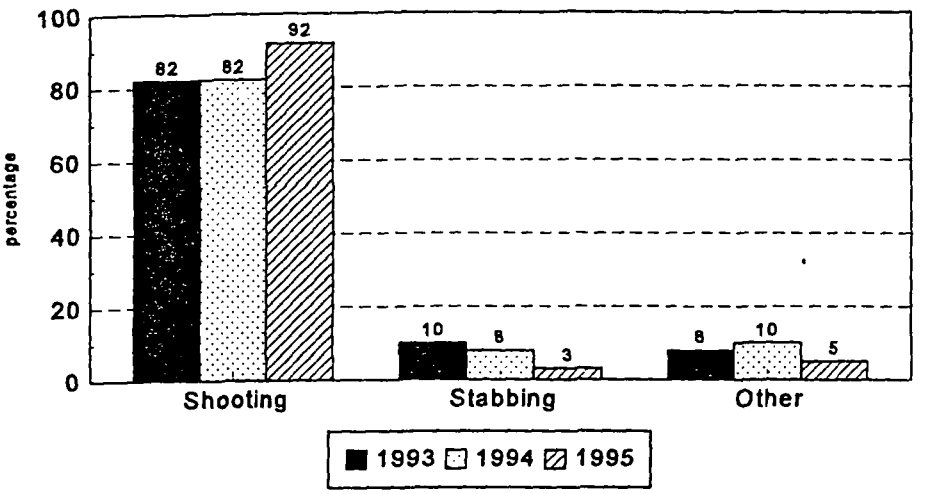
	1993		1994		1995	
	Black	White	Black	White	Black	White
Female	7 (14%)	0	4 (11%)	0	5 (13%)	0
Male	44	0	34	0	33	1[3]
Total	**51**	**0**	**38**	**0**	**38**	**1**

Table 2-3. Juvenile Homicide Victimizations by Age of Victim

Age	1993[1]	1994	1995	Total
<12	8	3	2	13
12	0	1	0	1
13	1	3	0	4
14	3	1	5	9
15	3	3	6	12
16	11	9	9	29
17	24	17	17	59
Total	**51**	**37[1]**	**39**	**127[1]**

[1]One victim was a known juvenile, but the exact age was unknown.

Figure 2-1. Juvenile Homicide Victimizations
by Cause of Death, 1993-1995



Seventy-one of the city's 192 Census tracts experienced at least one juvenile homicide victimization between 1993 and 1995. Of those Census tracts with one known homicide event, eleven averaged at least one victimization a year. Contrary to popular belief, a mixture of dangerous and safe areas surrounded the Census tracts with the highest three-year averages. While some areas surrounding these Census tracts had experienced similar patterns of youth violence, many had no juvenile homicide victimization recorded.

Table 2-4 shows the tract distributions for homicide (also see Maps 2-1b, 2-1b and 2-1c at the end of this chapter). Noticeable is that the top three categories for homicides per tract house 7.6 percent of the juvenile population, but these tracts were the sites of 28 percent of the juvenile homicide victimizations during 1993. During 1994, the number of tracts with no homicides increased from 151 to 158. Only in 1993 did any tract have more than 3 homicides per tract. This tract is 74.01, bordered by the Anacostia River on the north, St. Elizabeth's Hospital on the south, and Suitland Parkway on the east. The tract contains the Barry Farms dwellings.

Table 2-4. Tract Distribution of Juvenile Homicide Victimizations, 1993, 1994, 1995

Juvenile victims of homicide per tract	Number of tracts (n=192)	Percent of Juvenile population	Cumulative percent of juvenile population	Percent of total juvenile homicide victimizations	Cumulative percent of juvenile homicide victimizations
1993					
4	1	1%	1%	7.8%	7.8%
3	0	0	1	0	7.8
2	7	7.6	8.6	27.5	35.3
1	33	22.9	31.5	64.7	100
0	151	68.5	100	--	--
1994					
4	0	0	0	0	0
3	0	0	0	0	0
2	5	3.2	3.2%	74.4	74.4
1	29	21.7	24.9	25.6	100
0	158	75.1	100	--	--
1995					
4	0	0	0	0	0
3	2	1.8%	1.8%	.15	.15
2	5	3.3	5.1	.25	.40
1	24	18.8	23.9	.60	100
0	161	76.1	100	--	--

In the following sections, we investigate spatial patterns of juvenile homicide victimizations. The spatial analysis will only focus on the location of high victimization Census tracts. We will also begin a preliminary discussion of temporal patterns[8]--a more in-depth temporal analysis of all juvenile victimizations (including a special investigation of homicide) is presented in Chapter 3.

Juvenile Homicide Victimization, 1993

In 1993, there were 51 official reports of juvenile homicide victimization. Of these victims, seven (14 percent) were female; all victims were black; 16 percent were eleven years of age or younger, and 70 percent were age 16-17. As shown earlier in Figure 2-1, 82 percent of the

[8]Analysis of temporal patterns uses the "time of day" of victimization and "day of "week" of victimization variables. For the non-fatal violent crimes, these variables are very precise. For homicide, however, the values for these variables represent the homicide officers' best estimation of time of death and day of week of death as recorded on the homicide report, not the report of the initial officer called to the scene.

victims were killed by a firearm, 10 percent were stabbed, and the remaining were killed by some other means.

Forty-one Census tracts had at least one reported homicide of a juvenile (see Map #). Of these Census tracts, only one had four victimizations and seven had two victimizations. What is particularly interesting about tract 74.01 with four victimizations is that it was surrounded by several Census tracts with two victimizations each. This cluster spanned several neighborhoods that included Anacostia, Washington Highlands, Congress Heights, and Buena Vista--Cluster A. These communities accounted for nearly one-third of all juvenile homicide victimizations.

Perhaps surprisingly, 47 percent of victimizations occurred between the hours of 7 a.m. and 5 p.m.; only 22 percent of victimizations occurred between the hours of 10 p.m. and 2 a.m (see Table 2-5). A similar finding was reported by OJJDP in their 1996 *Update on Violence*. Although the OJJDP report relied on data for all juvenile victimizations, they argued that roughly 50 percent of all juvenile violent victimizations reported to the FBI between 1991 and 1992 occurred during the 7 a.m.-5 p.m. period; only 20 percent of all juvenile violent victimizations occurred during 10 p.m.-2 a.m. period. This temporal pattern will be explored further in the next chapter.

Table 2-5. Juvenile Homicide Victimizations: Daytime versus Nighttime

	1993		1994	
	Number (n=51)	Percent	Number (n=38)	Percent
7a.m.-5 p.m.	24	47%	13	34%
10 p.m.-2 a.m.	11	22	10	26
All other times	16	31	15	40

Juvenile Homicide Victimization, 1994

In 1994, there were thirty-eight official reports of juvenile homicide victimization. Of these victims, four (11 percent) were female; all victims were black; 8 percent were eleven years of age or younger, and 68 percent were ages 16-17. As shown in Figure 2-1, 82 percent of the victims were killed by a firearm, 8 percent were stabbed, and the remaining 10 percent were killed by some other means.

Juvenile homicides occurred in thirty-four Census tracts in 1994. Areas with the highest juvenile victimization were not the same year-after-year. For example, Cluster A--the cluster of neighborhoods in 1993--only accounted for one-sixth of all juvenile victimizations in 1994. There

was a shift north and east between 1993 and 1994 that produced a high number of victimizations in a new cluster of neighborhoods (Cluster B). Cluster B, which includes Marshall Heights, accounted for one-third of victimizations in 1994. This was mainly the result of several Census tracts in this cluster that doubled their victimization counts--from 1 in 1993 to 2 in 1994.

The temporal pattern of these data was roughly similar to the pattern observed in 1993. The 1994 pattern showed that 34 percent of all juvenile homicide victimizations occurred between the hours of 7 a.m. and 5 p.m.; 26 percent of all such victimizations occurred during the 10 p.m.-2 a.m. period, as compared to 22 percent in 1993 (see Table 2-5). In 1994 a greater percentage of crimes occurred between 5 p.m. and 10 p.m. than did in 1993 (*all other times* category).

Juvenile Homicide Victimization, 1995[9]

In 1995, there were thirty-nine official reports of juvenile homicide victimization. Of these victims, five (13 percent) were female; all but one was black; 5 percent were eleven years of age or younger, and 67 percent were age 16-17. As shown in Figure 2-1, 92 percent of the victims were killed by a firearm, 3 percent were stabbed, and 5 percent were killed by some other means.

Juvenile homicide victimization occurred in thirty-one Census tracts. Unlike the previous two years, the victimization patterns clustered in four distinct areas. These clusters spanned several neighborhoods, but each cluster only encompassed those neighborhoods have had at least one homicide in each of the three years. Each of the neighborhood groupings accounted for approximately one-fourth of the victimizations in 1995. Just two clusters--A and B--together accounted for approximately one-half of the victimizations. These places may have had characteristics that produced environments ripe with opportunity to commit violent acts. Conversely, Cluster C, which includes the Shaw neighborhood, and Cluster D, which includes the H Street Corridor, were neighborhoods with no previous record of longstanding violent patterns.

Summary

The data showed that although the absolute number of juvenile homicide victims decreased between 1993 and 1995 (31 percent), the percentage of all homicide victims that were juvenile remained relatively stable. Juvenile victims accounted for 10 percent of all homicide victims over the three-year period (11 percent in 1993, 9 percent in 1994, and 10 percent in 1995). Of these juvenile victims, the percent that were females and the percent that were age 16-17 remained stable as well. Female victims accounted for 13 percent of all juvenile victims between 1993 and 1995 (14 percent in 1993, 11 percent in 1994, and 13 percent in 1995). Victims ages16-17 accounted for 69 percent of all juvenile victims.[10]

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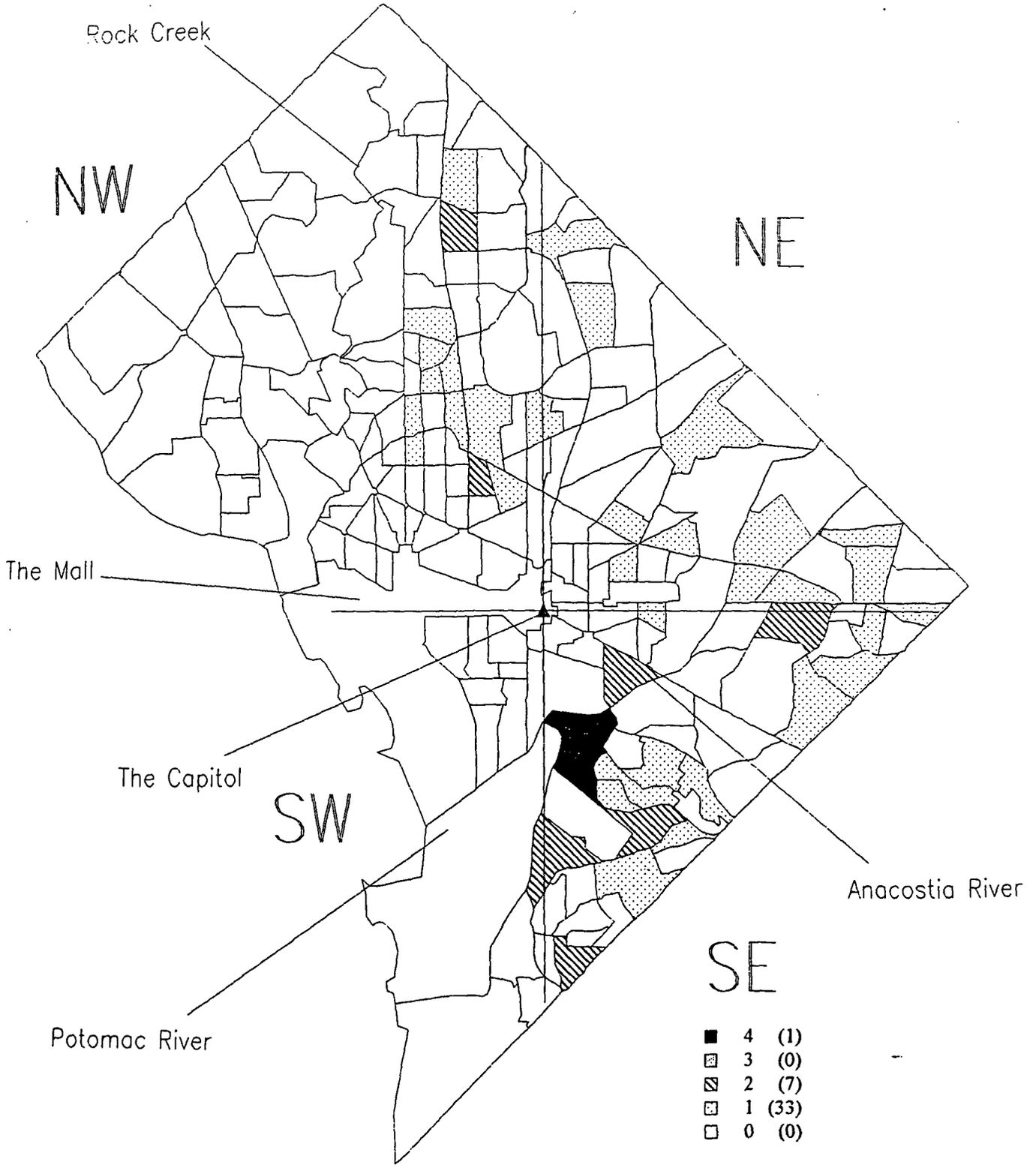
[9]The 1995 data had 69 percent of all cases with time=0. Therefore we did not perform a temporal analysis of these data.

[10]The OJJDP report indicated that in 1994 53% of juvenile victims were age 15-17. Thus, our 16-17 age category is on average 16 percentage points higher and we include one less category of age.

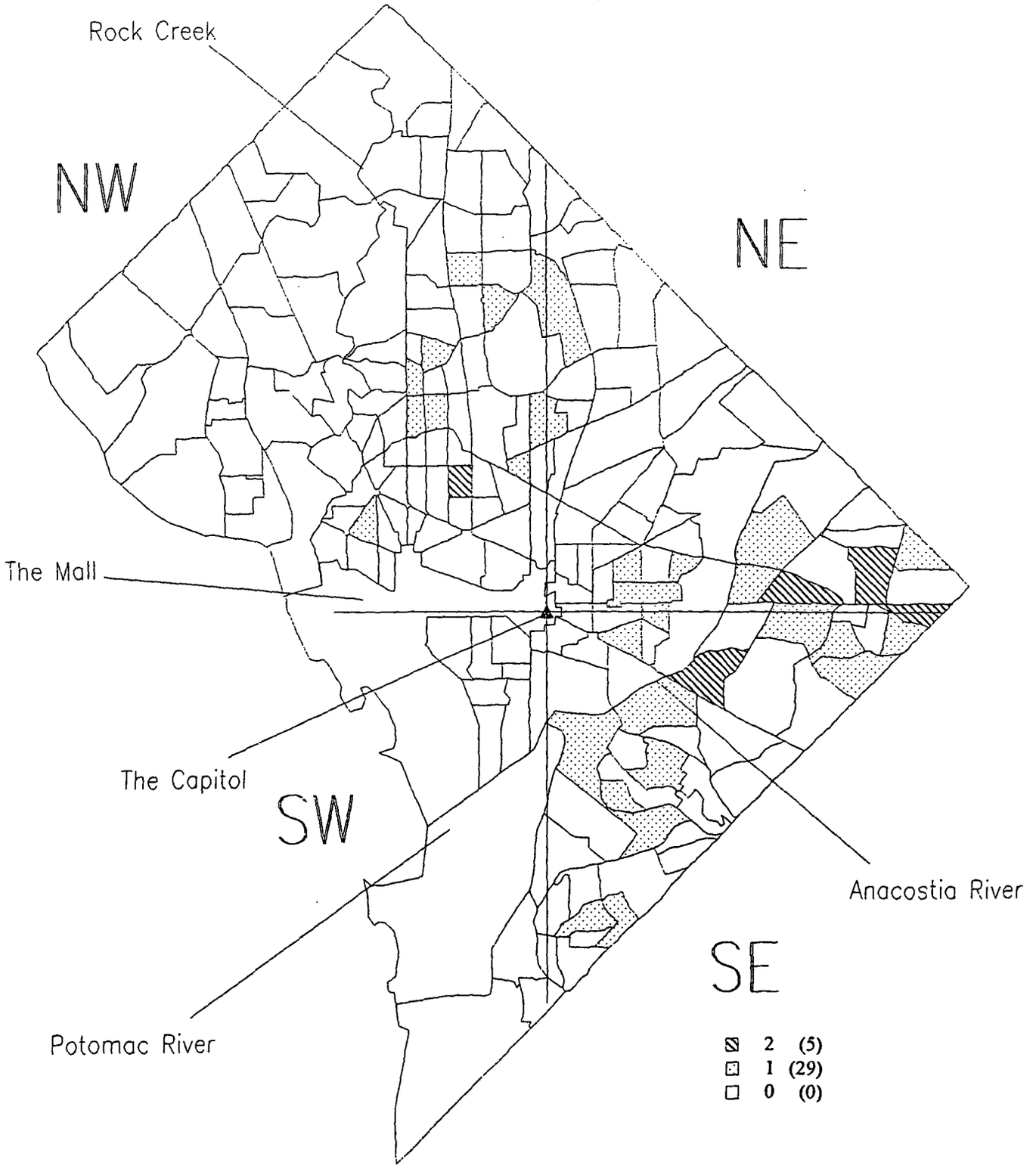
The maps (2-1a,b,c) enable us to identify Census tracts, in general, and neighborhoods, more specifically, that have had longstanding patterns of homicidal violence. While many Census tracts experienced a homicide victimization in one of the three years, only 11 Census tracts averaged at least one homicide victimization in each year.

Finally, the preliminary analysis of temporal pattern indicated that juveniles were more likely to be murdered during the day. In the following chapter, we will investigate this temporal pattern more closely to determine whether this is an artifact of the way we categorized the day and night periods.

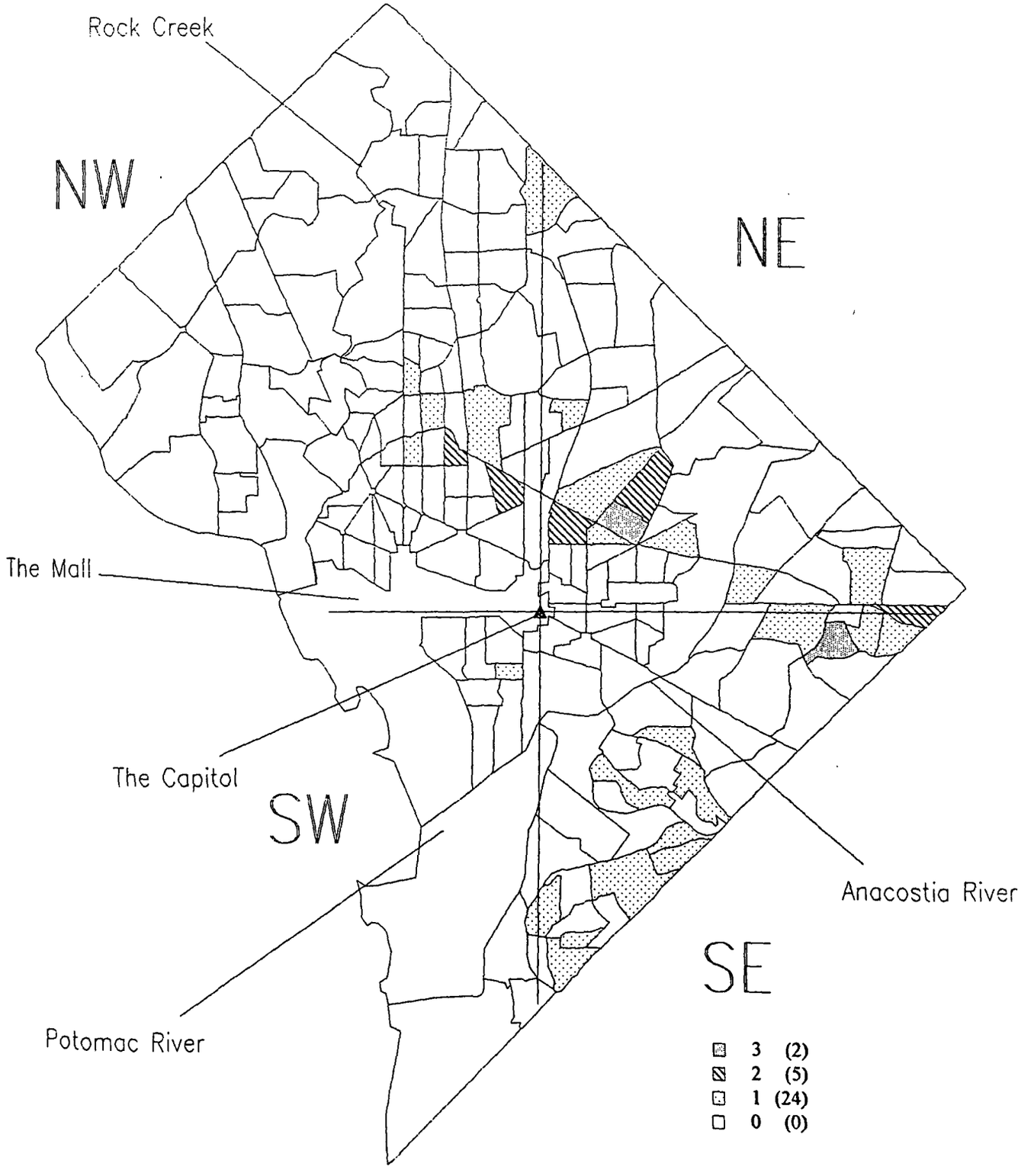
Map 2-1a. Tract Distribution of Juvenile Homicide Victimizations, 1993



Map 2-1b. Tract Distribution of Juvenile Homicide Victimizations, 1994



Map 2-1c. Tract Distribution of Juvenile Homicide Victimizations, 1995



Chapter 3

Analysis of School Commute and School Session Violent Victimizations

In a previous report[11], we began to investigate the temporal dynamics of juvenile victimization. First, we constructed a time variable that closely corresponded to the routine and lifestyles of the "typical" juvenile. This approach draws from routine activity theory that posits that an individual's risk of crime is related to common day activities that increase or reduce exposure to motivated criminal offenders (Cohen and Felson, 1979; Felson, 1994; Sherman et al,. 1989). The categories we derived were: (1) **school commute** (Monday through Friday 7 a.m.-9 a.m. and 3 p.m.-5 p.m.); (2) **school session** (Monday through Friday 9 a.m.-3 p.m.); (3) **weekday night** (Monday through Thursday 5 p.m.-7 a.m.); (4) **weekend night** (Friday 5 p.m.-3 a.m. [Saturday], Saturday 5 p.m.-3 a.m. [Sunday], and Sunday 5 p.m.-7 a.m. [Monday]; and (5) **weekend day** (Saturday and Sunday 3 a.m.-5 p.m.).[12] Second, we investigated the differences across categories, especially the patterns during the school commute and school session periods. From the investigation, we discovered similar patterns in the frequency and hourly rate of victimization during the school periods (commute and session) and the night periods. In the sections that follow, we investigate these patterns further by exploring the temporal and spatial dynamics of high juvenile victimization zones with a special focus on the school commute and school session.

Temporal Distribution of Juvenile Victimization

School Year v. Summer Break

Between 1993 and 1994, 75 percent of juvenile victimizations occurred during the school year, while 25 percent occurred during the summer break. This percentage distribution is proportional to the distribution of time each period contributes to the year. In other words, youth are not proportionally committing more violent crimes during the summer than during the school year.

We began this investigation with the following hypothesis: there is no difference between the school year victimization temporal pattern and the summer break victimization temporal pattern. That is, we were interested in testing whether the juvenile victimization patterns were similar for both periods. If the categories were similar, we could pool the data and assume that the underlying factors driving time patterns of victimizations were the same. However,

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[11] "Patterns of Violent Crime Committed By and Against Juveniles in the District of Columbia: Report to the Institute for Law and Justice," Washington, D.C., the Urban Institute, June 1996.

[12] An additional dummy variable was created to identify victimization occurring during the school year and summer break.

victimization patterns during the school year were different from victimization patterns during the summer break. An interesting temporal pattern emerged between the school year and summer break that led us to conclude that their victimization trends are different (also see OJJDP, 1996). Specifically, peaks and valleys in the hourly distribution of victimizations (Monday through Friday) varied between school year and summer break periods (see Figures 3-1 and 3-2). During the school year, juvenile victimization was low between midnight and 7 a.m., increased during the day (school commute school session periods), reached its daily peak during the after school commute, and re-stabilized during the evening hours. In contrast, during the summer break, juvenile victimization was low to nonexistent between 2 a.m. and 10 a.m., increased steadily after 12 noon, and peaked in the evening between 8 p.m. and 10 p.m.

Another noticeable difference was the changes in type of victimization across the two periods. Specifically, during the school year the percentages of victimization for each type of crime were stable across years. In contrast, during the summer, robbery victimization increased by nearly 12 percent and assault victimization decreased by nearly 10 percent over the two year period.[13]

Table 3-1. School Year Juvenile Victimization by Type and Year

	1993		1994	
	Number of Incidents	Percent	Number of Incidents	Percent
Homicide	37	3.1%	33	3.0%
Rape	98	8.1	110	9.9
Robbery	303	25.0	263	23.7
Assault	773	63.8	702	63.4
Total	**1211**	**100**	**1108**	**100**

Table 3-2. School Break (Summer) Juvenile Victimization by Type and Year

	1993		1994	
	Number of Incidents	Percent of all	Number of Incidents	Percent of all
Homicide	14	3.5%	5	1.4%
Rape	28	7.1	30	8.7
Robbery	83	21.0	111	32.1
Assault	270	68.3	200	57.8
Total	**395**	**24.6**	**346**	**23.8**

[13]These figures are shown to provide a more detailed discussion of the patterns by type and year for both periods. However, the focus of this discussion should not be on the relative change in the distribution of type specific victimizations. Many of these robbery victims may have also been assaulted.

Figure 3-1. Distribution of Juvenile Victimizations by Time of Day, 1993

Monday - Friday

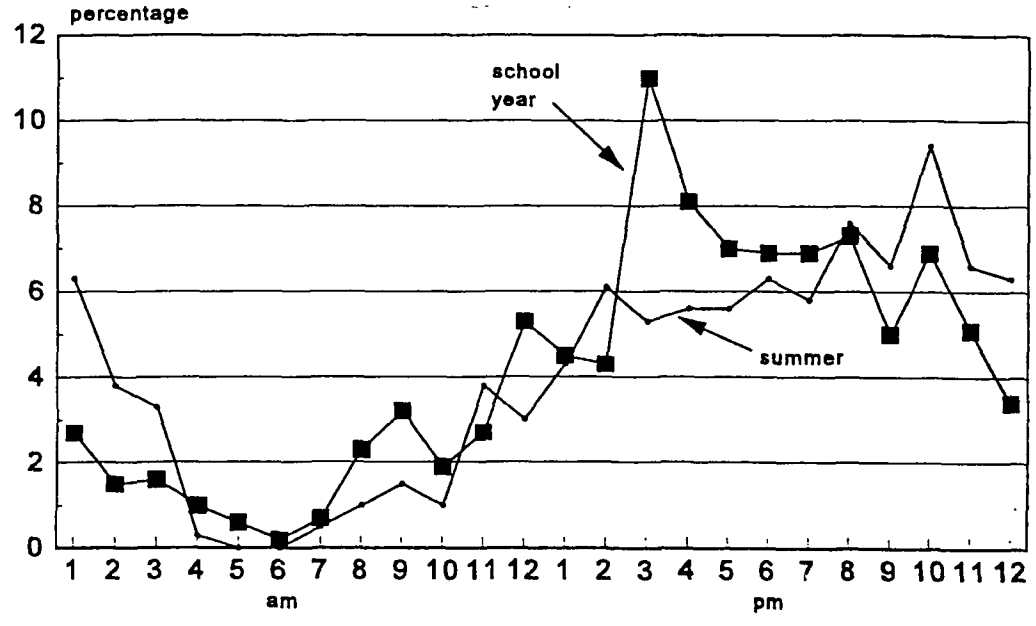
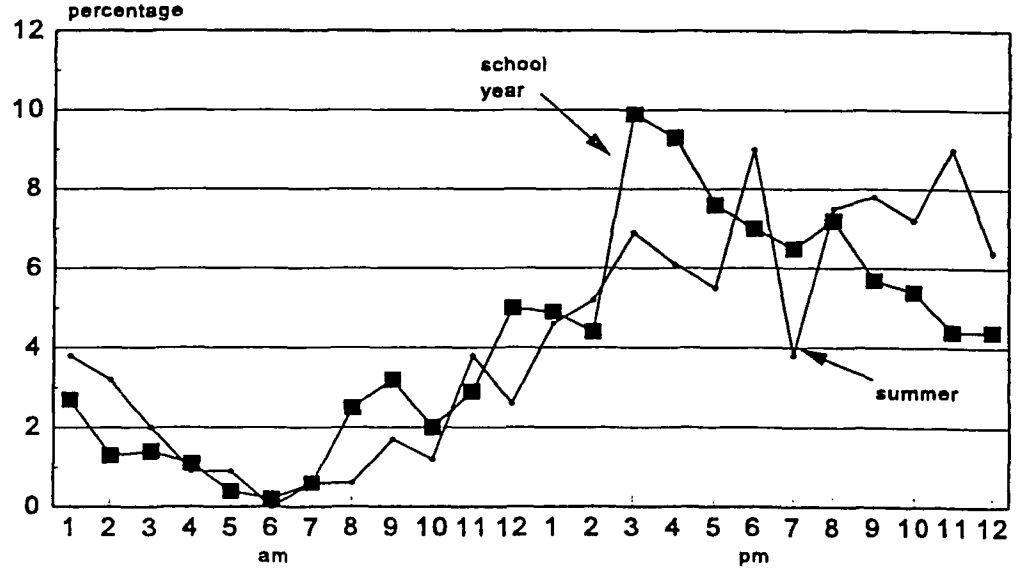


Figure 3-2. Distribution of Juvenile Victimizations by Time of Day, 1994

Monday - Friday



The patterns that emerged between these two periods have plausible explanations. Routine activities perspectives state that victimization requires a suitable target, a motivated offender, and the absence of a capable guardian (Cohen and Felson, 1979; Felson, 1994; Sherman et al,. 1989). During the school year, young people increase their level of exposure to motivated offenders--they attend school and have blocks of time when they are unsupervised, particularly during their commute to and from school. It is during these blocks of time that they become suitable targets. Even those who choose to be truant are more likely to leave the home to ensure that their actions are not discovered. Thus, truants and non-truants are suitable targets during periods of the day when they typically should be traveling to and from school or sitting in a classroom. Unfortunately, data are not available to determine if the youth victims were dropouts or truants. If the motivation to commit an offense is strong enough, the motivated offender can use the daily routine created by school participation to identify and select his/her suitable target(s). Finally, the victimization is less likely to occur if there is a capable guardian. That is, even if the target and offender come into contact, a capable guardian can diffuse the situation and prevent a potential victimization.[14]

Conversely, the summer break has its own unique set of circumstances that place young people at risk during other periods of the day. During the summer break, young people are not required to attend summer school except for poor school year performance. Young people who attend summer school have the same risk of exposure as youth attending school during the normal school year, expressed above. During the summer, young people may spend more time off the streets, "sleeping in" or spend more time in the company of a capable guardian. If this is the case, they are less likely to come into contact with motivated offenders. It is not until they are awake and begin "running the streets" that their suitability as a target increases. Studies (as reported in Cohen and Felson, 1979) have found each hour spent on public streets and trafficways turns out to be at least ten times more risky than an hour spent at home. Assuming that the typical young person will sleep past nine or ten o'clock in the morning, he/she does not become a suitable target until after that time.[15] Whenever the target and motivated offender come into contact and a capable guardian is absent, the victimization is likely to occur. Such is the case for young people [mostly unsupervised] on the streets between 8 p.m. and 2 a.m.

The above argument provides support for analyzing the school year data separately from the summer break data, especially when relating locations of victimizations to locations of schools as we do in the following sections.

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[14] A study of the school commuting pattern of Philadelphia student indicated that student often must travel through dangerous communities on their way to school (Welsch et. al. 1996).

[15] We use this example to highlight the patterns as observed in Figures 3-1 and 3-2.

Victimizations During the Day[16] v. Other periods

Although the frequency of victimization was greatest during the night (adding weekend night and weekday night categories from Table 3-3), the hourly rates were on average higher during the day. As illustrated in Table 3-3 and Figures 3-1 and 3-2, the hourly rate was higher during the school commute than during any other period. This pattern was observed in both years. What these finding suggest is that young people are targeted and victimized at higher rates during the day (a period of expected school participation) than during periods the general public associates with higher levels of victimization.

Table 3-3. Juvenile Victimizations:
All Crimes by Period of Day (excluding summer months)

		1993			1994		
	Number of hours	Incidents (n=1211)	Percent	Hourly Rate	Incidents (n=1108)	Percent	Hourly Rate
School Commute	20	233	19%	11.7	208	19%	10.4
School Session	30	208	17	6.9	206	19	6.9
Weekday night	56	360	30	6.4	323	29	5.8
Weekend night	34	300	25	8.8	276	25	8.1
Weekend day	28	111	9	4.0	95	9	3.5

A closer investigation of 1993 homicide victimizations (Table 3-4) showed that victims were murdered at the same frequency during school periods (combining the school commute and school session) as during both weekend periods. Thus, young people were no safer from homicide during the period associated with traditional school participation than during any period over the weekend. However, the weekday night was higher than the combined school periods by 9 percentage points.

By 1994, the combined school periods surpassed all other categories in accounting for the highest percentage of juvenile homicide victimizations. The investigation of 1994 homicide victimizations showed that victims appeared to be at greater risk during the combined school periods (32 percent) than during any other periods, especially the weekday night (24 percent) and weekend night (14 percent).

[16]Day is meant to represent the school commute and school session.

Victimization During the Day and School Location

A primary focus of this analysis was to determine whether the location of schools was associated with juvenile victimization during the day, which includes the school commute and school session periods. More specifically, we wanted to determine whether young people were targeted or made better targets during the day, especially during the school periods. To begin the analysis, we limited the scope to focus only on victims at least 12 years of age and the location of schools that serve this population (junior high/middle schools and senior high schools). Data on schools were available from the Common Core of Data CD-ROM, distributed by U.S. Department of Education's National Center for Education Statistics. Sixty-eight schools out of 181 public schools in D.C. were junior high schools, middle schools or high schools (or some combination). Of these 68, five were listed as alternative or vocational schools, and 11 were special educational schools for adolescents or were listed as "ungraded." Four of the 68 schools had a population with over 80 percent of the youth qualifying for the free lunch benefit.[17] Eighteen additional schools had 60 to 79 percent of their student body qualifying for free lunches. The 68 schools ranged from having 60 percent minorities (Hardy Middle School on Foxhall Road, NW), to being a 100 percent minority (n=34). The exception was the Senate Page School with no minorities out of the 29 students.

As shown in the Tables 3-5 and 3-6, 15 percent of all victims were younger than age 12. Each age within this category accounted for less than 5 percent of all cases. A similar age distribution was observed in both years and across summer-non summer categories. This suggests that whatever was underlying the age distribution produced the same distributional pattern with and without the inclusion of summer data. Thus, we can exclude the summer data without making erroneous assumptions about the age-victimization distribution.

Table 3-4. Juvenile Homicide Victimization by Period of Day (excluding summer months)

	1993		1994		Total	
	Number	Percent	Number	Percent	Number	Percent
School Commute	2	6.1%	4	10.8%	6	8.6%
School Session	6	18.2	8	21.6	14	20.0
Weekday night	11	33.3	9	24.3	20	28.6
Weekend night	7	21.2	5	13.5	12	17.1
Weekend day	7	21.2	11	29.7	18	25.7
Total	**33**	**100**	**37**	**100**	**70**	**100**

[17]These schools were Johnson JHS, Sharpe Health School (special ed.), Terrell JHS and Shaw JHS.

Table 3-5. Age Distribution of Juvenile Victims, All Cases (excluding summer months)

	1993		1994	
Age	Incidents (n=1211)	Percent	Incidents (n=1108)	Percent
11 and under[1]	180	15%	152	14%
12	76	6	80	7
13	134	11	114	10
14	153	13	167	15
15	187	15	172	16
16	221	18	188	17
17	260	21	236	21

[1] Each age in this group accounts for less than 5 percent of all incidents.

Table 3-6. Age Distribution of Juvenile Victims, Day Only (summer months only)

	1993		1994	
Age	Incidents (n=441)	Percent of all	Incidents (n=414)	Percent of all
11 and under	68	15%	59	14
12	35	8	27	7
13	67	15	54	13
14	68	15	63	15
15	65	15	78	19
16	68	15	70	17
17	70	16	63	15

High Victimization Zones[18] and School Location

The maps of the high juvenile victimization zones and the location of schools provide a rather interesting picture of the geography of the problem (see Maps 3-1 through 3-3). More specifically, the location of the high juvenile victimization zones (ellipses) have longstanding clusters which include some of the following neighborhoods: Cluster A (Columbia Heights and Shaw), Cluster B (Marshall Heights), Cluster C (Anacostia, Congress Heights, and Washington Highlands). Despite the consistency in the spatial pattern of these zones, each cluster has its own subtle differences.

Cluster A (Columbia Heights and Shaw). The neighborhoods of Columbia Heights and Shaw had clearly defined and consistent spatial patterns of high victimization zones during the school commute and school session periods. In both years, the zones formed ellipses that shifted from year-to-year but remained within the same spatial neighborhood association. Upon closer examination of the pattern during the school session, the spatial patterns showed that juvenile victimizations took place in the same general location. The locations did not change much between 1993 and 1994. In contrast, the pattern during the school commute shows that juvenile victimization zones formed in the same cluster region, but the neighborhoods associated with the cluster changed from year-to-year.

In these neighborhoods, the high victimization zones were associated with the location of schools.[19] Specifically, the zones formed ellipses around twelve schools.[20] Of these schools, 2 were alternative schools, and 6 ranked in the top 20 largest schools in the city. There were more schools in the areas surrounding the zones. However, we can make the assumption that characteristics of the places near and around the schools were likely associated with the high levels of victimization committed against youth who fit the profile of their students. These characteristics of places can include boarded and/or abandoned houses, unsafe passages/corridors that are unmonitored, and carry-outs, arcades that attract large groups of unsupervised youth.

Cluster B (Marshall Heights). The neighborhood of Marshall Heights had two pockets of high victimization zones that emerged in 1994. Both zones were located in the Marshall Heights neighborhood. The problem with juvenile victimization during the day was confined to the school session--no zones formed during the school commute. The high victimization zones formed

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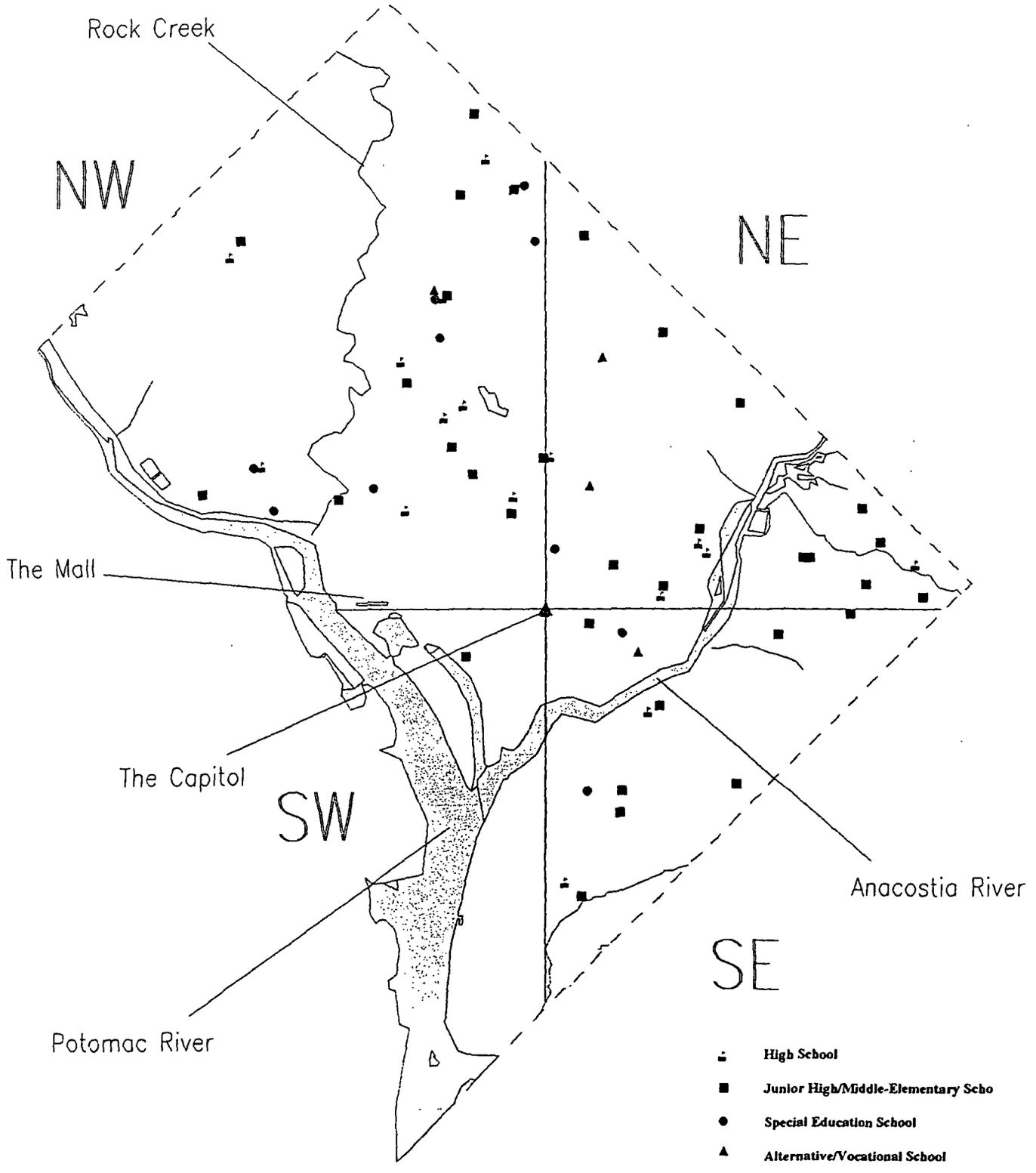
[18]Spatial and Temporal Analysis of Crime (STAC) software was used to generate the ellipses for high juvenile victimization zones (Illinois Criminal Justice Information Authority, 1996). The search radius covered an area of 500 meters with at least 10 incidents.

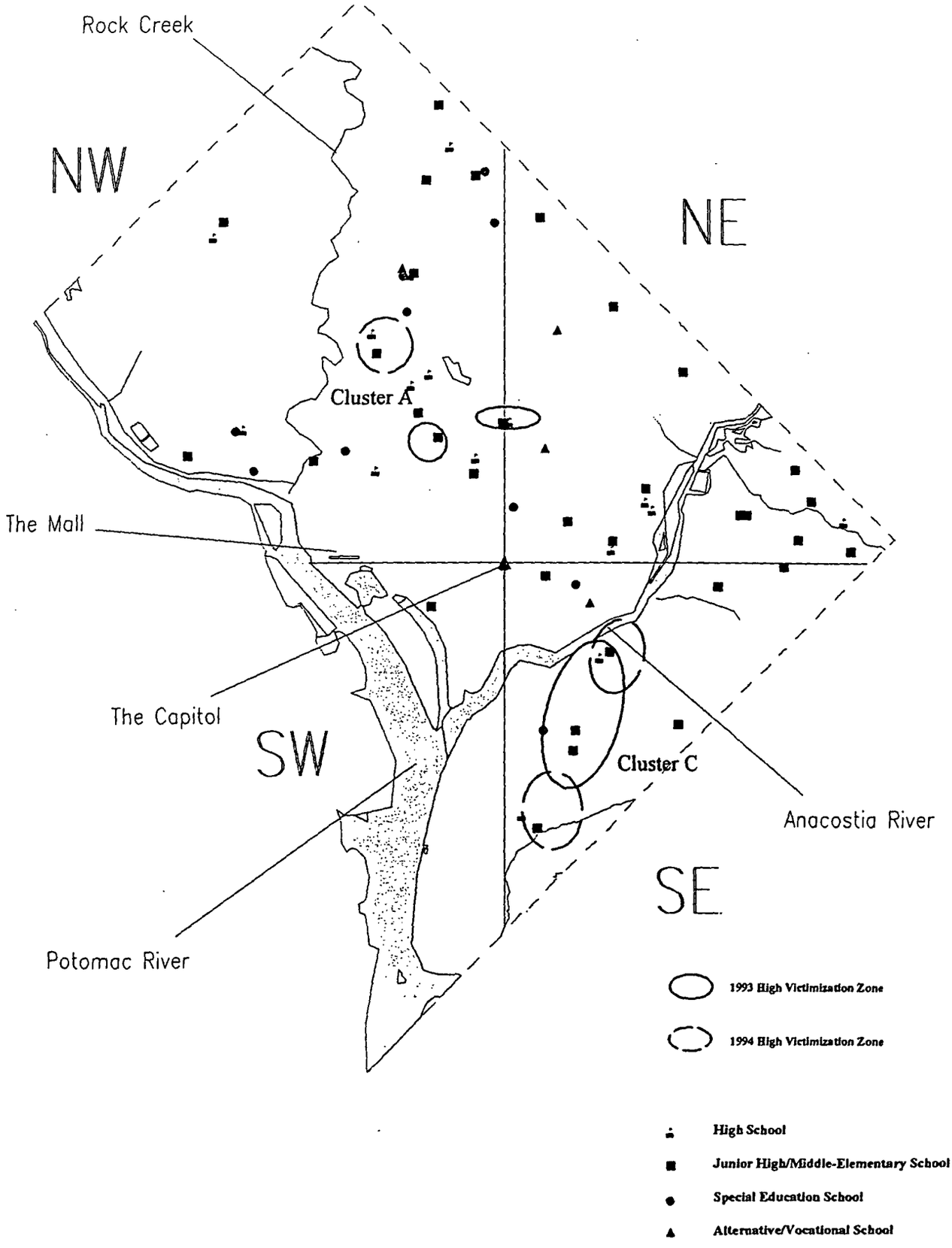
[19]Again, we only plotted the junior high and high schools. These schools correspond to the age group targeted for this section of the analysis.

[20]The schools are Burdick Career Center, Sharpe Health School, Roosevelt HS, MacFarland JHS, Bell Multicultural Center, Lincoln Junior HS, Banneker HS, Cardozo HS, Garnett-Patterson JHS, Shaw JHS, Langley JHS, and McKinley HS.

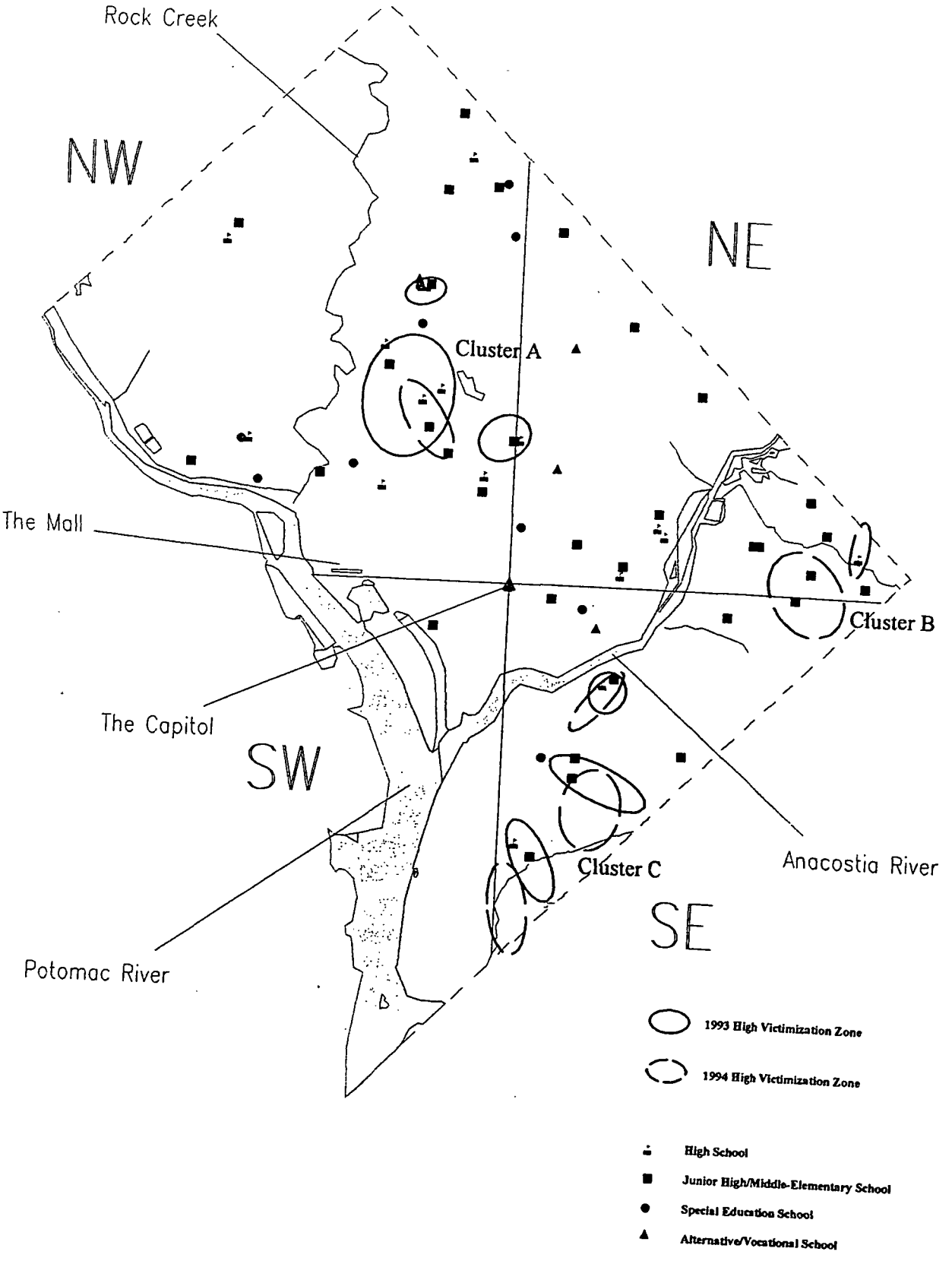
Map 3-1. Location of Public Schools (Secondary Schools Only)



Map 3-2. Location of High Victimization Zones and Public Schools During the School Commute



Map 3-3. Location of High Victimization Zones and Public Schools During the School Session



ellipses around three schools.[21] Two of the three schools were among the top 20 largest schools in the city.

Cluster C (Anacostia, Congress Heights, and Washington Highlands). The neighborhoods of Anacostia, Congress Heights, and Washington Highlands were the only cluster that showed a consistent pattern of high victimization zones year-after-year and during both school periods. Most importantly, the cluster spanned across each neighborhood with little variation across year and school periods. The high victimization zones formed ellipses around seven schools.[22] Only two of these schools were among the 20 largest in the city.

Summary

The data showed that the patterns of juvenile victimization were not the same during the school year and summer break periods. During the school year, young people were more often victims during the day, which includes the school commute and school session periods. Whereas, during the summer break, young people were more often victims in the late afternoon and evening hours.

When we focused on the temporal patterns during the school year, we found that the hourly rate of victimization was higher during the school commute than during any other session, followed by weekend night and school session periods. Surprisingly, the two school periods reported higher hourly victimization rates than the periods associate with late night.

The locations of victimizations showed a clear pattern of association with the location of schools. That is, juvenile victimizations occurred near or around schools. Particularly, we were able to identify the high juvenile victimization zones for the two school periods and plot them against the location of schools. Although we noticed slight variation in the spatial distribution of the zones, they encompassed the same schools.

Many schools were located in the high juvenile victimization zones. Those located in these zones were among the largest schools in the city. Of the 22 schools located in these zones, nearly 50 percent (10) were among the largest 20 schools in the city. Only two of the schools within the zones were alternative schools.

Our findings provide further support for the idea of adopting after school programs as a way of protecting young people against violence. In the OJJDP report, the authors mention that some communities have begun to develop after school programs because they provide adult

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[21]The schools are Woodson HS, Kelly-Miller JHS, and Fletcher-Johnson Educational Complex (elementary and JHS).

[22]The schools are Kramer JHS, Anacostia HS, Psycho-Education Program, Douglass JHS, Johnson JHS, Ballou JHS, Hart JHS.

supervision for young people during the high-risk time periods. What is particularly interesting about this approach is that the community appears to have been included in the process to prevent juvenile violence within its boundaries. These efforts may prove useful in the District if the high juvenile victimization zones are given the resources to increase their capacity to prevent youth violence.

Further, our findings highlight the need to address victimizations that occur *during* the school session. We identified the school session as a period of high juvenile victimization. Unfortunately, we do not have data on the school participation of the victims. These data are needed to understand whether the victims are truants or drop-outs. In any event, enforced truancy policies could assist in the prevention of victimization during the school session.

In the summer of 1995, the District passed a curfew law that was aimed at reducing juvenile offending and victimization patterns between the hours of 11 p.m. and 6 a.m. By October 1996, a federal judge overturned the law because the city council had not provided adequate data supporting the notion that a large number of crimes are committed during that time period. Our data suggest that, particularly during the summer months, youth are highly vulnerable during the hours associated with the curfew (Figures 3-2 and 3-2). Continued investigation of victimization by time of day is crucial for making the most informed decisions--decisions that can rightly prevent youth from being victimized.

Finally, the spatial distribution of victimizations near and around schools, especially during the school commute and school session periods, provides support for the argument that schools need to become the training grounds for educating young people on how to reduce their risk of becoming a victim. That is, schools may be the institutions most capable of providing young people with the skills needed to make themselves a less desirable target.

Chapter 4

Exploratory Analysis of Blockface Characteristics

Introduction

The exploratory analysis of blockface[23] data began by investigating the relationships among variables that sociological research has demonstrated to represent negative neighborhood physical conditions, often termed "physical disorder" (Skogan, 1990). Indicators of physical disorder, for example, may include the presence of trash, abandoned cars, vacant lots and boarded-up and burned-out buildings. Researchers have shown evidence of a relationship between the physical deterioration of neighborhoods and crime in those areas. Studies suggest that offenders perceive that areas of high disorder or physical deterioration provide increased opportunities to commit crimes. Further, residents living in thses areas are fearful and are, therefore, less likely to take action to prevent crime or will be less committed to joint protective activities (Taylor and Harrell, 1996). Another consequence of disorder is more disorder. In other words, current levels of disorder produce future levels of disorder (Skogan, 1990). The implication is that disorder may be only partially explained by other neighborhood characteristics such as poverty and class.

For this task of our study on juvenile crime in D.C., teams of researchers collected blockface observations while enumerating male youth within three Census tracts in Washington, D.C. The enumeration was performed by a separate organization for a related facet of the research on juvenile crime in D.C.; the tracts had been selected because of their high rates of violent juvenile victimization. Our hypothesis was that even within an area as small as a Census tract, block-to-block variations in physical disorder would be observable and correlated with fear of crime. The enumeration provided a unique opportunity to assess the conditions of the blockfaces, and examine relationships among those physical disorder variables and other constructs related to crime, or fear of crime.

The measures and methods used for this analysis are described below. In addition, a brief summary of the results are presented with the maps highlighting blocks of high fear and disorder for each of the three tracts. Violent juvenile victimizations are also displayed on the tract maps. Details of the entire analysis, with corresponding tables, can be found in the Appendix.

Measures

Physical Disorder. Before the enumeration began. we developed a coding sheet to record observations about the physical condition of each blockface during the block enumeration. The

[23] A blockface is one side of a street between two cross streets or intersections.

coding sheet contained 12 main items or facets of physical disorder derived from extant research on physical disorder. These included the presence of trash/litter; the presence of drug paraphernalia; the presence of gang or crew markers; the presence of defaced, broken or missing street signs or directional signals; the number of vacant lots not maintained; the number of parks and playgrounds not maintained; the number of units with positive ownership markers; the number of units with broken windows; the number of uninhabitable and inhabitable vacant units; the number of broken streetlights; the number of abandoned cars. Coders also counted the base number of units on each blockface, the number of residential addresses, the number of multi-address units, the number of commercial properties and the number of other structures (e.g., schools, hospitals), on each blockface. Coders did not go into alleyways or behind structures to collect data. In other words, data collection was limited to the actual "face" of the block. A copy of the blockface coding sheet is presented at the end of the Appendix.

Violent Juvenile Victimizations. This measure is the total number of violent victimizations of juveniles on each blockface within the three tracts for 1993 and 1994, combined. Address-based data on the location of the victimizations were obtained from the Metropolitan Police Department. The data were geocoded into Census tracts and then matched to the blockface for the cases that fell within the three tracts.

Fear of Victimization. This measure was obtained from nine survey items taken from face to face surveys of a non-random sample (n=213) of young males, 13-17 years old, residing in three target tracts in Washington, D.C. The survey was conducted by the Institute for Law and Justice. The survey questions are listed at the end of the Appendix.

Overview of the Blockfaces

The unit of analysis for this task was the blockface. Trained observers counted the presence of disorder items as listed in the coding form.The tracts are quite different in size (i.e., number of blockfaces) and land use (i.e., residential, commercial, etc.) (Table 4-1). For instance, tract 91.02 only has 61 blockfaces with residential units out of 140 blockfaces in the tract. Fifty-three blockfaces in that tract have no structures such as houses, apartment buildings, schools, hospitals or churches. Some of the blockfaces are part of the Rhode Island Metro parking lot and border against the metro and Amtrak rails. The three Census tracts ranged from one tract (tract 29.00) having 76 blockfaces to another tract (tract 91.02) having 140 blockfaces. None of the tracts contain a public school. However, the northern border of tract 29.00--Spring Road, NW--hosts Paul Robeson School, a special educational school with 24 students. The school falls in contiguous tract 25.02.

Tract 73.04 had the most violent victimizations of juveniles (1993 and 1994 data), with 47 percent of the blockfaces recording a violent juvenile victimization, compared to 38 percent in tract 29.00 and 20 percent in tract 91.02. The table also portrays that only a limited number of blockfaces contain survey data. It is unclear whether this is due to the limited pool of survey-eligible residents or a high non-response rate.

Table 4-1. Summary Description of Tracts

	29.00	73.04	91.02
Number of Blockfaces	76	94	140
Number of Blockfaces with Survey Data	23	29	27
Number of Blockfaces with No Units/Structures	18	20	53
Number of Blockfaces W/More than 1 Commercial Property	8	2	16
Number of Blockfaces with Residential Addresses	54	49	61
Number of Blockfaces with Violent Victimizations	29	44	28

Methods

The intent of the analysis was to ultimately develop a scale of *physical disorder* and test its relationship to *official victimizations* and a survey-derived *fear of victimization* measure. The first step was to examine the raw data frequencies for all variables, and utilize data reduction techniques to derive a scale of physical disorder and a scale of fear of victimization. We wanted to determine if all the items from the blockface ratings form could be combined into a single scale. In other words, do the items measure a single construct representing physical disorder? And similarly, do the nine fear items from the individual-level survey represent a simple construct of fear of victimization? Factor analysis was used at the early stages to see if clearly defined concepts arose from groupings of the variables (for both physical disorder and fear of victimization). After using factor analysis, a more detailed correlational analysis was run using Cronbach's (1984) alpha to assess the item-to-total correlation. The results of this analysis were used to construct final additive scales for the constructs.

Because the available official data on juvenile victimizations precede the collection of the blockface ratings data and survey data by at least two years, we could not try to predict violent victimizations. However, we did explore fear of victimization as a function of physical disorder, vacancy rate and violent victimizations. We need to stress that our sample sizes by Census tract in our regression models tract are very limited (the number of cases is 20, 27, and 25 for the three tracts). There are at least two problems with a small sample size: (1) in regression analysis, we need the random sample to be representative of the larger population. In this example, the population are the youth who live in the Census tract. It is unlikely that a sample size of 20 will be representative of the larger population; (2) for small sample sizes, the power of the test is very limited. For a test of small power, we are only likely to find large sized effects. Thus, the weaker relationships will be more difficult to detect within any Census tract; therefore, we estimated the models using the pooled data, in addition to separately by tract. The models tested are shown below:

Model 1: $Fear_1$ = f{physical disorder, vacancy rate, victimizations)
Model 2: $Fear_1$ = f{physical disorder, victimizations)
Model 3: $Fear_1$ = f{victimizations)

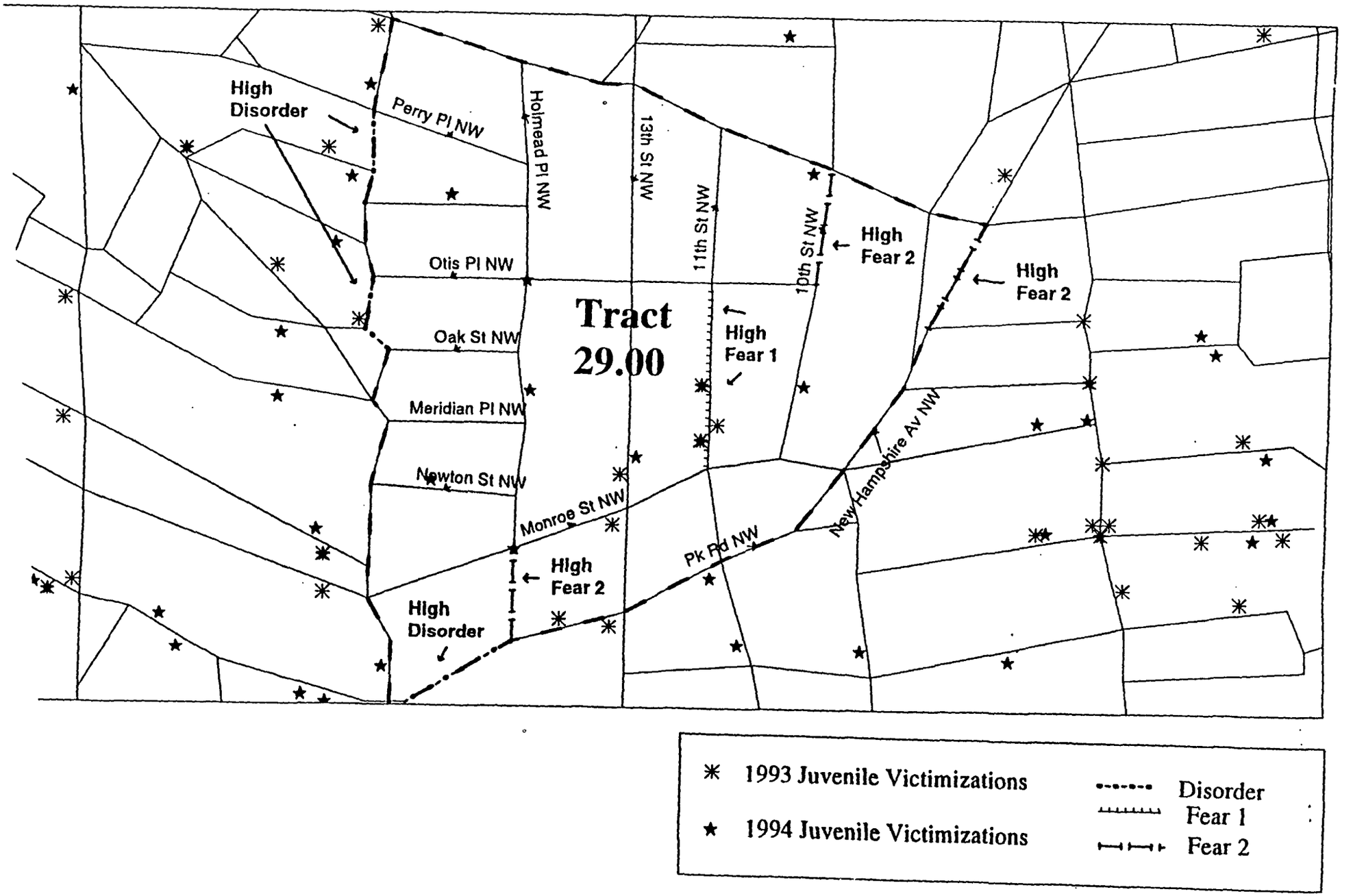
Model 4: $Fear_2$ = f{physical disorder, vacancy rate, victimizations)
Model 5: $Fear_2$ = f{physical disorder, victimizations)
Model 6: $Fear_2$ = f{victimizations),

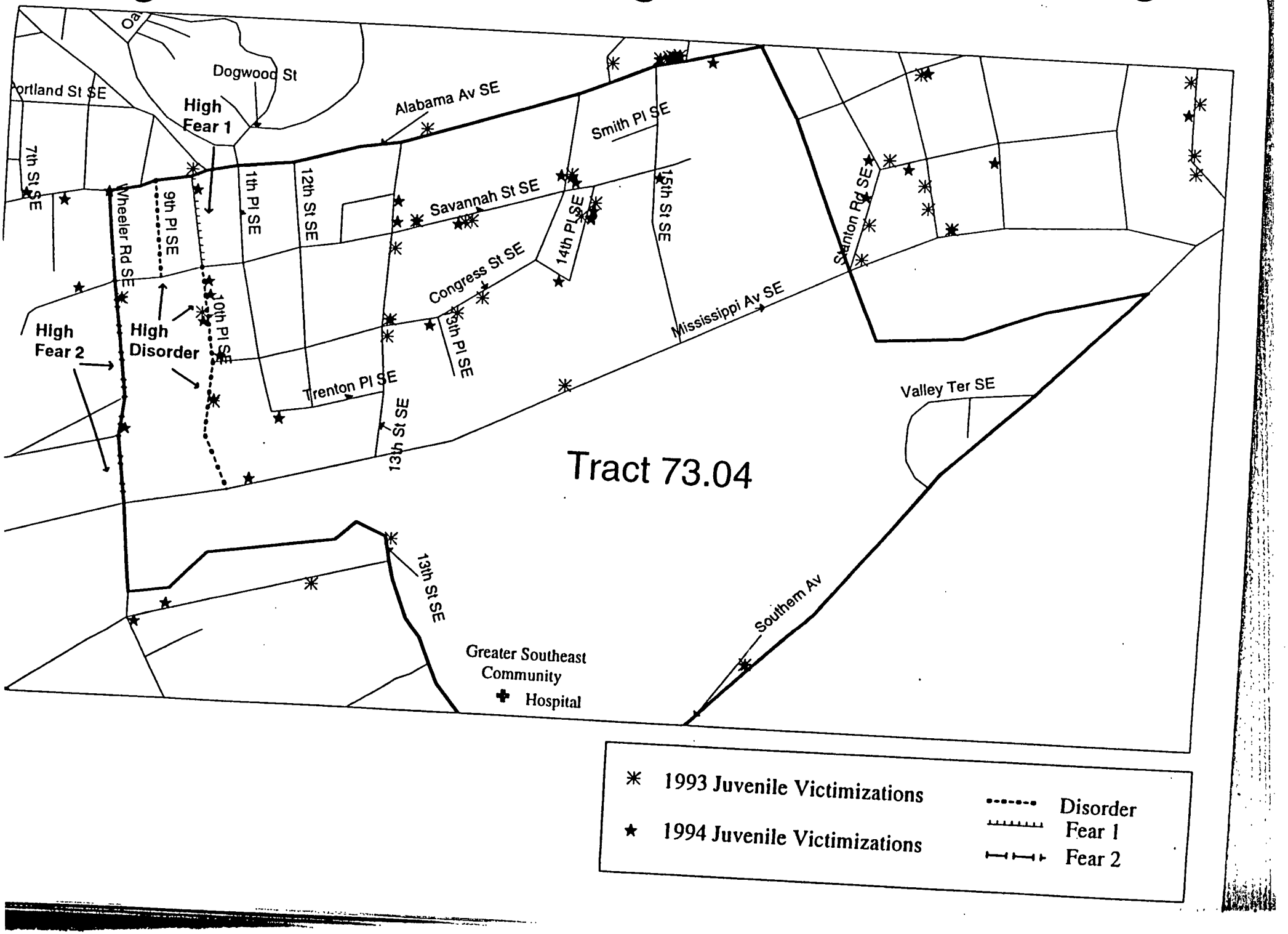
where $Fear_1$ represents fear of *personal victimization* and $Fear_2$ represents risk minimizing behaviors associated with fear of walking in one's own neighborhood.

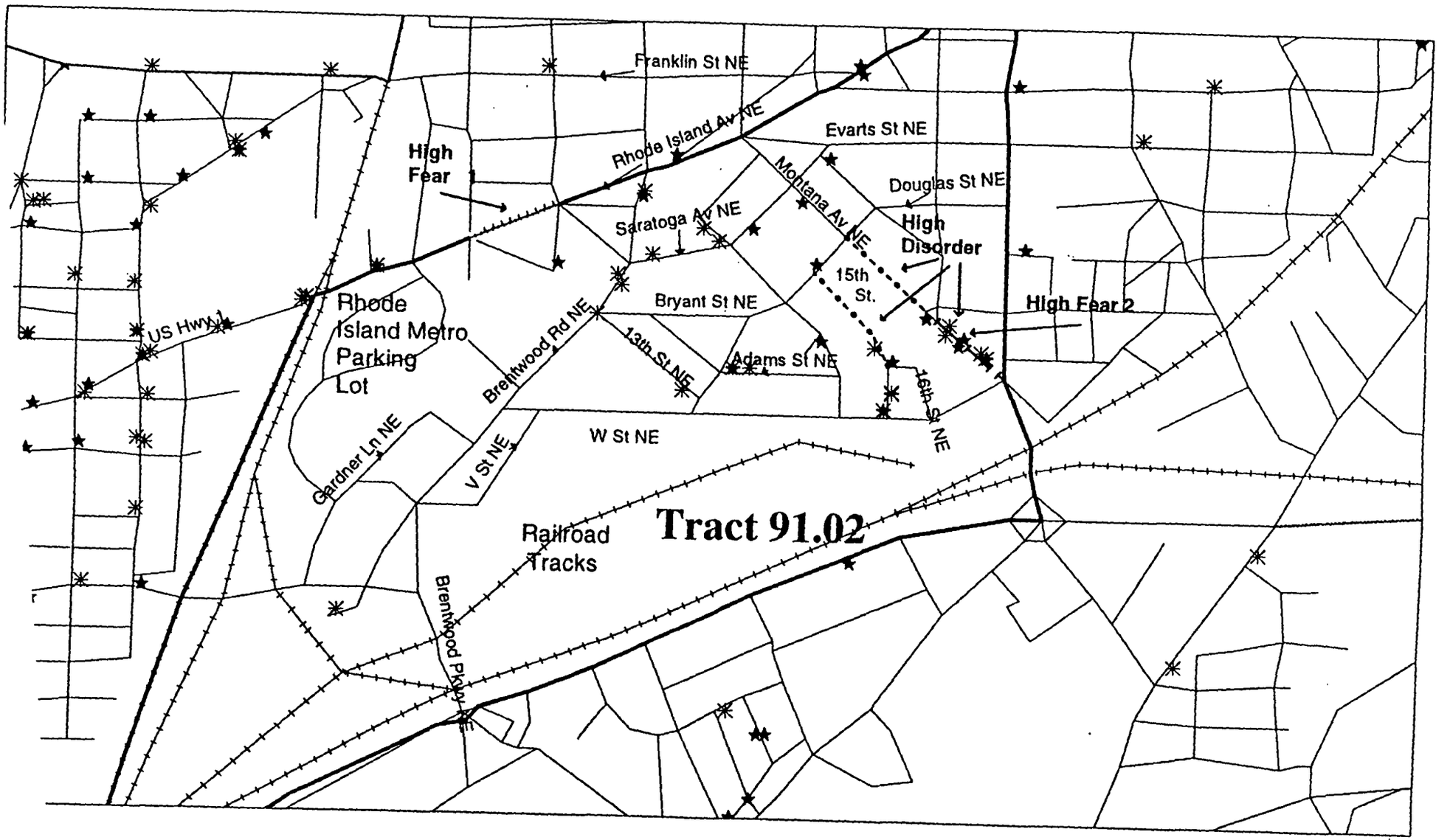
Summary of Findings

The results of the regression analysis by Census tract revealed no significant predictor variables. However, when the data are pooled, the number of violent juvenile victimizations emerges as significant as a predictor for Fear2. The percentage of variance explained by the model is very low across models, ranging from 0 in Model 6 for tract 29 to .17 in Model 4. Fully saturated models were tested, exploring the interaction of the predictors with each neighborhood, but no significant patterns emerged. Overall, the model with the best fit is model 6 for the pooled data demonstrating that, for our sample, although small, the number of violent juvenile victimizations correspond to areas that have high levels of fear of walking alone (Fear2). The maps, on the following pages, enable us to see that, although there may not be strong statistical relationships among the measures employed here, high disorder blockfaces are located near high fear blockfaces. This is particularly true for tracts 73.04 and 91.02. For tract 29.00, it is interesting to note that high fear blockfaces and high disorder blockfaces were often the Census boundary streets,and that there were a high number of victimizations located outside the tract but very nearby. This suggests that our measure of physical disorder may have picked up some facet of crime or fear of crime as we measured it.

In addition, the locations of violent victimizations, even in previous years, may be driving levels of fear or risk-minimizing behaviors. It also may be that the locations or patterns of violent victimizations for 1995 and 1996 were similar to 1993 and 1994. It is our hope that in the future, indicators of disorder and fear will be more readily available for the District. Research at the block and neighborhood level that sheds light on the relationships among victimization, physical disorder and fear of crime can only enhance our knowledge of how to aid crime prevention in our city.


High Disorder
Perry Pl NW
Holmead Pl NW
13th St NW
11th St NW
10th St NW
High Fear 2
High Fear 2
Otis Pl NW
Tract 29.00
High Fear 1
Oak St NW
Meridian Pl NW
Newton St NW
Monroe St NW
New Hampshire Av NW
Pk Rd NW
High Fear 2
High Disorder
1993 Juvenile Victimizations
1994 Juvenile Victimizations
Disorder
Fear 1
Fear 2


Oa
Dogwood St
Portland St SE
High Fear 1
Alabama Av SE
Smith Pl SE
7th St SE
Wheeler Rd SE
9th Pl SE
1th Pl SE
12th St SE
Savannah St SE
14th Pl SE
15th St SE
Stanton Rd SE
Congress St SE
10th Pl SE
8th Pl SE
Mississippi Av SE
High Fear 2
High Disorder
Trenton Pl SE
13th St SE
Valley Ter SE
Tract 73.04
13th St SE
Southern Av
Greater Southeast Community Hospital
1993 Juvenile Victimizations
1994 Juvenile Victimizations
Disorder
Fear 1
Fear 2


Franklin St NE
Rhode Island Av NE
Evarts St NE
High Fear 1
Douglas St NE
Montana Av NE
Saratoga Av NE
High Disorder
15th St.
High Fear 2
Bryant St NE
Rhode Island Metro Parking Lot
US Hwy 1
Brentwood Rd NE
13th St NE
Adams St NE
16th St NE
Gardner Ln NE
V St NE
W St NE
Railroad Tracks
Tract 91.02
Brentwood Pkwy NE
1993 Juvenile Victimizations
1994 Juvenile Victimizations
Disorder
Fear 1
Fear 2

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Appendix

Details of the Exploratory Analysis of Blockface Characteristics

Derivation of the Constructs

Physical Disorder Construct. After examining the frequency distributions of the variables from the blockface coding sheet, we recognized that the majority of the variables have very little variance. The mean and standard deviation are shown in Table A-1 for the original items on the coding form. We reduced the four response categories to two for the variables on the ratings form, because the upper values were represented by very few, and sometimes no, blockfaces. The new variables represent the presence or absence of an item. We initially thought that we could rely on three newly created variables: (1) the broken window rate (Bwinrt)--the number of units per blockfaces with broken windows divided by the number of units on each blockface; (2) the positive ownership rate (Ownrt)--the number of units with signs of positive ownership divided by the number of units on each blockface; and (3) the vacancy rate (Vacrt)-- the number of obviously vacant units divided by the number of units on each blockface to supply more variance to our desired disorder scale, but upon closer examination, we realized that even those variables do not provide much variance. When we looked at the frequency distribution for positive ownership, we noticed that the distribution included blockfaces with a rate higher than one. Raw data revealed problems in coding, and therefore, we dropped this variable from the analysis.

More specifically, we dichotomized variable 1 through 12a from the coding sheet, examined the frequencies, and then looked at the correlation coefficients. We used Cronbach's Alpha to determine which items were worthy of being part of a scale. The goal was to maximize the alpha by adding or deleting variables depending on the individual alpha scores. We determined that the dummy variable for Q12a (signs of gentrification) was very weakly correlated with the other variables, and that dropping 12a would maximize the total alpha and in turn provide a more meaningful scale. This was consistent across Census tracts. The other variables that were weakly correlated did not necessarily improve the total alpha when dropped from the model so we did not eliminate them from the final scale. Dummy variables were created for Q8 and Q9 using the rated variable (Bwinrt and Vacrt). Further analysis will use the dummy variables (Dbwinrt and Dvacrt) in place of the continuous values for the variables.

We then excluded questions 12b through 12f from the analysis because these observational measures are dependent on the time of day and the day of week (i.e., weekday or weekend) which was not controlled in data collection. In addition, these measures may represent another dimension or construct, such as "social disorder," or even prosocial bonding or prosocial activity. When we looked at the initial factor analysis, no particular patterns emerged with these variables, with the exception of within tract 73.04.

The final physical disorder scale (Pdis) included seven dummy variables: presence/absence of litter (D1new), presence/absence of drug paraphernalia (D2), presence/absence of gang or crew

markers (D3), presence/absence of defaced, broken or missing signs (D4), presence/absence of vacant lots not maintained (D5), presence. absence of parks or playgrounds not maintained (D6), and the presence/absence of abandoned cars (D11). The frequency distribution of the scale for each of the tracts is shown below in Table A-2. The disorder scale did not include the two dummy variables derived from the rated variables (Dbwinrt and Dvacrt) because many blockfaces contained missing data (i.e., the blockfaces contained no units). The scale ranges from a low of 0 to a high of 5. Only tract 91.02 had blockfaces (n=2) with a disorder scale score of 5. However, tract 91.02 also had the highest percentage of tracts with a scale score of zero (64 percent compared to 46 percent for tract 29 and 51 percent for tract 73.04.

Survey Data/Fear of Victimization Construct. We performed three steps to arrive at the final scales representing the fear of victimization construct: (1) computed the correlation coefficients on the pooled data and the individual tract-level data, (2) ran a factor analysis on the pooled data and (3) examined Cronbach's alpha for the correlation coefficients to attempt to confirm relationships among variables found in the factor analysis. If the variables that grouped together in the factor analysis did not make a significant contribution to the total alpha scores, we did not use the variables. Tables A-3 and A-4 show the correlation matrix and the results of factor analysis for the pooled data. Looking at the pooled data, the results do not conform to a one factor solution. Three factors emerged (Table A-4). The first factor (we call "personal risk") grouped Q66b (concerned that you will be caught in gunfire) and Q66C (concerned that you will be hit by a drive-by shooting). The second factor represented what we call "risk minimizing behavior." This included Q65a (Do you walk alone in your neighborhood during the daytime) and Q65b (Do you walk alone in your neighborhood after dark). The third factor included Q65c (How safe is it to walk alone during the daytime) and Q65d (How safe is it to walk alone after dark). The cumulative proportion explained by the three factors is .584.

The total alpha (not shown) for the standardized variables for the pooled data was .33. Question 67a and questions 65c and 65d had the largest individual alphas of .39, .40 and .47, respectively, indicating that these questions may not add any depth to the scale. We then looked to see if this pattern held up within the individual Census tracts. For tract 29, dropping Q65d would increase the total alpha from .36 to .44; similarly, for tract 73.04, dropping Q67a would increase the alpha from .36 to .40 and dropping Q65d would increase the total alpha to .47. For this tract, it would improve the overall score to also drop Q65b and Q65c. For tract 91.02, questions 65c and 65d each have very low correlations with the remaining variables, and similarly. the total alpha score of .28 could be improved if these questions were dropped. Also, question 67a is not highly correlated with the remaining variables, but would not increase the alpha (for standardized variables) if it were dropped. However, because we are trying to maintain consistency of the scales across the three tracts, we dropped question 67a from the final scale. After dropping 67a from the model, we then used Cronbach alpha to examine different combinations of the variables, hoping to witness consistent patterns across the Census tracts. We also conducted the factor analysis using the individual tract data. A pattern emerged that was similar to the first two factors derived from the factor analysis shown in Table A-4. A clustering occurred in two places across all tracts, with Q66a, Q66b. Q66c and Q66d, and similarly with Q65a and Q65b. We concluded that it would be meaningful to have two separate scales representing fear of victimization. Means were derived for the responses to the survey questions

and two additive scales were created (FEAR1= fear of personal victimization, and FEAR2=risk minimizing behaviors).

The frequency distributions for the two *fear* scales for each of the Census tracts is shown below (Tables A-5a and A-5b). The direction of the scale is opposite the direction of the disorder scale. A low value represents greater fear. Tract 91.02 had the highest scale score of the three tracts with one blockface having a score of 6 for personal victimization. Noticeable from the scale distribution is that tract 29.00 only had 39 percent of the blockfaces (n=9) scoring under 12 (higher fear) on Fear1, while the other two tracts had 48 percent (n=14 for tract 73.04) and 56 percent (n=15 for tract 91.02) of the blockfaces in this category. However, for Fear2, tract 29.00 had a higher percentage of blockfaces at the high end of the scale with 12.5 percent of the blockfaces having a scale score of 2.0, while tract 73.04 had 10.3 percent of the blockfaces with a score of 2, and tract 91.02 had no blockfaces with a score of 2.

Analysis of Final Constructs

Because the available official data on juvenile victimizations precede the collection of the blockface ratings data and survey data by at least two years, we could not try to predict violent victimizations. However, we did explore fear of victimization as a function of physical disorder, vacancy rate and violent victimizations. However, we need to stress that our sample sizes by Census tract in our regression models tract are very limited (the number of cases is 20, 27, and 25 for the three tracts) for regression purposes. There are at least two problems with a small sample size: (1) in regression analysis, we need the random sample to be representative of the larger population. In this example, the population are the youth who live in the Census tract. It is unlikely that a sample size of 20 will be representative of the larger population. (2) For small sample sizes, the power of the test is very limited. For a test of small power, we are only likely to find large sized effects. Thus, the weaker relationships will be more difficult to detect within any Census tract; therefore, we estimated the models using the pooled data, in addition to separately by tract. The models tested are shown below:

Model 1: $Fear_1 = f$(physical disorder, vacancy rate, victimizations)
Model 2: $Fear_1 = f$(physical disorder, victimizations)
Model 3: $Fear_1 = f$(victimizations)

Model 4: $Fear_2 = f$(physical disorder, vacancy rate, victimizations)
Model 5: $Fear_2 = f$(physical disorder, victimizations)
Model 6: $Fear_2 = f$(victimizations),

where $Fear_1$ represents fear of *personal victimization* (Q66a+b+c+d) and $Fear_2$ represents risk minimizing behaviors associated with fear of walking in one's own neighborhood (Q65a+Q65b). Table A-6 summarizes the variables used for examination for predictive utility of the physical disorder and victimization indicators. In addition to the two additive dependent variables measuring fear, we ran similar regression models using each individual survey question. However, only the results for the models listed above are shown (Table A-7). The results of the regression analysis by census tract revealed no significant predictor variables. However, when the

data are pooled, the number of violent juvenile victimizations emerges as significant. The correlation matrix for the pooled data is shown in Table A-8 and the regression results are shown in Table A-9. Looking at Table A-9, the percentage of variance explained by the model is very low across models, ranging from 0 in Model 6 for tract 29 to .17 in Model 4. Fully saturated models were tested, exploring the interaction of the predictors with each neighborhood, but no significant patterns emerged (results not shown). Overall, the model with the best fit is model 6 for the pooled data demonstrating that, for our sample, although small, the number of violent juvenile victimizations correspond to areas that have high levels of fear of walking alone (Fear2).

Table A-1: Descriptive Statistics: Variables From Blockface Coding Form

Name	Description	Mean	S.D.
Census Tract 29.00 (N=76)			
Q1	Presence of Trash/Litter/Garbage	1.25	0.71
Q2	Presence of Drug Paraphernalia	0.08	0.36
Q3	Presence of Gang/Crew Members	0.29	0.69
Q4	Presnce of Defaced, Brken or Missing St and Directional Signals	0.37	0.56
Q5a	Number of Vacant Lots/Total	0.05	0.22
Q5b	Number of Vacant Lots/Number Not Maintained	0.03	0.16
Q5c	Number of Vacant Lots/Number Maintained	0	0
Q5d	Number of Vacant Lots/Number Very Well Maintained	0.03	0.16
Q6a	Number of Parks/Playgrounds/Total	0.03	0.16
Q6b	Number of Parks/Playgrounds/Number Not Maintained	0.01	0.11
Q6c	Number of Parks/Playgrounds/Number Maintained	0.01	0.11
Q6d	Number of Parks/Playgrounds/Number Very Well Maintained	0	0
Q7	Number of Units with Presence of Positive, Private Ownership	8.99	9.53
Q8	Number of Units with Broken Windows	0.41	0.75
Q9a	Number of Obviously Vacant Units	0.75	1.10
Q9b	Number of Obviously Vacant Units/Not Boarded--Inhabitable	0.39	0.77
Q9c	# of Obviously Vacnt Units/Not Boarded--Uninhabitable	0.01	0.11
Q9d	# of Obviously Vacnt Units/Burned Out	0	0
Q9e	# of Obviously Vacnt Units/Partly Boarded/Cemented	0.16	0.46
Q9f	# of Obviously Vacnt Units/Fully Boarded/Cemented	0.12	0.40
Q10a	Number of streetlights on block face	20.8	1.17
Q10b	Number of broken streetlights on block face	0.05	0.22
Q11	Number of Abandoned Cars	0.01	0.11
Q12a	Other Block Face Characteristics/Signs of gentrification	0.13	0.34
Q12b	Other Block Face Chars/Adlts, youth sit on front	0.29	0.46
Q12c	Other Block Face Chars/lots outdoor activity/people out-N/Y	0.24	0.43
Q12d	Other Block Face Chars/not many people outdoors-N/Y	0.45	0.50
Q12e	Other Block Face Chars/groups of unsupervised youth outdoors-	0.07	0.25
Q12f	Other Block Face Characteristics/Number of loose unattended	0	0

Table A-1: Descriptive Statistics: Variables From Blockface Coding Form, continued

Name	Description	Mean	S.D.
Census Tract 73.00 (N=94)			
Q1	Presence of Trash/Litter/Garbage	0.89	0.73
Q2	Presence of Drug Paraphernalia	0.03	0.18
Q3	Presence of Gang/Crew Members	0.04	0.20
Q4	Presnce of Defaced, Brken or Missing St and Directional Signals	0.31	0.5
Q5a	Number of Vacant Lots/Total	0.19	0.42
Q5b	Number of Vacant Lots/Number Not Maintained	0.13	0.37
Q5c	Number of Vacant Lots/Number Maintained	0.05	0.23
Q5d	Number of Vacant Lots/Number Very Well Maintained	0.01	0.10
Q6a	Number of Parks/Playgrounds/Total	0.11	0.34
Q6b	Number of Parks/Playgrounds/Number Not Maintained	0.01	0.10
Q6c	Number of Parks/Playgrounds/Number Maintained	0.07	0.30
Q6d	Number of Parks/Playgrounds/Number Very Well Maintained	0.02	0.15
Q7	Number of Units with Presence of Positive, Private Ownership	4.62	8.16
Q8	Number of Units with Broken Windows	0.30	0.87
Q9a	Number of Obviously Vacant Units	0.56	1.82
Q9b	Number of Obviously Vacant Units/Not Boarded--Inhabitable	0.15	0.70
Q9c	# of Obviously Vacnt Units/Not Boarded--Uninhabitable	0.02	0.21
Q9d	# of Obviously Vacnt Units/Burned Out	0	0
Q9e	# of Obviously Vacnt Units/Partly Boarded/Cemented	0.24	0.94
Q9f	# of Obviously Vacnt Units/Fully Boarded/Cemented	0.15	0.69
Q10a	Number of streetlights on block face	2.35	2.87
Q10b	Number of broken streetlights on block face	0.05	0.34
Q11	Number of Abandoned Cars	0.15	0.41
Q12a	Other Block Face Characteristics/Signs of gentrification-N/Y	0.04	0.20
Q12b	Other Block Face Chars/Adlts, youth sit on front	0.24	0.43
Q12c	Other Block Face Chars/lots outdoor activity/people outside-N/Y	0.13	0.34
Q12d	Other Block Face Chars/not many people outdoors-N/Y	0.59	0.50
Q12e	Other Block Face Chars/groups of unsupervised youth outdoors-	0.10	0.30
Q12f	Other Block Face Characteristics/Number of loose unattended	0	0

Table A-1: Descriptive Statistics: Variables From Blockface Coding Form, continued

Name	Description	Mean	S.D.
Census Tract 91.00 (N=140)			
Q1	Presence of Trash/Litter/Garbage	0.81	0.78
Q2	Presence of Drug Paraphernalia	0.07	0.39
Q3	Presence of Gang/Crew Members	0.31	0.70
Q4	Presnce of Defaced, Brken or Missing St and Directional Signals	0.16	0.44
Q5a	Number of Vacant Lots/Total	0.18	0.44
Q5b	Number of Vacant Lots/Number Not Maintained	0.06	0.26
Q5c	Number of Vacant Lots/Number Maintained	0.08	0.30
Q5d	Number of Vacant Lots/Number Very Well Maintained	0.04	0.20
Q6a	Number of Parks/Playgrounds/Total	0.04	0.22
Q6b	Number of Parks/Playgrounds/Number Not Maintained	0.02	0.15
Q6c	Number of Parks/Playgrounds/Number Maintained	0.01	0.08
Q6d	Number of Parks/Playgrounds/Number Very Well Maintained	0.02	0.19
Q7	Number of Units with Presence of Positive, Private Ownership	4.91	7.81
Q8	Number of Units with Broken Windows	0.30	2.31
Q9a	Number of Obviously Vacant Units	0.19	0.82
Q9b	Number of Obviously Vacant Units/Not Boarded--Inhabitable	0.03	0.17
Q9c	# of Obviously Vacnt Units/Not Boarded--Uninhabitable	0.01	0.12
Q9d	# of Obviously Vacnt Units/Burned Out	0	0
Q9e	# of Obviously Vacnt Units/Partly Boarded/Cemented	0.12	0.72
Q9f	# of Obviously Vacnt Units/Fully Boarded/Cemented	0	0
Q10a	Number of streetlights on block face	2.44	2.94
Q10b	Number of broken streetlights on block face	0	0
Q11	Number of Abandoned Cars	0.09	0.38
Q12a	Other Block Face Characteristics/Signs of gentrification	0.06	0.25
Q12b	Other Block Face Chars/Adlts, youth sit on front	0.05	0.22
Q12c	Other Block Face Chars/lots outdoor activity/people out-N/Y	0.14	0.34
Q12d	Other Block Face Chars/not many people outdoors-N/Y	0.59	0.49
Q12e	Other Block Face Chars/groups of unsupervised youth outdoors-	0.01	0.08
Q12f	Other Block Face Characteristics/Number of loose unattended	0.01	0.12

Table A-2. Scale Distribution for Physical Disorder Construct

Scale Score	Number of Blockfaces	Cumulative Frequency of Blockfaces	Percent	Cumulative percent
A. Tract 29.00				
4	3	3	3.9%	3.9%
3	2	5	2.6	6.5
2	13	18	17.1	23.6
1	23	41	30.3	53.9
0	35	76	46.1	100
B. Tract 73.04				
4	2	2	2.1%	2.1%
3	4	6	4.3	6.4
2	13	19	13.8	20.2
1	27	46	28.7	48.9
0	48	94	51.1	100
C. Tract 91.02				
5	2	2	1.4%	1.4%
4	3	5	2.1	3.5
3	5	9	2.9	6.4
2	16	25	11.4	17.8
1	26	51	18.6	36.4
0	89	140	63.6	100

Table A-3. Correlation Matrix for Survey Data, Pooled Across Census Tracts

	Q65a	Q65b	Q65c	Q65d	Q66a	Q66b	Q66c	Q66d	Q67a
Q65a	1.00								
Q65b	.480	1.00							
Q65c	.080	.025	1.00						
Q65d	.010	-.188	.470	1.00					
Q66a	-.034	.057	-.082	-.159	1.00				
Q66b	-.038	-.069	-.088	-.243	.319	1.00			
Q66c	.000	-.029	-.097	-.136	.295	.711	1.00		
Q66d	-.015	.034	.017	-.135	.088	.300	.278	1.00	
Q67a	-.105	-.099	-.227	-.174	.079	.167	.130	.220	1.00

Table A-4. Factor Analysis for Survey Data, Pooled Across Census Tracts

Item	Factor 1	Factor 2	Factor 3
Q65A (walk alone during daytime)	-0.1130	0.81159	0.1263
Q65B (walk alone after dark)	-0.0301	0.8694	-0.0605
Q65C (neighborhood safe during daytime)	-0.3931	0.0124	0.7512
Q65D (neighborhood safe after dark)	-0.5204	-0.2526	0.6048
Q66A (concerned - caught in fight)	0.5021	0.0991	0.14234
Q66B (concerned - caught in gunfire)	0.8079	-0.0081	0.3375
Q66C (concerned - hit by drive by shooting)	0.7614	0.0267	0.3947
Q66D (concerned - break into home)	0.4884	0.0356	0.2206
Q67A (seen crack vials, drug paraphernalia)	0.4274	-0.2098	-0.3040

Table A-5a. Scale Distribution for Fear1: Personal Victimization

A. Tract 29.00				
Scale Score	Number of Blockfaces	Cumulative Frequency of Blockfaces	Percent	Cumulative percent
8.0	1	1	4.3%	4.3%
10.0	5	6	21.7	26.1
11.0	1	7	4.3	30.4
11.5	2	9	8.7	39.1
12.0	2	11	8.7	47.8
12.3	1	12	4.3	52.2
13.0	5	17	21.7	73.9
14.3	1	18	4.3	78.3
14.5	1	19	4.3	82.6
15.0	1	20	4.3	87.0
16.0	3	23	13.0	100.0
B. Tract 73.04				
7	1	1	3.4%	3.4%
10	3	4	10.3	13.8
10.5	1	5	3.4	17.2
10.67	1	6	3.4	20.7
10.76	1	7	3.4	24.1
10.86	1	8	3.4	27.6
11	2	10	6.9	34.5
11.43	1	11	3.4	37.9
11.5	2	13	6.9	44.8
11.8	1	14	3.4	48.3
12	4	18	13.8	62.1
13	3	21	10.3	72.4
13.14	1	22	3.4	75.9
13.2	1	23	3.4	79.3
13.5	1	24	3.4	82.8
13.83	1	25	3.4	86.2
14.0	3	28	10.3	96.6
15.0	1	29	3.4	100.0

Table A-5a. Scale Distribution for Fear1: Personal Victimization, continued

A. Tract 91.02

Scale Score	Number of Blockfaces	Cumulative Frequency of Blockfaces	Percent	Cumulative percent
6	1	1	3.7%	3.7%
8	1	2	3.7	7.4
9	3	5	11.1	18.5
9.4	1	6	3.7	22.2
9.5	1	7	3.7	25.9
10	3	10	11.1	37.0
10.6	1	11	3.7	40.7
11.5	2	13	7.4	48.1
11.75	1	14	3.7	51.9
11.9	1	15	3.7	55.6
12	3	18	11.1	66.7
12.14	1	19	3.7	70.4
12.25	1	20	3.7	74.1
13.0	2	22	7.4	81.5
14.33	1	23	3.7	85.2
15	2	25	7.4	92.6
15.5	1	26	3.7	96.3
16	1	27	3.7	100.0

Table A-5b. Scale Distribution for Fear2: Risk Minimizing Behaviors

A. Tract 29.00

Scale Score	Number of Blockfaces	Cumulative Frequency of Blockfaces	Percent	Cumulative percent
2.0	3	3	12.5%	12.5%
2.8	1	4	4.2	16.7
3.0	3	7	12.5	29.2
3.5	1	8	4.2	33.3
3.7	1	9	4.2	37.5
4.0	15	24	62.5	100

B. Tract 73.04

2.0	3	3	10.3%	10.3%
2.5	1	4	3.4	13.8
3.0	6	10	20.7	34.5
3.14	1	11	3.4	37.9
3.16	1	12	3.4	41.4
3.2	1	13	3.4	44.8
3.29	1	14	3.4	48.3
3.33	1	15	3.4	51.7
3.4	1	16	3.4	55.2
3.5	1	17	3.4	58.6
3.57	1	18	3.4	62.1
3.67	2	20	6.9	69.0
4.0	9	29	31.0	100

C. Tract 91.02

2.71	1	1	3.7%	3.7%
3.0	4	5	14.8	18.5
3.25	1	6	3.7	22.2
3.39	1	7	3.7	25.9
3.5	2	9	7.4	33.3
3.67	2	11	7.4	40.7
3.75	1	12	3.7	44.4
3.85	1	13	3.7	48.1
4.0	14	27	51.9	100

Table A-6: Descriptive Statistics: Variables Included in Regression Analysis

Name	Description	N	Mean	S.D.	Min	Max
Census Tract 29.00						
Fear1	Self-reported fear of personal victimization.	22	12.42	2.26	8	16
Fear2	Self-reported fear of walking alone in neighborhood.	23	3.56	0.72	2	4
Pdis	Additive scores of dummy variables for seven physical disorder items.	76	0.88	1.05	0	4
	Included blockfaces:	21	0.81	1.08	0	4
Dvacrt	Presence/absence of vacant units.	58	0.47	0.50	0	1
	Included blockfaces:	21	0.38	0.50	0	1
Vtot	Number of violent victimizations of juveniles, 1993 and 1994 combined.	76	0.62	1.03	0	5
	Included blockfaces:	21	1.00	1.44	0	5
Census Tract 73.04						
Fear1	Self-reported fear of personal victimization.	29	11.92	1.68	7	15
Fear2	Self-reported fear of walking alone in neighborhood.	29	3.33	.63	2	4
Pdis	Additive scores of dummy variables for seven physical disorder items.	94	0.78	0.99	0	4
	Included blockfaces:	28	0.89	1.20	0	4
...crt	Presence/absence of vacant units.	74	0.23	0.42	0	1
	Included blockfaces:	28	0.21	0.42	0	1
Vtot	Number of violent victimizations of juveniles, 1993 and 1994 combined.	94	0.97	1.33	0	5
	Included blockfaces:	28	1.71	1.78	0	5
Census Tract 91.02						
Fear1	Self-reported fear of personal victimization.	27	11.46	2.42	6	16
Fear2	Self-reported fear of walking alone in neighborhood.	27	3.68	0.42	2.71	4
Pdis	Additive scores of dummy variables for seven physical disorder items.	140	0.66	1.08	0	5
	Included blockfaces:	26	1.42	1.50	0	5
Dvacrt	Presence/absence of vacant units.	88	0.13	0.33	0	1
	Included blockfaces:	26	0.23	0.43	0	1
Vtot	Number of violent victimizations of juveniles, 1993 and 1994 combined.	140	0.35	0.91	0	5
	Included blockfaces:	26	1.04	1.56	0	5

Table A-7: Results of Regression Analysis for Each Census Tract

	Fear1: Personal Victimization						Fear2: Walking Alone					
	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6	
Tract 29	*b*	*B*	*b*	*B*	*b*	*B*	*b*	*B*	*b*	*B*	*b*	*B*
Pdis	0.56	0.27	0.65	0.31	--	--	0.14	0.20	0.17	0.22	--	--
Vtot	-0.44	-0.29	-0.38	-0.25	-0.02	-0.05	-0.05	-0.10	-0.03	-0.08	-0.03	-0.05
Dvacrt	0.45	0.10	--	--	--	--	0.08	0.05	--	--	--	--
Intercept	12.11		12.15		3.60		3.48		3.45		3.60	
R2	0.15		0.14		0.00		0.05		-0.02		0.00	
N	20		20		20		20		20		20	
Tract 73.04	*b*	*B*	*b*	*B*	*b*	*B*	*b*	*B*	*b*	*B*	*b*	*B*
Pdis	0.40	0.28	0.40	0.28	--	--	-0.07	-0.13	-0.07	-0.13	--	--
Vtot	-0.19	-0.19	-0.25	-0.26	-0.21	-0.22	-0.10	-0.27	-0.10	-0.27	-0.10	-0.28
Dvacrt	-0.53	-0.13	--	--	--	--	0.02	0.01	--	--	--	--
Intercept	12.03		12.02		12.32		3.56		3.57		3.51	
R2	0.14		0.13		0.05		0.10		.10		.08	
N	27		27		27		27		27		27	
Tract 91.02	*b*	*B*	*b*	*B*	*b*	*B*	*b*	*B*	*b*	*B*	*b*	*B*
Pdis	-0.25	-0.16	-0.31	-0.21	--	--	-0.03	-0.11	-0.01	-0.03	--	--
Vtot	0.50	0.33	0.43	0.29	0.22	0.15	-0.09	-0.32	-0.06	-0.23	-0.07	-0.25
Dvacrt	-0.97	-0.18	--	--	--	--	0.36	0.36	--	--	--	--
Intercept	11.35		11.28		11.06		3.71		3.74		3.73	
R^2	.07		.05		.02		0.17		.06		.06	
N	25		25		25		25		25		25	

* p <.05

Table A-8. Correlation Matrix For Final Variables Used, Data Pooled Across Tracts

	Fear1	Fear2	Pdis	Vtot	Dvacrt
Fear1	1.00				
	(N=78)				
Fear2	.03	1.00			
	(N=78)	(N=79)			
Pdis	.06	-.01	1.00		
	(N=78)	(N=79)	(N=310)		
Vtot	-.10	-.23	.26	1.00	
	(N=78)	(N=79)	(N=310)	(N=310)	
Dvacrt	-.05	.06	.25	.26	1.00
	(N=75)	(N=76)	(N=220)	(N=220)	(N=220)

Table A-9: Results of Regression Analysis, Data Pooled Across Census Tracts

	Model 1 (fear2)		Model 2 (fear1)		Model 3 (fear1)		Model 4 (fear2)		Model 5 (fear2)		Model 6 (fear2)	
Pooled	***b***	***B***	***b***	***B***	***b***	***B***	***b***	***B***	***b***	**B**	***b***	***B***
Finsc	0.22	.14	0.21	.13	--	--	0.02	.04	.03	0.06	--	--
Vtot	-0.11	-0.09	-0.13	-0.11	-0.08	-0.07	-0.12*	-0.31	-0.09*	-0.25	-0.08*	-.023
Dvacrt	-0.21	-0.04	--	--	--	--	0.22	0.16	--	--	--	--
Int.	11.79		12.15		11.93		3.59		3.61		-0.09	
R^2	-0.02		-0.01		0.00		0.03		.03		0.05	
N	74		74		74		74		74		74	

*p <.05