

Revisiting the Relationship Between Crime and Architectural Design: An Analysis of Data from HUD's 1994 Survey of Public Housing Residents

Harold R. Holzman
U.S. Department of Housing and Urban Development

Tarl Roger Kudrick
U.S. Department of Housing and Urban Development

Kenneth P. Voytek
National Alliance of Business

Abstract

The authors look at type of building design and size of development with respect to major crime problems identified by public housing residents. Size of development appears to be more closely associated with the presence of major crime problems than does type of building. Overall, high-rise buildings fare better than one would expect, given the conventional wisdom that such dwellings are more hospitable to criminal activity than are other types of housing.

This analysis revisits the concept of Crime Prevention Through Environmental Design (CPTED) as it applies to public housing. Interest in the association of architectural design with the incidence of crime, especially crime in public housing, began with the publication of Oscar Newman's *Defensible Space: Crime Prevention Through Urban Design* (1972). An architect by profession, Newman noted that highrise buildings deny their residents opportunities for surveillance of the public grounds, lobbies, corridors, and stairways. He contended that this lack of surveillance renders much of the public space in highrise structures vulnerable to crime.

However, other than a series of studies by Brill and Associates (1975, 1976, 1977a, 1977b, 1977c), the U.S. Department of Housing and Urban Development's (HUD's) *Evaluation of the Urban Initiatives Anti-Crime Demonstration* (HUD, 1985), and Newman's later work (such as Newman and Franck, 1980), there has been little

systematic research on CPTED issues in public housing in the United States. Clarke (1994) suggests that Newman's "environmental determinism" provoked something of a reaction among behavioral scientists, resulting in the widespread adoption of "social determinism" in the study of crime in public housing that quickly became the dominant approach. Notwithstanding the popularity of particular explanatory models, Keyes (1992) notes that government-sponsored research on crime in public housing was sharply reduced during the Reagan administration, stating that "the period of serious investigation of management and crime reduction was over. Research was out." When research on crime in public housing began again in the late 1980s, recognition of the unusually rapid and significant impact of crack cocaine on the quality of life in urban communities thrust illicit drug traffic to center stage (Weisel, 1990; Webster and Connors, 1992; Skogan and Annan, 1994; Feins et al., 1994; Popkin et al., 1995).

Data from HUD's 1994 Survey of Public Housing Residents: Crime and Crime Prevention in Public Housing ("the Survey") provided an opportunity for a fresh look at architecture as a criminogenic factor. Presented here is an examination of the association between building design/development size and public housing residents' perception of crime problems in their communities. In the course of the analysis, data on several other variables, such as disorder and resident support for a variety of crime-control strategies, will also be analyzed.

The Survey

The Survey, conducted by telephone, collected information from public housing residents about their fear of crime, their assessment of the local crime problem, and their opinion of crime-prevention strategies in their development. HUD's Offices of Public and Indian Housing (PIH) and Policy Development and Research (PD&R) collaborated on the Survey, intending that it inform policy deliberations on public housing crime prevention by increasing HUD's understanding of residents' preferences regarding crime-reduction strategies. The research was performed by the Research Triangle Institute (RTI) through telephone interviews of a national sample of 1,547 public housing residents.

Research Methodology

Sampling

A sample of 1,547 residents of public housing located in the continental United States were interviewed. A multiphase probability sampling design was used to select the survey participants. The sampling process began with the selection of a stratified random sample from HUD's "951" computerized file of the approximately 1.3 million public housing addresses in the United States.¹ The sample was stratified by census region, size of public housing authority, and type of housing (that is, elderly or family). Ultimately, the sample was weighted up to provide estimates for the public housing population as a whole. In addition, these weights were adjusted to reduce biases from limited coverage of the public housing universe and nonresponses, yielding the final analysis weights.

By design, the Survey oversampled the public housing most likely to have serious crime problems: family developments in public housing authorities (PHAs) with at least 1,250 units. These PHAs are generally found in the most densely populated urban jurisdictions where crime rates, particularly with respect to violent offenses, tend to be highest. Seven of every 10 Survey respondents live in family developments and about one-fifth (21.5 percent) in housing reserved for the elderly; the remaining 8.5 percent did not respond to the question. In the actual public housing population, roughly one-third (35 percent) of

households are classified as “elderly” and are thus substantially underrepresented in this sample (Goering, Kamely, and Richardson, 1994). The aggregate response rate for the Survey was 75 percent. Some four out of five (81 percent) of those contacted at eligible addresses agreed to be interviewed, with virtually all respondents completing the process. A screening response rate (for eligible respondents) of 93 percent multiplied by 81 percent yields the aggregate rate of 75 percent.

Data Collection: The Choice of Telephone Interviews

The severely disadvantaged economic status of public housing residents as a population is well documented. Thus the researchers assumed that a relatively large proportion of public housing families might not have telephone service and would be excluded from the sampling process if data collection involved telephone interviews. Despite these concerns, time and cost constraints, coupled with desire for a survey of national scope, dictated the use of telephone interviewing. Hence the stratified random sample of public housing addresses in the United States was sent to a commercial address-matching firm so that telephone numbers could be paired with addresses. Slightly more than 40 percent of the public housing addresses produced telephone numbers.

The impact of restricting the Survey to households with telephones is unclear. International victimization studies have involved populations without widespread telephone service. Associated research directed to the issue of whether the victimization experience of households without telephone service differed from that of households with telephones indicates that some difference may exist: namely, a higher risk of victimization for households with telephones (van Dijk, Mayhew, and Killias, 1990). However, in the context of international research, telephone ownership was highly correlated with above-average income. Despite the inherent difficulty of making cross-cultural comparisons, the international victimization surveys involved the general population, not the largely low-income population targeted here.

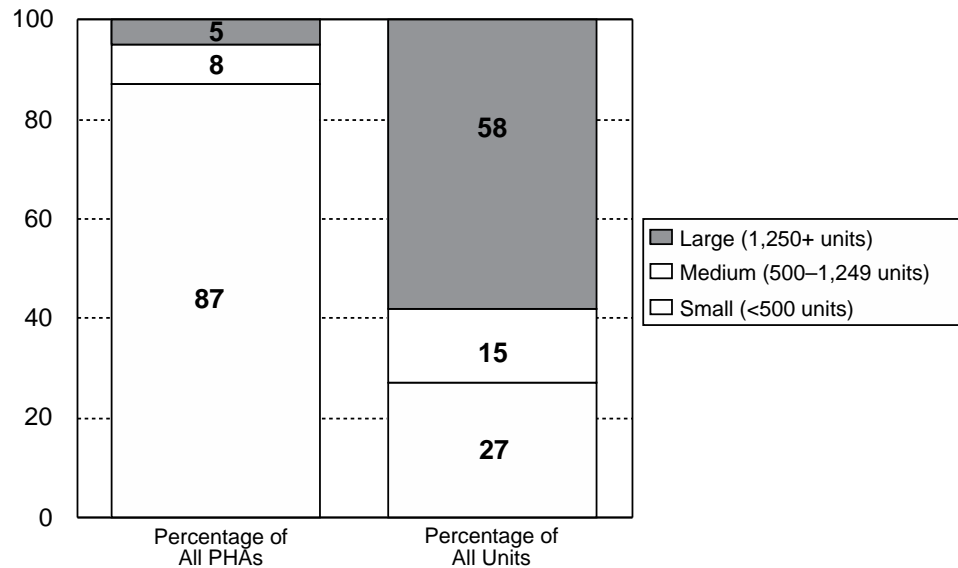
As discussed below, the 1994 Survey respondents match fairly well in several important ways with the population profile of U.S. public housing residents. Whether this resemblance extends to experience with criminal victimization, to perceptions of personal safety, or to attitudes about crime prevention is open to question.²

Comparing the Sample and the Population

The analysis presented in this article is limited to the family (as opposed to elderly) projects in the Survey and involves a sample of the Nation’s biggest PHAs—those with 1,250 or more units. These PHAs were divided into two categories: large (1,250–3,999 units) and largest (4,000–49,999 units). Since the two groups together account for fewer than 5 percent of all housing authorities, the Survey oversampled them in terms of their representation in the universe (see exhibit 1). However, their share of respondents in the sample virtually matches their share of the total number of units in the public housing universe, namely 58 percent. With respect to sex and race/ethnicity of the public housing population as a whole, the sample tallies reasonably well with recent estimates from HUD’s Multifamily Tenant Characteristics System (MTCS) (Goering, Kamely, and Richardson, 1994). Both the Survey and MTCS report that about three out of four (76 percent) households are headed by women. Some 36 percent of the Survey’s respondents are white, while MTCS reports 29 percent white. Conversely, the percent of African-American respondents in the Survey’s sample is slightly lower, at 48 percent, than the MTCS figure of 54 percent. With regard to Hispanic residents, the Survey and MTCS report 12 and 13 percent, respectively.

Exhibit 1

Public Housing Authorities in the United States, by Size



Data Analysis: Architectural Design and Perceptions of Crime and Disorder

Existing research on “defensible space” in public housing suggests that size of development and type of building influence vulnerability to crime. Examination of the Survey data indicates that the size of the PHA is also a factor. Since our analysis is based on a relatively small national sample that has subsequently been weighted up to reflect the public housing universe as a whole, only the clearest and most important patterns between key variables are described. We believe that some of these patterns are provocative, because they challenge the conventional wisdom on crime in public housing.

Size of Development

The first research issue to be addressed is the association of the size of the development—that is, the number of units it contains—with residents’ perceptions of crime and disorder. Some empirical research suggests that residents of large developments—those with hundreds of units—suffer greater rates of criminal victimization than households in small public housing enclaves (Newman, 1972; Newman and Franck, 1980; Roncek, Bell, and Francik, 1981). Table 1 displays data for just the large and largest³ PHAs, since only housing authorities in these two categories routinely include a full range of development sizes. In fact, many individual public housing developments in the Nation’s older central

Table 1

Percentage of Residents Reporting on Fear, Crime, and Disorder, by Size of PHA and Size of Development

	Large PHAs (1,250–3,999 units)			
	Development Size			
	2–50	51–100	101–500	501+
Feeling unsafe	21	33	27	50
Fear of crime	29	33	32	28
Major problems with crime:				
gunshots	21	35	33	52
burglary	21	16	20	28
robbery	17	22	18	21
assault	11	32	22	35
drug dealers	37	35	32	35
Major problems with disorder:				
broken lights	13	28	15	39
not enough lights	34	30	24	51
broken doors	8	0	8	8
trashy yards	39	39	40	51
graffiti	21	11	14	14
	Largest PHAs (4,000–49,999 units)			
	Development Size			
	2–50	51–100	101–500	501+
Feeling unsafe	32	15	39	48
Fear of crime	32	15	35	57
Major problems with crime:				
gunshots	39	28	42	65
burglary	21	17	23	25
robbery	26	15	23	33
assault	28	23	28	30
drug dealers	41	32	44	53
Major problems with disorder:				
broken lights	21	17	29	42
not enough lights	32	27	34	46
broken doors	16	8	21	30
trashy yards	29	39	58	53
graffiti	26	14	28	35

cities have several times the total number of units owned by the vast majority of PHAs. It is also important to recall that all of the data analyses involve only family developments that were deliberately oversampled.

Crime Problems

In general, residents of the largest developments (those with more than 500 units) were more apt to report major problems with crime than residents living in public housing properties with fewer units. This association is clearest with respect to the largest PHAs, which displayed the highest proportion of residents with major problems. Consistent with the residents' level of concern about crime was the percentage of those who reported "feeling unsafe" and having a "fear of crime": 48 and 57 percent, respectively. However, the association between crime problems and size of development was unambiguous only in regard to the largest developments in the largest PHAs. Otherwise, no direct relationship between the proportion of residents troubled by various types of crime and the size of the development was discernible.

Gunshots topped the list of residents' concerns in both PHA categories, with nearly two-thirds (65 percent) of the residents of the largest developments in the largest PHAs seriously troubled by gunshots (see exhibit 2). Overall, problems with drug dealers ranked second as a source of concern but, as exhibit 3 indicates, the link to the largest developments was not present in large PHAs. So few violent victimizations were reported that it was not possible to make statistically reliable estimates of their incidence by development size or type of building.

Exhibit 2

Major Problems With Gunfire, by Size of Development

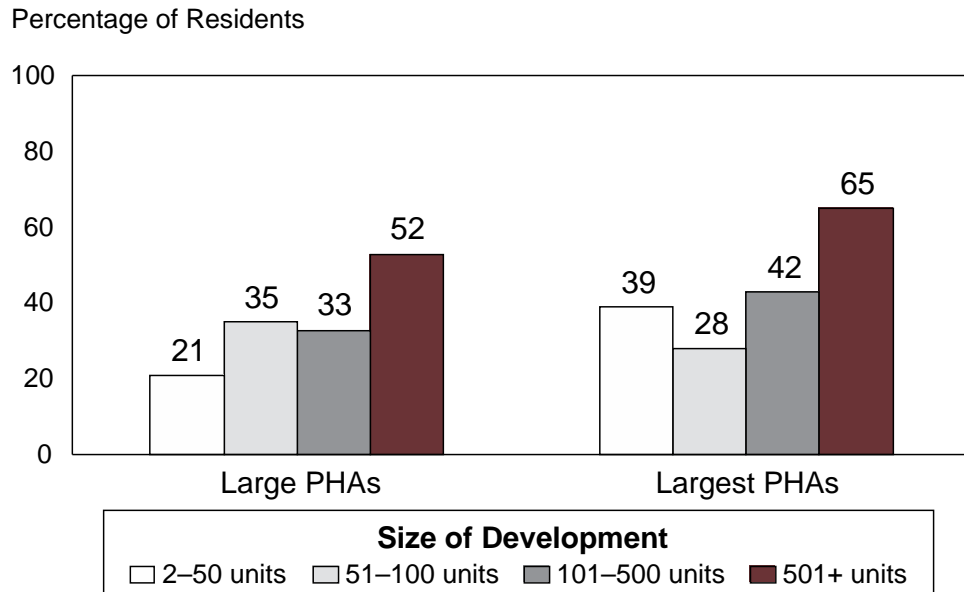
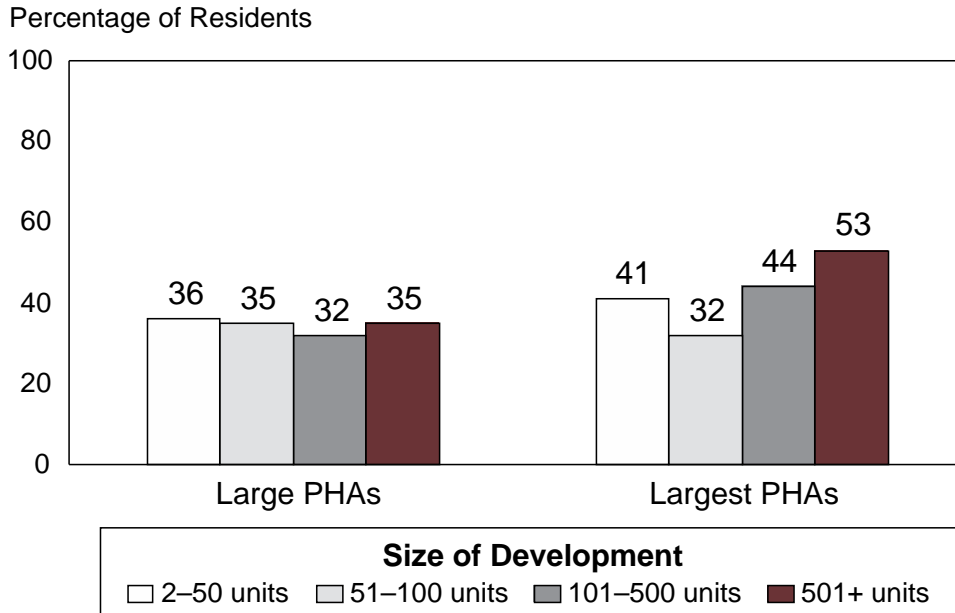


Exhibit 3

Major Problems With Drug Dealing, by Size of Development



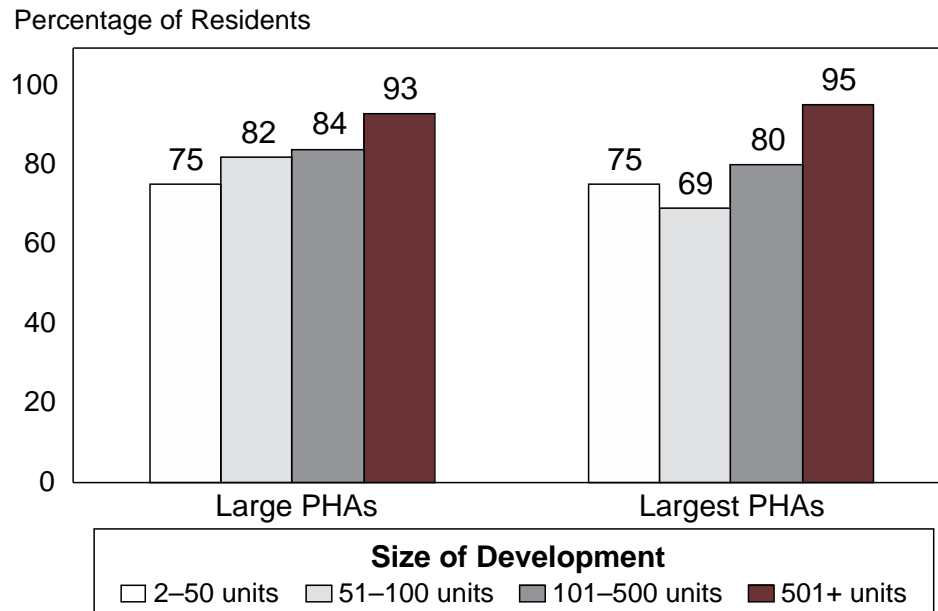
Disorder Problems

Overall, trash in the yards and inadequate streetlights provoked the greatest levels of dissatisfaction with respect to disorder in and around the respondents' developments. Generally, the highest levels of annoyance were registered in the largest PHAs. As was the case with crime, the residents of the largest developments were more likely to report major problems with disorder. Again, as with the crime data, the disorder data from developments with fewer than 500 units did not suggest a direct correlation between the size of the development and the proportion of dissatisfied residents.

Residents were asked their opinions on the projected effectiveness of a variety of enhancements to crime control, such as additional foot patrols by police. Anticrime measures involving some type of increase in police presence were perceived as potentially more effective in reducing crime than other types of security upgrades (see table 2). Although exhibit 4 deals only with the issue of increased police foot patrol, the pattern displayed shows that residents of the largest developments in large PHAs display consistently higher levels of support for crime control measures than do residents of the smaller developments. The most notable exception is the unanimous support of greater police presence by respondents living in developments with 51 to 100 units, as shown in table 2. Although not as clear cut as was the case with the large PHAs, the association between development size and positive assessment of projected crime-prevention measures in the largest PHAs is also evident.

Exhibit 4

Resident Support for Police Foot Patrols, by Size of Development



Interpretation of Findings: Size of Development

With respect to developments with 501 or more units, our analysis determined that the size of the public housing development is associated with serious crime problems. This finding supports Newman's (1972) original research, in which robbery rates were significantly higher in New York City Housing Authority developments with more than 1,000 units. However, Newman's later work is even more germane to our findings. In a larger study of both public and federally assisted housing designed to test further the notion of defensible space, Newman and Franck (1980) somewhat inadvertently produced more specific evidence with respect to the role of development size as a criminogenic factor.

Among the most important variables under scrutiny in the 1980 study was building size, which was also identified as a criminogenic factor in Newman's original conceptualization of defensible space, but the expanded replication found this variable to be only minimally correlated with crime rate. The authors realized that the vast majority of the developments in their study had 300 or fewer units. This finding is consistent with the general patterns of our results: Smaller developments experience fewer crime-related problems.

Our findings, coupled with those of Newman and Franck (1980), suggest that smaller developments are safer places to live. At present, however, one can do little more than hypothesize about the reasons why smaller developments seem safer and, by extension, about whether indepth research on smaller PHAs might reveal that they are generally less troubled by crime than larger developments. This knowledge gap is the result of the

Table 2

Percentage of Residents Who Believe in the Efficacy of Specific Crime-Prevention Techniques, by Size of PHA and Size of Development

	Large PHAs (1,250–3,999 units)			
	Development Size			
	2–50	51–100	101–500	501+
Police:				
greater police presence	80	100	86	92
more police patrolling on foot	75	82	84	93
more police bicycle patrols	54	74	67	93
more police car patrols	77	93	79	85
more police living nearby	77	78	76	80
placing police ministration nearby	68	80	75	93
Other security:				
private security guards	72	75	81	85
fence around the housing project	49	42	43	51
intercom for visitors	53	62	74	79
video cameras in public areas	66	78	80	79
visitors required to show ID	65	58	72	79
	Largest PHAs (4,000–49,999 units)			
	Development Size			
	2–50	51–100	101–500	501+
Police:				
greater police presence	87	85	91	93
more police patrolling on foot	75	69	80	95
more police bicycle patrols	73	65	70	76
more police car patrols	81	78	77	87
more police living nearby	75	78	81	65
placing police ministration nearby	80	70	76	73
Other security:				
private security guards	84	75	86	76
fence around the housing project	52	41	47	37
intercom for visitors	74	82	70	82
video cameras in public areas	71	69	82	76
visitors required to show ID	75	75	68	77

historically short shrift that research on crime in public housing has given to smaller PHAs (that is, those with fewer than 1,250 units). The Survey that yielded the data analyzed here also undersampled smaller PHAs. For our study, properties in smaller PHAs simply did not match the requirements of the analysis; for example, there are too few big developments and too few highrises. However, unpublished analyses executed in conjunction with the preparation of this article suggest that life in the smaller PHAs, which comprise 95 percent of all public housing authorities, is of better quality with respect to feelings of safety, fear of crime, and prevalence of major problems with crime and disorder. Nevertheless, efforts to seek more detailed comparisons were stymied by low cell frequencies and concomitant questions about statistical reliability.

Type of Building

The second research issue to be addressed is association of the type of building (that is, highrise, lowrise, townhouse, and scattered-site) with public housing residents' experiences with, and perceptions of, crime. In some cases building designs also tend to be typical of particular types of neighborhoods within a community. For example, today, highrises (buildings with more than six stories) are often found in older, inner-city neighborhoods. Conversely, by its very nature scattered-site housing is found in a variety of locales, ranging from central city to suburban and rural settings. Although once viewed by PHAs as an economical form of land use, highrise apartment buildings in public housing developments are increasingly viewed as being associated with both crime and disorder. With a few notable exceptions (Newman, 1972; Newman and Franck, 1980; U.S. Department of Housing and Urban Development, 1985), however, the crime-highrise nexus has not been systematically investigated and relies primarily on journalistic accounts such as Vergara's *Atlantic Monthly* article (1989), "Hell in a Very Tall Place." Since measurement of crime in public housing is relatively rare and still very much subject to methodological investigation (Dunworth and Saiger, 1994), the existence of a crime-highrise connection is far from firmly established.

Disorder is much more conspicuous than crime. While the physical damage resulting from disorder can literally destroy public housing properties, the comparative measurement of disorder across building types in public housing has not yet found its way into the research literature. Although well-known researchers such as Keyes (1992) certainly address the pernicious effects of disorder, their observations are aimed at public housing developments in general rather than at specific types of buildings.

Incidence of Burglary

As table 3 shows, households in highrises in both categories of PHAs were less apt to be victims of burglary than those living in the other types of buildings. Residents in scattered-site housing, which tends to consist of single-family homes and small multifamily buildings, reported the highest incidence of burglary in large PHAs (15 percent). In the largest PHAs, scattered-site and townhouse dwellers reported virtually the same level of victimization (12 and 14 percent, respectively). Highrise residents reported the lowest levels of burglary: 7 percent in the largest PHAs and 0 percent in large PHAs. Admittedly, the absence of even a single report of burglary is a vagary of sampling but may also be seen to reflect the inhospitality of highrise buildings to burglars.

Feeling Unsafe and Afraid

In large PHAs 14 percent of residents of highrises reported feeling very or somewhat unsafe—fewer than those living in other settings. About twice as many lowrise apartment dwellers (29 percent) and townhouse residents (27 percent) reported feeling unsafe. In the largest PHAs, the association between type of building and residents' unsafe feelings appeared much weaker. In general, however, a greater proportion of residents in every setting in the largest PHAs felt unsafe than did residents in large PHAs. With respect to fear of crime, the response patterns were roughly the same. Again, highrise settings do not appear to engender greater concerns about safety than do the other architectural types.

Guns and Drugs

The data in exhibits 5 and 6 suggest that particular types of public housing buildings are associated with handgun violence and drug traffic. But the locus of these crime problems does not appear only in highrise settings. Nearly half of the townhouse residents in the

Table 3

Percentage of Residents Reporting Concerns About Crime and Disorder, by Size of PHA and Building Type

	Large PHAs (1,250–3,999 units)			
	Highrises	Lowrises	Townhouses	Scattered-Site
Major problems with crime:				
feel unsafe	14	29	27	18
fear of crime	27	37	29	17
home victimization*	0	6	11	15
gunshots	16	37	29	15
drug dealers	21	43	26	22
Major problems with disorder:				
broken lights	14	25	15	14
not enough streetlights	22	22	32	27
broken/removed doors	6	13	0	8
trashy yards	21	39	38	33
graffiti	7	16	14	10
damaged elevators	6	4	1	2
	Largest PHAs (4,000–49,999 units)			
	Highrises	Lowrises	Townhouses	Scattered-Site
Major problems with crime:				
feel unsafe	33	30	36	25
fear of crime	36	38	37	26
home victimization*	7	9	14	12
gunshots	40	39	49	27
drug dealers	35	40	47	24
Major problems with disorder:				
broken lights	29	24	31	16
not enough streetlights	36	31	36	25
broken/removed doors	22	24	17	17
trashy yards	28	48	52	28
graffiti	23	32	27	19
damaged elevators	35	0	5	3

*Percentage of residents who have been the victim of a burglary or a household larceny during the previous 6 months.

largest PHAs were troubled by both gunshots and drug dealers. Conversely, in the large PHAs, it was the lowrise dwellers who were most seriously concerned about gunshots (37 percent) and drug dealers (43 percent). As in the earlier analyses, the relative volume of complaints is greatest for households of the largest PHAs. A comparison of silhouettes of the large PHA bargraphs in exhibits 5 and 6 reveals a striking similarity, supporting the notion that architectural design plays a role and highlighting the link between gunshots and drug dealers. The comparatively low volume of complaints emanating from highrises is evident in the silhouettes of all four bargraphs in exhibits 5 and 6.

Exhibit 5

Major Problems With Gunfire, by Building Type

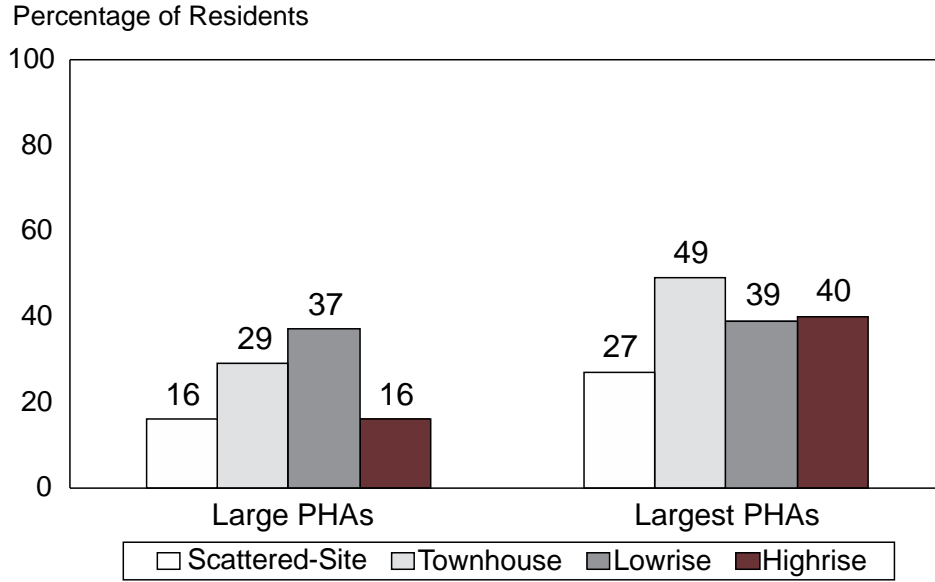


Exhibit 6

Major Problems With Drug Dealing, by Building Type

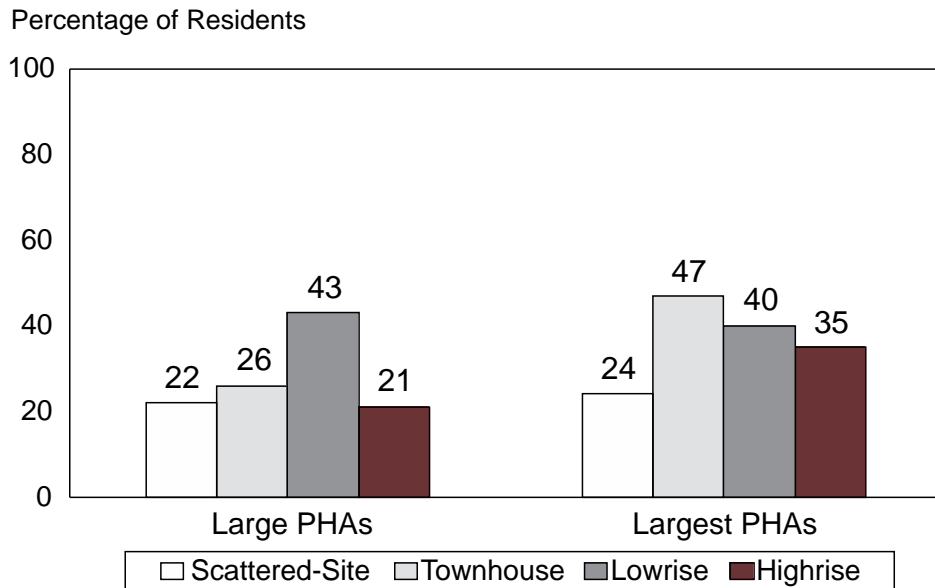


Table 4 examines residents' support for crime-prevention measures in relation to the type of building in which they live. In large PHAs greater proportions of lowrise residents consistently expressed support for more policing. It is interesting to note that the groups that consistently expressed the greatest concern about crime—residents of the largest developments in both categories and residents of lowrises in large PHAs—also were strongest in their support of the belief that more policing would help reduce crime.

Table 4

Percentage of Residents Who Believe in the Efficacy of Specific Crime Prevention Techniques, by Size of PHA and Building Type

	Large PHAs (1,250–3,999 units)			
	Highrises	Lowrises	Townhouses	Scattered-Site
Police:				
greater police presence	67	92	88	88
more police patrolling on foot	64	85	83	82
more police bicycle patrols	50	70	68	59
more police car patrols	61	91	82	72
more police living nearby	50	85	78	67
placing police ministration nearby	66	86	73	85
Other security:				
private security guards	68	78	76	75
fence around the housing project	26	56	41	47
intercom for visitors	87	69	59	75
video cameras in public areas	82	78	71	78
visitors required to show ID	80	68	66	75
	Largest PHAs (4,000–49,999 units)			
	Highrises	Lowrises	Townhouses	Scattered-Site
Police:				
greater police presence	82	89	90	82
more police patrolling on foot	82	83	78	82
more police bicycle patrols	59	71	75	67
more police car patrols	85	78	79	78
more police living nearby	62	81	75	65
placing police ministration nearby	77	73	74	81
Other security:				
private security guards	81	77	79	72
fence around the housing project	46	45	38	45
intercom for visitors	83	73	73	72
video cameras in public areas	85	78	75	74
visitors required to show ID	85	71	67	58

The strongest support for “other security” measures (as opposed to “more policing”) came from the residents of highrises in both PHA categories. Interestingly, the highrise tenants of both categories were relatively unenthusiastic about the crime prevention prospects of “building a fence around the project,” while such measures as “requiring visitor to show ID,” “an intercom for visitors,” and “video cameras in public areas” received strong backing from more than 80 percent of respondents. Ironically, the same surveillance-oriented crime-prevention modalities are routinely found in well-to-do, private-sector highrise housing. Clearly, residents of highrise public housing are aware of the shortfalls in their buildings’ security arrangements and of the range of possible solutions.

Interpretation of Findings: Type of Building

Our findings concerning the question of whether highrise buildings are more criminogenic than the other architectural styles appear to challenge, rather than confirm, conventional wisdom. In comparison to residents of other types of buildings, highrise dwellers in the 1994 Survey felt safer and were less likely to have serious concerns about crime. Again, an examination of Newman’s (1972) *Defensible Space* and Newman and Franck’s (1980) study proves instructive. Newman’s first work studied only New York City, focused almost exclusively on highrises (50 of 53 sites), and compared unusually large sites (1,000+ units) with “others.” Highrises located at sites with 1,000+ units had a much higher average incidence of robbery than apartment buildings with fewer stories (67 as opposed to 47). However, in sites with 1,000 or fewer units, robbery rates for highrises were only slightly higher (51 as opposed to 47).

For purposes of comparison with the present study’s findings, it is perhaps more germane that the robbery rates in the only two townhouse sites studied by Newman (1972) were among the highest that he encountered, exceeded only by those for the tallest highrises in the developments with 1,000+ units. Our finding that crime-related problems were highest for townhouse dwellers in the largest PHAs is thus consistent with Newman’s conclusions. It should be noted that Newman’s analysis of highrises in developments with 1,000+ units represents a very special case, because these developments exist in only about a dozen PHAs nationwide.⁴

In contrast to the original 1972 research, Newman and Franck’s 1980 study included 63 sites, of which only 11 were highrises. More than half (34) were lowrises and roughly a quarter (18) were townhouses. Differences among the three types of buildings, in terms of vulnerability to crime, were measured through a variable termed “accessibility,” referring to doors and windows through which the structure could be penetrated by would-be offenders (Newman and Franck, 1980). “Accessibility” proved to be strongly correlated ($r = .43, p < .05$) with burglary, while “size of building” had little effect on either burglary or violent crime. Highrises do not seem to be unusually criminogenic in either Newman and Franck’s analysis or in the present study.

In HUD’s *Final Report of the Evaluation of the Urban Initiatives Anti-Crime Demonstration* (1985), highrises did not fare as well as in the present study. HUD researchers collected information that involved a sample of PHAs, most of which would fall into the 1994 Survey’s “largest” category. With the exception of burglary, where rates were low (7 percent), the incidence of crime in highrises appeared to be greater, with their residents reporting more trouble with crime than those living in lowrises. Some 34 percent of lowrise dwellers felt unsafe, versus 44 percent of highrise residents.

A Note About Residents' Evaluation of Police Services

Respondents living in large PHA highrises expressed by far the most satisfaction with the quality of police service in their neighborhoods, with 70 percent giving a “good” rating. This finding is consistent with the fact that, as a group, highrise dwellers were less apt to express crime-related concerns. As table 5 shows, residents of the largest developments in the largest PHAs were less pleased with local police service, a finding also consistent with their higher levels of crime-related concerns (see table 4). Furthermore, highrise residents' satisfaction with the police is also paralleled by the fact that they were more likely than other residents to express interest in “other security” improvements rather than enhanced policing. Given the strong support for more policing as a tool in crime prevention, residents' dissatisfaction with the police supports the notion that the public housing universe is markedly underserved in this area (Skogan and Annan, 1994).

Table 5
Percentage of Residents Rating Police Service as “Good”

	By Size of PHA and Building Types:			
	Highrise	Lowrise	Townhouse	Scattered-Site
Large PHA	70	52	57	51
Largest PHA	42	33	39	52

	By Size of PHA and Density:			
	2–50 units	51–100 units	101–500 units	501+ units
Large PHA	50	44	58	46
Largest PHA	33	53	31	29

Conclusions

Official statistics on crime in public housing are difficult to obtain, since few police departments tally offenses for such small areas. More important is the fact that hard data about the vulnerability of various types of buildings to crime are also lacking. Our findings indicate that public housing highrises may not be as criminogenic as the conventional wisdom would lead one to believe. After all, major crimes are still statistically rare events, and the average city dweller does not often witness felonies. In contrast, however, the disorder that is all too common in low-income, inner-city neighborhoods is more easily observed. Furthermore, criminologists have long noted the association between crime and disorder and the fact that a disordered environment can engender a sense of unease and fear of crime (Skogan, 1990). Notwithstanding the serious crime problems afflicting urban America, disorder, even more than crime, accounts for the poor reputation that much public housing, especially highrise public housing, has acquired in recent decades.

Family highrises, and to some extent family developments of 500 or more units, have come to be considered disorder prone. The *Final Report of the National Commission on Severely Distressed Public Housing* (1992) questions whether large developments are really manageable. Thus the conflicting research findings on highrise public housing may be due to disorder rather than crime. The Commission judged highrise buildings to be inappropriate for families with children. In these buildings hundreds of people must share stairwells, corridors, and elevators. Routine wear and tear coupled with backed-up plumbing lines, broken windows, and other problems makes timely maintenance an

expensive and daunting task. The Commission notes that elevator maintenance is the single largest annual modernization expense for some PHAs. In addition to being short on defensible space, the physical design of highrises often prevents parents from supervising their children's play and contributes to higher noise levels and the appearance of disorder. Studies of public housing's family highrises, such as the one commissioned by the city of Philadelphia in the late 1970s, have concluded that these buildings are more suitable for elderly housing (Ueland and Junker, 1979), which has proven less vulnerable to crime and disorder. After years of trying to contain the deterioration of its family highrises, the Newark, New Jersey, PHA recently reached the same conclusion (Gugliotta, 1995). At present, the inappropriateness of highrise public housing for families is not subject to much debate. The current argument involves the question of whether it is more cost effective to raze family highrises or attempt to rehabilitate them for other uses, such as elderly housing.

Older public housing properties in large cities across the United States are currently undergoing major renovations, sometimes involving both demolition and introduction of less dense designs through such programs as HOPE VI. Family highrises and large family developments may be a thing of the past. Therefore, the fact that little research has been done on the connection of large developments and highrise architecture to crime may no longer be relevant to Federal policymakers or PHA directors. However, there is still little understanding of crime in other types of public housing. Our findings suggest that townhouses and lowrise housing might be even more vulnerable to crime. From time to time, criminological research even casts doubt on the notion that big-city public housing is more criminogenic than private-sector housing in the same neighborhoods (Farley, 1982; Harrell and Gouvis, 1994).

Regardless of the absence of empirical research on crime in public housing, extreme poverty and family disorganization in the public housing universe, especially in big cities, are well documented. Thus it is logical to label these communities as particularly criminogenic, even if the crime data are lacking. It is a safe assumption that crime will not disappear with the advent of less dense developments and fewer family highrises. We need to look at the 95 percent of the public housing authority universe occupied by small PHAs, because smaller, less dense public housing developments are becoming more prevalent in our Nation's cities.

Authors

Harold Holzman began his criminal justice research career with the Law Enforcement Assistance Administration. Dr. Holzman, who received his Doctorate in Criminal Justice and Criminology, has held a variety of public- and private-sector posts, including that of associate director of a Rutgers University School of Criminal Justice research center. He joined HUD's Office of Policy Development in 1988. Currently, he is performing criminological research related to crime in public housing.

Tarl Roger Kudrick is a master's degree candidate in the field of personality psychology at Howard University. He plans to pursue a Ph.D. in the same area, followed by a career as a professor and researcher. He is a special research affiliate in HUD's Office of Policy Development and Research.

Kenneth P. Voytek, Director of Economic Research and Chief Economist with the National Alliance of Business, examines the way workforce development issues and public policies affect business. He previously worked for HUD, the Michigan Department of Commerce, and The Urban Institute.

Notes

1. *Survey of Public Housing Residents: Crime and Crime Prevention in Public Housing*, submitted to HUD by RTI in July 1994, contains an extensive discussion of sampling procedures.
2. In 1995 HUD sponsored additional research on criminal victimization in public housing that included an attempt to learn whether possession of a telephone correlated in some way with victimization.
3. Although New York City (NYC) data were included in the Survey, they were excluded from this analysis. Some 90 percent of the NYC data came from highrise buildings with a heavy sampling of very large developments. Hence comparisons across development size and type of building might have been unduly biased by the NYC data.
4. These data were derived from HUD's System for Management Information Retrieval—Public Housing (SMIRPH) database.

References

- Abt Associates, Inc. 1994. *Public Housing Drug Elimination Project Resource Document: Final Report*. Washington, D.C.: U.S. Department of Housing and Urban Development.
- Annan, S.O., and W.G. Skogan. 1993. *Drug Enforcement in Public Housing: Signs of Success in Denver*. The Police Foundation.
- Brill and Associates. 1975. *Victimization, Fear of Crime, and Altered Behavior: A Profile of the Crime Problem in Four Housing Projects in Boston*. Washington, D.C.: U.S. Department of Housing and Urban Development.
- _____. 1976. *Victimization, Fear of Crime, and Altered Behavior: A Profile of the Crime Problem in William Nickerson Jr. Gardens, Los Angeles, California*. Washington, D.C.: U.S. Department of Housing and Urban Development.
- _____. 1977a. *Victimization, Fear of Crime, and Altered Behavior: A Profile of the Crime Problem in Capper Dwellings, Washington, D.C.* Washington, D.C.: U.S. Department of Housing and Urban Development.
- _____. 1977b. *Victimization, Fear of Crime, and Altered Behavior: A Profile of the Crime Problem in Murphy Homes, Baltimore, Maryland*. Washington, D.C.: U.S. Department of Housing and Urban Development.
- _____. 1977c. *Victimization, Fear of Crime, and Altered Behavior: A Profile of the Crime Problem in Scott/Carver Homes, Dade County, Florida*. Washington, D.C.: U.S. Department of Housing and Urban Development.
- Bureau of Justice Statistics. 1993. *Highlights from 20 Years of Surveying Crime Victims: The National Crime Victimization Survey, 1973–1992*. Washington, D.C.
- Cisneros, Henry G. 1995. *Defensible Space: Deterring Crime and Building Community*. Washington, D.C.: U.S. Department of Housing and Urban Development.

- Clarke, R.V. 1992. *Situational Crime Prevention: Successful Case Studies*. New York: Harrow and Heston.
- _____. 1994. "CPTED and Situational Prevention in Public Housing." Paper prepared for the Technical Assistance Workshop on "Crime Prevention Through Environmental Design." Washington, D.C.: U.S. Department of Housing and Urban Development.
- Conner, R., and P. Burns. 1991. *The Winnable War: A Community Guide to Eradicating Street Drug Markets*. Washington, D.C.: U.S. Department of Housing and Urban Development.
- DeFrances, C.J., and S.K. Smith. 1994. *Crime and Neighborhoods*. Washington, D.C.: U.S. Department of Justice.
- Dunworth, T., and A. Saiger. 1994. *Drugs and Crime in Public Housing: A Three-City Analysis*. Santa Monica, CA: RAND.
- Eve, S.B. 1985. "Criminal Victimization and Fear of Crime Among the Noninstitutionalized Elderly in the United States: A Critique of the Empirical Research Literature," *Victimology* 101:397–408.
- Farley, J.E. 1982. "Has Public Housing Gotten a Bum Rap? The Incidence of Crime in St. Louis Public Housing Developments," *Environment and Behavior* 14(4):443–477.
- Feins, J.D., S.R. Merrill, N. Kutty, K. Heintz, and G.P. Locke. 1994. *Revised Methods of Providing Federal Funds for Public Housing Agencies: Final Report*. Washington, D.C.: U.S. Department of Housing and Urban Development.
- Goering, J., A. Kamely, and T. Richardson. 1994. *The Location and Racial Composition of Public Housing in the United States*. Washington, D.C.: U.S. Department of Housing and Urban Development.
- Greenberg, R.M. Winter 1992. "Less Bang-Bang for the Buck," *Policy Review*, pp. 56–60.
- Gugliotta, G. 1995. Saturday, September 2, 1995. "Newark Housing Authority Raises Its HUD Rating as It Razes Highrises," *The Washington Post*, p. A9.
- Gurwitt, R. December 1993. "Visions of Community in an Urban War Zone," *Governing*, pp. 28–33.
- Harrell, A., and C. Gouvis. 1994. *Predicting Neighborhood Risk of Crime*. Washington, D.C.: The Urban Institute.
- International Association of Chiefs of Police. 1991. *A Study of the Security Needs of the Buffalo Municipal Housing Authority*. Alexandria, VA.
- Keyes, L.C. 1992. *Strategies and Saints: Fighting Drugs in Subsidized Housing*. Washington, D.C.: The Urban Institute Press.
- Merry, S.E. 1981. "Defensible Space undefended: Social Factors in Crime Control Through Environmental Design," *Urban Affairs Quarterly* 16(4):397–422.

_____. 1981. *Urban Danger: Life in a Neighborhood of Strangers*. Philadelphia: Temple University Press.

National Commission on Severely Distressed Public Housing. 1992. *The Final Report of the National Commission on Severely Distressed Public Housing: A Report to the Congress and the Secretary of Housing and Urban Development*. Washington, D.C.

Newman, O. 1972. *Defensible Space: Crime Prevention Through Urban Design*. New York: Macmillan.

_____, and K.A. Franck. 1980. *Factors Influencing Crime and Instability in Urban Housing Developments*. Washington, D.C.: National Institute of Justice.

Popkin, S.J., L.M. Olson, A.J. Lurigio, V.E. Gwiasda, and R.G. Carter. 1995. "Sweeping Out Drugs and Crime: Residents' Views of the Chicago Housing Authority's Public Housing Drug Elimination Program," *Crime and Delinquency* 41(1):73–99.

President's Commission on Housing. 1982. *The Report of the President's Commission on Housing*. Washington, D.C.

Rabushka, A., and W.G. Weissert. 1974. *Caseworkers or Police? How Tenants See Public Housing*. Stanford, CA: Hoover Institution Press.

Rainwater, L. 1970. *Behind Ghetto Walls: Black Family Life in a Federal Slum*. Chicago: Aldine.

Research Triangle Institute. 1994. *Survey of Public Housing Residents: Crime and Crime Prevention in Public Housing*. Research Triangle Park, NC.

Roncek, D.W., R. Bell, and J.M.A. Francik. 1981. "Housing Projects and Crime," *Social Problems* 29:151–166.

Rouse, W., V. Rubenstein, and H. Rubenstein. 1978. *Crime in Public Housing: A Review of Major Issues and Selected Crime Reduction Strategies*, Vol. 1. Washington, D.C.: U.S. Department of Housing and Urban Development, Office of Policy Development and Research.

Skogan, W.G. 1990. *Disorder and Decline: Crime and the Spiral of Decay in American Neighborhoods*. New York: Free Press.

_____, and S.O. Annan. 1994. "Drugs in Public Housing: Toward an Effective Police Response," in D. MacKenzie and C. Uchida, eds., *Drugs and Crime: Evaluating Public Police Initiatives*. Thousand Oaks, CA: Sage Publications.

Ueland and Junker. 1979. *Reuse and Improvements: High-Rise Public Housing*. Philadelphia: Philadelphia Housing Authority.

U.S. Department of Housing and Urban Development. 1985. *Final Report of the Evaluation of the Urban Initiatives Anti-Crime Demonstration*. Washington, D.C.

van Dijk, J.J.M., P. Mayhew, and M. Killias. 1990. *Experiences of Crime Across the World: Key Findings of the 1989 International Crime Survey*. Boston: Kluwer Law and Taxation Publishers.

Vergara, C.J. September 1989. "Hell in a Very Tall Place," *Atlantic Monthly*, pp. 72–78.

Webster, B., and E.F. Connors. 1992. *The Police, Drugs, and Public Housing*. Washington, D.C.: National Institute of Justice.

Weisel, D.L. 1990. *Tackling Drug Problems in Public Housing: A Guide for Police*. Washington, D.C.: Police Executive Research Forum.