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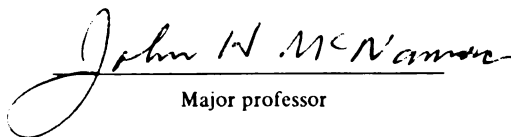
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PHYSICAL ENVIRONMENTAL DESIGN AND THE OCCURRENCE
OF CRIME IN CAMPUS RESIDENCE HALLS

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ROGER CHARLES MILLER

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**PHYSICAL ENVIRONMENTAL DESIGN AND THE OCCURRENCE
OF CRIME IN CAMPUS RESIDENCE HALLS**

By

Roger Charles Miller

A THESIS

**Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of**

MASTER OF SCIENCE

School of Criminal Justice

1990

ABSTRACT**PHYSICAL ENVIRONMENTAL DESIGN AND THE OCCURRENCE
OF CRIME IN CAMPUS RESIDENCE HALLS****By****Roger Charles Miller**

This study investigates the relationship between physical environmental design and the frequency of occurrence of burglary, larceny, and malicious destruction of property in campus residence halls. A purposive sample of the residence halls at Michigan State University resulted in the selection of eight residence halls with a combined population of 6,511 residents.

Crime data utilized were the 221 incidents which occurred in the eight residence halls during the school year September, 1986 to June, 1987, as reported by the campus Department of Public Safety. Physical design features include hall length, percentage of room doors facing room doors across the hall, number of rooms per floor, number of rooms per residence hall, number of floors, floor level, and common bath versus two rooms sharing a bath.

All research hypotheses were rejected at the .05 significance level. Results of this study may have been influenced by the use of a non-random sampling procedure and the small number of cases in some hypothesis tests.

To my parents, Fletcher and Margaret Miller

ACKNOWLEDGEMENTS

My thesis committee, John McNamara, Ken Christian, and Robert Warden, provided the necessary direction and motivation. They also went "beyond the call of duty" in scheduling my defense on short notice at a busy time.

MSU Department of Public Safety Director Bruce Benson provided access to crime incident records and authorized interviews of department personnel. Commander Andrew McEntee answered many questions and directed me to other sources of information.

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Finally, my wife Linda and daughter Mallory endured frequent and lengthy absences of a husband and father and provided much needed support which allowed me to complete this thesis.

TABLE OF CONTENTS

LIST OF TABLES	viii
CHAPTER I. THE PROBLEM	1
NEED	1
PURPOSE	4
HYPOTHESIS	4
THEORY	4
OVERVIEW	7
CHAPTER II. LITERATURE REVIEW.....	8
INTRODUCTION-ORGANIZATION	8
CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN.....	8
TERRITORIALITY	18
CAMPUS CRIME.....	20
RESIDENCE HALLS	27
SUMMARY	38
CHAPTER III. DESIGN OF STUDY	43
DESIGN	43
HYPOTHESES.....	44
SAMPLE	45
MEASURES	47
CRIME DATA	47
DESIGN FEATURES	48

DATA COLLECTION.....	50
CRIME INCIDENTS	50
HALL POPULATION DEMOGRAPHICS.....	51
STUDENT OPINION SURVEY	51
INTERVIEWS	54
ANALYSIS PROCEDURES.....	54
CHAPTER IV. ANALYSIS OF RESULTS.....	55
CRIME DATA.....	55
DESCRIPTIVE.....	55
HYPOTHESES	59
STUDENT OPINION SURVEY.....	61
DESCRIPTIVE.....	61
SOS HYPOTHESES.....	62
SUMMARY	63
CHAPTER V. SUMMARY AND CONCLUSIONS	67
SUMMARY	67
CONCLUSIONS	69
DISCUSSION-FUTURE RESEARCH.....	70
APPENDICES.....	72
APPENDIX A DEFINITIONS.....	72
APPENDIX B MAP OF CAMPUS	74
APPENDIX C CRIME STATISTICS	75
APPENDIX D RESIDENCE HALL POPULATION DESCRIPTIONS	78
APPENDIX E SOS SURVEY INSTRUMENT	80

BIBLIOGRAPHY	83
CITED REFERENCES	83
GENERAL REFERENCES	87

LIST OF TABLES

Table 2.1	Location, Defensible Space, & Danger Perception	16
Table 2.2	Crime Type, Victimization Characteristic, Victimization Rate	25
Table 2.3	Summary of Literature Review	39
Table 3.1	Hall, #Floors, Population, and Crime Rate	47
Table 3.2	SOS Item Analysis	54
Table 4.1	Crime Types and Number of Incidents	55
Table 4.2	Floor level and Number of Incidents	56
Table 4.3	Crime Location	56
Table 4.4	Class of Stolen Items	57
Table 4.5	Dollar Value of Stolen Items	57
Table 4.6	Dollar Value of Damage Incidents	58
Table 4.7	Day Crime Incident Occurred	58
Table 4.8	Tools Used In Crime	58
Table 4.9	Hall Population, SOS Responses	61
Table C.1	Campus Crime Statistics	75
Table C.2	Crime Statistics For All Halls	76
Table C.3	Residence Hall Crime Rates	77
Table D.1	Residence Hall Populations Of Eight Sample Halls	78
Table D.2	Residence Hall Populations Of All Halls	79

CHAPTER I. THE PROBLEM

NEED

Since 1921, crime and the fear of crime have continued to be important issues. (O'Hare, 1921) In recent times, sources such as The Gallop Poll, the Uniform Crime Reports, and the National Crime Victimization Survey have provided information about the status of crime and the fear of crime in our nation's cities and rural areas.

The occurrence of crime can cause events such as the destruction or loss of property, physical injury or death, or the demise of businesses or neighborhoods. Although the level of crime may vary and the actual amount of crime may be disputed, crime continues to be of great concern to many people. The fear of crime has become a problem as serious as crime itself. (Clemente & Kleiman, 1977) The President's Commission on Law Enforcement, the Gallop Poll, and the National Crime Victimization Survey have all documented the fear of crime in the United States.

→ The fear of crime can force changes in daily living habits and affect the psychological well-being of those living in a state of constant anxiety. Skogan (1986) states that the fear of crime can cause: (1) physical and psychological withdrawal from community life; (2) a weakening of the informal social control processes that inhibit crime and disorder; (3) a decline in the organizational life and mobilization capacity of the neighborhood; (4) deteriorating business conditions; (5) the importation and domestic production of delinquency and deviance; and (6) further dramatic changes in the composition of the population.

The problem of crime and the fear of crime has not been limited to the cities and rural areas. This problem has developed on the campuses of colleges and

universities as well. Early campus problems included the provision of heat, the disposal of waste, the avoidance of fires, the protection of property, or disciplinary problems such as swearing, drunkenness, noise, improper dress, and card playing. (Gelber, 1972) John W. Powell (1979) states that there was very little need for campus security in the early 1900's because the campus of that time projected a 'sanctuary image.' The outside community was not allowed on campus, and as a result, few crimes were committed by outsiders. In the late 1940's and 50's there was an increase in thefts, vandalism, and campus parking problems. These problems continued on through the early 1960's.

The belief that campus crime is a problem as serious as crime off the campus is increasingly being accepted. During the 1960's and early 1970's, student dissent and disturbances developed into a major problem on many U.S. campuses. By the late 1970's, student dissent had declined, but theft of property, vandalism, arson, assaults, and armed robbery had increased.

In 1982, the authors of an article in Newsweek magazine (Williams, D.A., Morris, H. & Contreras, J., 1982) reported that crime on college campuses had become almost as big an issue as crime in the city streets. U.S. News & World Report (1982) writers reported that college and university administrators said that many campuses could no longer be considered "secure havens for scholarly pursuit" (p.49).

As campuses become communities with non-heterogeneous populations of differing values, cultures, and philosophies, campus administrators are faced with the same types of problems faced by other communities. Crime problems on the campus are similar to and just as serious as those off the campus.

In a recent survey by USA Today (1988), college and university officials from 698 schools reported a total of 285,932 crimes for 1987. This total included 3,366

drug law violations, 1,874 armed robberies, 653 rapes, 13,079 assaults, 22,170 burglaries, and 144,717 thefts. Of the thefts, 13,446 occurred in residence halls.

Although there may not have been a major statistical increase in campus crime, there has certainly been an increased awareness of crime on campus. In an attempt to deal with the increased awareness and concern about crime on campus, many campus officials are utilizing techniques of crime prevention. (American School and University, 1980; Dahlinger, 1989; Gross, 1973; Handley, 1980; Williams, D.A., Morris, H., & Contreras, J., 1982; Nolte, 1977; Strunk, 1980; U.S. News & World Report, 1982) One of these crime prevention techniques is known as Crime Prevention Through Environmental Design (CPTED). This technique is based on the assumption that environmental design can play a part in preventing crime and reducing the level of fear of crime. It is generally agreed that lighting and target hardening (locks, alarms, fencing, tamper-resistant materials, etc.) have an effect on the occurrence of crime. The relationship between the incidence of crime and other environmental design techniques is less clear. Variations in the strength of the relationship between crime and environmental design may be influenced by demographics, social behavior, other crime prevention techniques being utilized, and research design.

Most of the research examining CPTED and its relation to the frequency of occurrence of crime has been conducted in public housing environments which were generally composed of low to middle income families. These studies generally evaluated only one or two types of crime and usually were limited to comparisons of low-rise versus high-rise structures.

Research in the residence hall environment has generally examined low-rise versus high-rise halls and related social behavior, not the occurrence of crime. One published study, Bynum and Purri (1984), examined the relationship of student

victimization by theft and residence in high-rise versus low-rise residence halls. Thus, little research in the residence hall environment has been conducted which contributed to the development of CPTED theory. This lack of research has also left campus administrators with little information for rational campus planning in their attempts to deal with a major portion of campus crime, that which occurs in residence halls.

PURPOSE

The purpose of this study is to explore the relationship between physical environmental design and the frequency of occurrence of crime in selected residence halls on the campus of Michigan State University. The residence halls were selected based upon their location on campus, physical design, and crime rate. The crime incidents used for this study were larceny, burglary, and malicious destruction of property. This study also explored the use of a student opinion survey as a means of measuring intervening variables in the relationship between physical environmental design and the frequency of occurrence of crime.

HYPOTHESIS

The general hypothesis for this study is that the frequency of occurrence of burglary, larceny, and malicious destruction of property is related to physical design features. Specific research hypotheses are discussed in the Design of Study section.

THEORY

This study is based upon the premise that a certain amount of crime can be prevented from occurring in certain locations. The concept of crime prevention has been defined by the National Crime Prevention Institute as "...[a] simple and direct approach that protects the potential victim from criminal attack by anticipating the

possibility of attack and eliminating or reducing the opportunity for it to occur--and the possibility for personal harm or property loss should it occur" (Sloan, 1988, p.1).

Walter A. Lunden (1962) contends that there is no theory of crime prevention, only theories of crime causation. He states that a theory of criminality is a "Why" question and a theory of crime prevention is a "How" question. This may be generally accepted, as there does not seem to be an accepted general theory of crime prevention.

However, there are several theoretical approaches to crime prevention, one of which is Crime Prevention Through Environmental Design (CPTED). Wallis and Ford (1980) argue that the 'Opportunity Hypothesis' is the basis for all CPTED programs. This hypothesis states that "if crime is significantly influenced by the opportunities available in a particular setting, then it should be possible to affect the crime rate by modifying the opportunity structure. This goal can be achieved by (1) increasing the perceived risk or effort necessary to commit the crime, or (2) by reducing the number of available targets" (p.10).

Oscar Newman (1972) contended that his concept of 'Defensible Space' was a "model for residential environments which inhibited crime by creating the physical expression of a social fabric that defends itself" (p.3). Newman's 'Defensible Space' concept was built around four characteristics: (1) territoriality, (2) surveillance, (3) image, and (4) environment.

Rubenstein, et al. (1980) consider the relationship between crime and the built environment to be composed of three basic rationales. The 'Hardware Rationale' consists of those measures which "can succeed solely by means of technology and paid operators" (p.6). This rationale is based on the assumption that "no social variable need enter into the equation before a relationship with crime or fear of crime levels can be expected" (p.6). Second, the hypothesis of the 'Social

Surveillance' rationale is that the "design of the physical environment can help residents and users detect suspicious behavior or actual crime" (p.9). Third, the **'Community Building Rationale'** is based upon the hypothesis that "physical characteristics affect social interaction and cohesion, which in turn affect crime and the fear of crime" (p.11).

This study will be conducted upon the acceptance of the three rationales of Rubenstein, et al with the major focus of the study based upon the **'Community Building Rationale.'**

One of the basic concepts of CPTED, Defensible Space, and the Community Building Rationale is territoriality. Irwin Altman has identified five themes that appear in the literature on human and animal territoriality. These themes are:

- Territories can belong to individuals or groups.
- Territories are geographical areas that are often marked and personalized.
- Territories function in the service of a variety of needs and motives including childrearing, food gathering, sex, mating, and a variety of social functions such as status and resource control.
- Territories serve as boundaries that allow selective control over who may see, hear, or participate in an activity.
- If invaders cross territorial lines, defense responses may range from threats to overt aggression. (Cited in Brown & Altman, 1981, p.58)

From these themes, Altman developed a working definition which stated that territoriality is a "self/other boundary regulation mechanism that involves personalization of or marking of a place or object and communication that it is 'owned' by a person or group. Personalization and ownership are designed to regulate social interaction and to help satisfy various social and physical motives. Defense responses may sometimes occur when territorial boundaries are violated" (1981, p.107). The concept of territoriality in this study will be based upon the above themes and definition presented by Altman.

OVERVIEW

In Chapter Two, literature pertinent to this study will be reviewed. The reviewed literature will be divided into four categories: Crime Prevention Through Environmental Design; Territoriality; Campus Crime; and Residence Halls.

Chapter Three contains a description of the design used for this study. Information will be provided about the sample, measures, hypotheses, data collection procedures, and analysis procedures in this study.

An analysis of results is provided in Chapter Four. The first section of the chapter contains a discussion of the results of the analysis of crime data in relation to the CPTED measures of the residence halls. The second section of the chapter contains the analysis of campus crime data in relation to CPTED measures of the residence halls in conjunction with results from a Student Opinion Survey completed by residents of the residence halls.

Definitions, map of the campus, campus crime statistics, residence hall population demographics, and a copy of the Student Opinion Survey Instrument can be found in the Appendices.

CHAPTER II. LITERATURE REVIEW

INTRODUCTION-ORGANIZATION

The literature reviewed for this chapter concerns studies similar to the current study and research testing concepts and theories upon which this study is based. Each review is organized to provide the purpose, hypothesis, design, and results of each study.

The reviews are divided into four sections: Crime Prevention Through Environmental Design (CPTED); Territoriality; Campus Crime; and Residence Halls. The CPTED section contains reviews of literature examining CPTED in environments other than campus residence halls. The Territoriality section contains reviews of literature examining territoriality, which is one of the basic concepts in CPTED. Reviews of literature examining general campus crime are located in the Campus Crime section. Finally, the Residence Hall section contains reviews of literature examining CPTED concepts in the campus residence hall environment. References for all of the reviewed literature are located in the Cited References section of the bibliography.

The chapter concludes with a discussion and summary of the reviewed literature.

CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN

Crime Prevention Through Environmental Design (CPTED) had its present day beginning in the work of Jane Jacobs (1961). Jacobs proposed that, to establish a safe city, the city must contain a diversity of uses that give each other constant mutual support. Jacobs specified four conditions which are necessary to generate diversity in a city's streets and districts.

First, the city must serve more than one primary function and these functions must insure the presence of people who go outdoors on different schedules and for different purposes. Second, most blocks must be short to open up the neighborhood by providing alternate routes for travel. Long blocks cause streets to become isolated and the residents may not mingle except in major commercial areas. Third, the city must mingle buildings that vary in age and condition. Finally, there must be a sufficiently dense concentration of people. Additionally, for a street to be safe, Jacobs stated that public and private space must be well defined, buildings must be oriented to the street for surveillance by residents, and the sidewalks must be used fairly continuously. Jacobs based her statements on "inklings, speculations, notions, and clues" (p.15) and not empirical research. Therefore the acceptance and application of these concepts should be accomplished with care.

CPTED concepts were further developed by Schlomo Angel (1968). Angel was concerned with those public areas where pedestrians circulate. He purported that the physical environment exerts a direct influence on crime settings by: (1) delineating territories; (2) reducing or increasing accessibility by the creation and elimination of boundaries and circulation networks; and (3) by facilitating surveillance by citizens and by the police. Angel also felt that the physical environment has an indirect influence on crime settings through the creation of the social contexts.

Angel suggested that the physical environment be designed to channel traffic to produce a desired level of intensity of use. He defined intensity of use as the number of people present in a unit of time. When the intensity of use is low, there will be virtually no crime as there will not be enough potential victims. An area with low intensity of use will thus be a safe area. As the intensity of use increases there are enough potential victims, but there are not enough people to function as a social

deterrence to crime through visual surveillance. The assumption is that deterrence is achieved by the increased number of persons who act as witnesses. This is considered an unsafe area because most crimes occur here.

As intensity of use further increases the area becomes populated and again becomes safe. There are more potential victims, but there are also adequate numbers of people to perform a surveillance function. Angel did not establish the boundaries of the different levels of intensity of use which make an area safe or unsafe. As was the case with Jacob's work, Angel's suggestions were not based on any empirical research, but are only a postulation of his ideas.

The development of the CPTED concept continued with C. Ray Jeffery (1971), who stated that, from a scientific point of view, behavior is a product of the interaction of organism and environment. Jeffery proposed that there were no criminals, only environmental circumstances which result in criminal behavior. Jeffery viewed criminal behavior as a result of gain minus risk plus interaction with conditioning history plus interaction with environmental opportunity.

To change criminal behavior, Jeffery suggests that the environment be changed by (1) decreasing the reinforcement available from criminal acts, and (2) increasing the risk involved in criminal acts. He further distinguished between crimes against property and crimes against persons. Environmental changes which might apply to controlling crimes against property include (1) alarm and surveillance systems, (2) urban planning and design, (3) environment and behavior, and (4) citizen participation. Environmental changes that might apply to controlling crimes against persons include (1) urban design, (2) environmental behavior, and (3) citizen participation. Although the changes proposed by Jeffery include more than just physical environment changes, he later stated that major research should be undertaken to determine the ways in which urban design contributes to crime.

The work of Oscar Newman may have done more than any other to popularize the idea of CPTED. Newman (1972), proposed that crime could be controlled by designing buildings to establish a 'defensible space'. The concept of 'defensible space' utilizes a design which allows residents or users to supervise and be seen to be responsible for the areas in which they live or are using.

Newman viewed the concept of 'defensible space' as a "model for residential environments which inhibits crime by creating the physical expression of a social fabric that defends itself" (p.3). 'Defensible space' utilizes (1) real and symbolic barriers, (2) strongly defined areas of influence, and (3) improved opportunities for surveillance.

Newman identified four aspects of the defensible space concept. These are:

TERRITORIALITY - The territorial definition of space in developments reflecting the areas of influence of the inhabitants.

SURVEILLANCE - The positioning of apartment windows to allow residents to naturally survey the exterior and interior public areas of their living environment.

IMAGE - The adoption of building forms and idioms which avoid the stigma of peculiarity that allows others to perceive the vulnerability and isolation of the inhabitants.

ENVIRONMENT - The enhancement of safety by locating residential developments in functionally sympathetic urban areas immediately adjacent to activities that do not provide continued threat. (p.9)

Newman analyzed the relationship between physical design elements and criminal activity. Newman's main focus was on territoriality and surveillance. His basic design solutions were: (1) that housing blocks should face directly onto public streets; (2) that semi-public access should be kept to a minimum; (3) that open space should be assigned to and overlooked by particular buildings and residents; and (4) that dwelling units should be closely grouped together to encourage social contacts.

The housing areas compared in Newman's study were the Brownsville and Van Dyke housing projects in New York City. Each project housed approximately

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6,000 residents with 288 persons per acre. The Brownsville project covered 23% of the land and the buildings were 3-6 stories in height. The Van Dyke project covered 16.6% of the land and consisted of 9 three story buildings and 13 fourteen floor high-rises. Both housing projects had very similar demographic characteristics.

Crime data were gathered from the New York City Housing Authority Police for incidents that occurred in the two projects. Crime data were also collected from the New York City Police Department to compare project crime with that of surrounding communities.

Newman developed a list of physical characteristic measures and data on tenant characteristics were gathered from the New York City Housing Authority. Newman also conducted interviews with residents of four housing projects including the two in his present study. A detailed description of the interviewing methodology and results were to be provided in a forthcoming publication.

The reporting of the results of the statistical analysis of the above study is incomplete and somewhat confusing. Newman conducted a regression analysis using ten physical features as independent variables and robbery as the dependent variable. Robbery was selected because Newman considered it to be a "particularly indicative crime" (p.231) because of its variation and its capacity to occur in any location. The ten physical features used as independent variables were not specified in the study.

In the first analysis, the direct influence of physical variables alone upon crime was more strongly related to locational percentages than to the total robbery rate. Physical variables had an explained variance of .17 at the .05 significance level in terms of the total robbery rate and an explained variance of .38 at the .04 significance level in terms of location percentages.

Newman reported that in a regression analysis using 6 social and 6 physical variables, social variables were significant in accounting for variations in crime and

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physical variables had a compounding influence upon crime in particular locations. Newman stated that "the combination of five key physical and social variables alone approached an r^2 of .50" (p.231). Newman did not specify the five key variables and using the term "approached" does not provide a clear picture of his results.

Newman provided a table of the correlation coefficients of the physical and social variables with robbery. However, the table did not provide significance levels for these results. Without further information, support for Newman's theories may be in doubt.

Booth (1981) concludes from Newman's work that the built environment may encourage crime in two ways: (1) by permitting non-residents to have easy access to public areas; and (2) by limiting the opportunities residents may have to observe activities in public areas adjacent to their home.

Booth investigated the relationship between accessibility and opportunities to observe and the occurrence of crime. Crime, assessed through a victim survey rather than official reports, was the dependent variable. Booth additionally gathered information on whether residents felt responsible for what goes on in public areas. Data on physical characteristics were gathered by trained observers who assessed the design features of each dwelling and its surroundings.

Booth compared two matched samples of urban households, one of which had been victims of vandalism or burglary, and the other sample had not been victims of vandalism or burglary. The samples were matched by type of dwelling, minority status of residents, household composition, and years in school. From observations of the dwellings, the researchers created measures of accessibility and opportunities to observe. These measures were:

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Accessibility

no boundaries (fences, shrubs, etc.)
 one or more dimensions greater than 400 feet
 (community areas)
 three or more people present
 signs of use (debris, defacement, wear)
 bounded by public facilities

Opportunity to observe - cannot be seen from

cannot be seen from the street
 cannot be seen from more than one direction before using
 cannot be seen from more than 50 feet before using
 cannot be seen from door of dwelling
 cannot be seen from window of dwelling
 cannot be seen from porch or balcony of dwelling. (pp.563,564)

A correlation matrix of the accessibility and opportunity to observe variables revealed that the variables for outdoor areas are independent of one another, but measures for the indoor areas are not independent. A cross-tabular analysis showing the percentage of the noncrime and crime household samples which have environmental features that increase access to public areas by strangers or limit residents' opportunities to observe such areas revealed that, for outdoor public areas, the differences between the samples were slight. The differences for public areas inside the housing were also slight, but were all in a direction which suggested to the author that easy access and limited opportunity to observe facilitates crime.

The residents were asked, "Do you or any member of your household feel responsible for what goes on in ___?" (p.567) The question was asked for each of the 164 outdoor community areas. The percentage of residents responding affirmatively averaged 9% and generally indicated that people are more likely to feel responsibility for areas with limited accessibility and significant opportunity to observe. The author stated that many of the percentages were based on small numbers of cases so interpretation must be done with caution. The study concluded that defensible space seems to significantly influence burglary and vandalism in some areas, but not in others.

Merry (1981) examined the patterns of intervention in crimes in a modern American housing development which contained many of the characteristics of defensible design. Her research was accomplished by conducting 18 months of anthropological participant observation of a small inner-city housing project during 1975/76. Merry spent almost every day visiting with, talking to, and taking trips with residents. She also assisted in community groups. The author had regular contact with three Chinese families, three white families, and four black families. Through the leader of a group of youths who 'hung out' in the project and were blamed for much of the crime that occurred there, Merry spent over 100 hours with the members of the group discussing their attitudes toward crime, the design of the project, and their choice of victims and crime opportunities.

Merry also collected quantitative data. First, by attempting to interview as many households as possible, rather than sampling, the author interviewed one member of two-thirds of the households about their victimization, expectation someone would help them, and their own intervention in crime. Second, 90 of the interviewees filled in a map of the project indicating which areas they perceived as safe or dangerous. Last, a twelve page, closed-ended questionnaire was administered to 101 persons selected to represent the categories of ethnicity, age, sex, and length of residence in the project. The questionnaire contained questions about attitudes toward crime and danger, knowledge of identity of local teenagers, and victimization.

The project consisted of 500 apartments and 100 units of housing for the elderly in a square, 28 acre area surrounded by vacant lots, industry, parking lots, and an expressway. The author focused her study on the 300 four-story low-rise apartments. These apartments had 2-4 bedrooms and housed almost entirely families with children. The other portion of the project contained 1-2 bedroom, high-rises housing primarily elderly and childless couples. Most of the tenants were

semi-skilled or unskilled, low income families with 60% of the families having lived in the project for at least 10 years. However, in spite of the lengthy residence of many, the residents' social and recreational lives were separated ethnically.

Merry reported that over half of the incidents of robbery in the project occurred in defensible areas, while the remainder occurred either in secluded lobbies; narrow, dim area between buildings; in short-cut areas; and in sidewalks along streets with concrete pillars and recessed alcoves (see Table 2.1).

Table 2.1 Location, Defensible Space, & Danger Perception

LOCATION	PERCENT OF ROBBERIES	DEFENSIBLE SPACE	PERCEIVED DANGEROUS	PERCEIVED SAFE
Alleys and Entrances	25% (15)	No	46% (37)	4% (3)
Playground	2% (1)	Yes	33% (26)	12% (10)
Square	5% (3)	Yes	12% (10)	22% (18)
Front of house	50% (30)	Yes/No	5% (4)	57% (46)
Other places	18% (12)			

Note. Table adapted from Table 1, Merry, 1981, pg. 415.

Although the project generally conformed to the concepts of defensible space, features such as translucent enclosures and turns of stairwells, entry hallways hidden from view, and fenced trash container enclosures provided hiding places and prohibited surveillance. Furthermore, if an area is designed for surveillance, surveillance is successful only when crime is observed. In this project, there was nothing of interest to watch in the courtyards and many of the windows facing the courtyards and walkways were covered by curtains which prevented surveillance by the occupants. Even when residents did observe criminal activity, they may not have intervened because of their inability or unwillingness to distinguish intruders from neighbors, lack of knowledge of effective modes of intervention, the fear of crime and retaliation, and because residents were less likely to help strangers than persons who were known to them.

From her conversations with individuals who committed crimes in the project, Merry found that they considered both physical and social factors when determining where to commit a crime. Physical factors included visibility, vehicle traffic, number of people in an area, amount of light, and escape routes. Social factors included the probability of actual surveillance and level of active intervention by the residents. Merry concluded that defensible space is a valuable concept, but to prevent crime it requires the interaction of social behavior by residents who provide surveillance and active intervention.

Pyle (1976) looked at Cleveland public housing in areas previously identified as high crime risk areas. The housing was categorized according to design type: (1) row houses; (2) 3-story walk-ups; (3) high-rise apartments; and (4) mixed or planned unit development-type housing. Data were gathered on crimes reported during a 24-month period. The purpose of the study was to determine whether or not design (architectural type and general location) could help explain the distribution of crime. The demographic characteristics used were those related to known aspects of crime in other locations. Pyle cited Y.H. Cho, 1974. Demographic characteristics were used as independent variables in a canonical factor analysis of association with homicide, rape, assault, robbery, theft, burglary, and vandalism.

The major findings were that grouping crimes by architectural type showed a relationship statistically significant at the .05 level, but not at the .01 level, and that crimes grouped by demographic characteristics were statistically significant at the .01 level. Demographic factors were significant more than twice as often as design type. The demographic factors used were age of children, percentage of families with children and only one parent, and percentage of total population.

Pyle also looked at the crime location as related to the address of the arrested suspect. Sixty-one percent of all those arrested for crime against persons resided in

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the same census tract as the crime location. The average distance traveled by an offender between home and the crime location was 1.9 miles. Forty-eight percent of the persons arrested for crimes against property also came from the same census tract as the one where the crime was committed, but the average distance traveled increased to 2.3 miles.

TERRITORIALITY

Schroeder (1980) defines territoriality as "the acquisition, demarcation, and defense of a spatial area with corresponding dimensions of implied ownership, personalization, and maximum control" (p.16). Schroeder identifies several functions of territoriality. These are:

- regulating density and social interaction
- organizing behavior
- providing areas for privacy and security
- reducing conflict and aggression
- inspiring social order and group stability
- promoting self-definition and self-identity. (p.120)

Schroeder suggests strategies to enhance territorial functions in primary, secondary, and public territories which will facilitate the territorial behavior of residents. For Primary Territories, Schroeder suggests, first, the personalization of personal space. Residents should be encouraged to change room atmospheres by painting and wall papering; adding plants, posters, and drapes; paneling; constructing lofts, bookcases, and other furniture; refinishing doors, replacing fixtures; and plastering ceilings. Second: he suggests Privacy Regulation. Administrators should offer more private rooms or encourage residents to build partitions and lofts, and create boundaries through arrangement of bookcases, plants, and desks. Third: he urges the promotion of effective Roommate Relationships. This should be done by assisting roommates to define their living habits by organizing space and functions within their room.

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For Secondary Territories, Schroeder suggests, first, creating defensible space. This is accomplished by encouraging residents to territorially mark hallways and lounges by painting and decoration. Further, opportunities should be provided for residents to lock off houses and corridors and restrict access to residents and their guests. Residents should begin to take care of the space, and encroachment by unidentified persons should be reduced. Second, increased social interaction and group stability should be attempted by reducing the size of secondary territories by partitioning long hallways into smaller units and providing centrally located group rooms which residents could personalize and control.

For Public Territories, first, public territories should be converted into group socializing areas. This should be done by walling off unused areas or relocating lounges under the control of houses or units and limiting access to group members and their invited guests by issuing lounge keys to group members. Second, behavioral zones should be created. Create stimulation zones for games and other activities; freedom zones for libraries, mechanical drawing, etc.; and privacy zones such as study carrels. This enhances social interactions and provides privacy, security, and reduction of conflicts.

Schroeder concludes that a sense of community cannot be developed within residence halls without considering the significance of territoriality.

McCarthy and Saegert (1979) studied the effects of high density in the immediate residential environment on residents' experiences of social overload and the consequences of these experiences for their social relationships and attitudes. The site of their study was a low-income housing project with 2,000 families which contained both high- and low-rise buildings. The 56 low-rise buildings housed 12 families per entrance and the 12 high-rise buildings housed 110 families each. The authors' hypothesis was that "high-rise residents would experience more social

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overload, which would result in more perceived crowding, feelings of less control, safety, and privacy in the residential environment as well as less positive and more problematic social relationships with other tenants, and more feelings of withdrawal, alienation, and dissatisfaction with the residential environment generally" (p.57).

A total of 60 structured interviews were conducted, 15 each from two 14 story buildings, and 4 to 6 each from the six 3 story buildings. Interviewers knocked at doors randomly and interviewed the female head of households. There were not any significant demographic differences between the interviewees in high-rise versus low-rise residences.

The authors found that high-rise tenants were:

- more likely to report experiences of social overload and crowding;
- more likely to feel a weaker sense of control, privacy, and safety in various interior spaces of their building;
- more likely to experience greater difficulty in social relations; and
- more alienated, less satisfied, less involved, and more detached from their own building and the project in general. (p.59)

The high-rise tenants felt more crowded, and those living on higher floors also felt more crowded than those on lower floors. Additionally, tenants who felt more crowded perceived the other residents as less friendly, less likely to stop vandalism, and less likely to intervene if another tenant were attacked.

The authors stated that the major limitation of their findings would be in an attempt to generalize the findings to middle- and upper-income groups who might have more opportunity to choose where to live and to live with people with whom they already have social ties.

CAMPUS CRIME

In 1977, James Fox stated that campus crime had not received very much research attention. This is currently true, at least for research which has been published. Often the literature on campus crime discusses organization, administration, operational procedures, personnel selection and legal authority of

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the campus police or security agency. (Iannarelli, 1968; Adams & Rogers, 1971; Gelber, 1972; Bordner & Peterson, 1983) Although there seems to be a paucity of literature dealing with campus crime, this section contains a review of some of the literature which does deal with campus crime.

Molumby (1976) conducted a study at Florida State University's married housing development, 'Alumni Village'. The village is divided into three main areas with four distinct building types. Area I contained eighteen 16-unit buildings, each with dual two-story double-loaded entryways. Area II contained thirteen townhouse-style buildings and six two-story buildings with entryways in the front for apartments on both levels. Area III contained both townhouse-style buildings and single-level efficiency apartments.

A victimization survey was developed to gather information about the number and types of crimes in the village, where and when it occurred, the method of entry, whether it was noticed right away, dollar loss, and if it was reported to the local police. The study focused on property crime, but data on other types of crimes were collected. The crimes were categorized as larceny, burglary and others. The 'others' category included breaking and entering where nothing was taken, acts of vandalism, and one assault. Information was also noted on the spatial aspects of the dwelling units - (building type, placement, lighting, traffic flow, etc.). The information gathered covered a period of approximately 15 months.

Apartments having no buildings on the opposite side of the street and a location along a main access route represented only 39% of the apartments, but they were the location of 65% of all crimes in Areas I & II. The Chi-square for this relationship was found to be significant at the .001 level.

Area III contained 40% of the apartments and 29% of the crime. Chi-square for the relationship of apartments which have no buildings on the opposite side of

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the street and a location along a main access route and the rest of the apartments was found to be significant at between the .20 and .30 levels. For Molumby, this result suggests there was little difference between crime rates for the two neighborhoods.

In Area I, 95% of the crimes occurred outside the apartment. In Areas II & III, 35% of the crimes involved entering the apartment. Molumby concluded that this difference in crime technique could be explained by occupant visibility. Visibility of the parking and other areas outside the Area I apartments was extremely poor. In Areas II & III, the visibility of the parking area was much better, but the areas behind the buildings were unprotected and the apartments easier to break into because of sliding glass doors which the residents often left unlocked.

The victimization rates were found to be .36 for the larger apartments (Type I), .26 for townhouses (Type 2), .04 for single-level efficiencies (Type 3), and .025 for upstairs/downstairs apartments (Type 4). Although Molumby reports these victimization rates, he does not explain how the rates were computed.

Molumby concluded that property crime in Alumni Village seemed to occur mostly at night, along the main access routes through the village and that crime rates in the village were a reflection of (1) street patterns and usage, (2) apartment building design, and (3) the surrounding environment.

Fox (1977) conducted research on the assumption that the data available from university police departments gives only a "vague impression of the distribution of crime on campus" (p.346). Fox's study of the University of Virginia was designed to answer the following questions: (1) Is a mailed questionnaire a viable method for screening victims of crime on the college campus?, (2) What is the distribution of crime on the college campus?, and (3) How does the distribution of crime on the college campus compare with that of crime in the general population?

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A sample of 2,002 was selected from the official roster of all University of Virginia students during the 1972-73 school year. A questionnaire was mailed to each student of the sample with an initial return rate of 51 percent. A second mailing produced 15% more responses. A telephone follow-up was conducted which resulted in a total response of 79% of the original sample. Each respondent who indicated he or she had been victimized was interviewed to verify the alleged incident and gather personal data. The official records of the university police were examined to (a) identify patterns of incidence of victimization to validate the survey findings, (b) identify patterns of geographical distribution, and (c) establish how many of the incidents identified in the mailed questionnaire were actually on the official records.

The types of crime analyzed were rape, assault, robbery, burglary, larceny and car theft. Variables considered in terms of their correlation with victimization were sex, age, religion, class standing, marital status, number of people sharing a living unit, average weekly spending, visible wealth, and social cohesiveness. Variables that did not appear to be related to victimization were race, possession of a weapon for protection, ownership of a dog, frequency of drinking alcohol, whether or not the individual locked the door to the living unit, the number of entrances to the residence, and the number of observable entrances to the residence. The type of crime with victim characteristics and the victimization rates for each is displayed in Table 2.2.

The findings of the victimization survey were compared with the official reports of the university police. For rape, robbery, and assault, the official reports indicated a victimization rate of .3 per 100 students where the survey rate for these crimes was 3.1 per 100 students. According to the official records, the victimization

rate for auto theft, burglary, and larceny was 3 per 100 students while the victimization rate from the survey was 27 per 100 students.

A review of the distribution of crimes reported to the police showed that the highest incidence of crimes was between 6pm and 12 midnight. Analysis of the victimization survey data revealed that the rate of victimization was highest in the afternoon rather than the evening. The author stated that relying on the reported crimes could lead to misinterpretation of criminal behavior.

Campus victimization rates for rape, robbery, assault, and auto theft were lower than the composite rate for the cities. Campus victimization rates for burglary and larceny were higher than the composite city rates.

The author concluded that there, most likely, are many college students who are being victimized whose cases are not known by college administrators, that 'target hardening' is possible only when the incidence of crime can be accurately analyzed in terms of time, place and potential victim, and that it is feasible to use the victimization survey on the college campus.

McPheters (1978) examined the hypothesis that crime on university campuses has a systematic and statistically identifiable relationship to characteristics of (1) the student population, (2) physical aspects of the campus, (3) forces outside the campus that may induce outsiders to perpetrate criminal acts on campus property, and (4) the level of campus security activity. The study was based on a model using two simultaneous equations estimating crime and security activity where crime was the FBI index crimes per 10,000 students and security activity was the security budget per 10,000 students. The equations included variables for the percentage of the student body living in residence halls; student density per nonfarm acre; unemployment rate in the nearest city with a population over 100,000; urban

Table 2.2 Crime Type, Victimization Characteristic, Victimization Rate

TYPE OF CRIME	CRIME TYPE VICTIMIZATION RATE	VICTIM CHARACTERISTIC	CHARACTERISTIC VICTIMIZATION RATE
Rape	0.4	Female	1.1
Assault	2.2	Religious preference	4.5
Robbery	0.6	Living in unit of 7 or more	1.7
Burglary	10.9	Living in fraternity	40.8
		21-22 years of age	15.5
		Lowest quartile on social cohesiveness	17.6
		Seniors	16.0
		Juniors	14.0
		Average weekly spending > or = \$9.00	14.1
		Living unit of more than 7	20.6
Larceny	15.6	Males	17.7
		Third quartile on social cohesiveness	19.0
		19-20 years of age	18.0
Car Theft	0.9	Visible wealth > or = \$3,600	2.4
		Female	1.7
Total Victimization	30.6	Males	29.8
		19-20 years of age	35.3
		21-22 years of age	35.2
		Seniors	37.0
		Single	31.0
		Living in fraternity	51.0

Note: Rates of victimization are per 100 . This table was adapted from Table 2, Fox, 1977, pg.348. P=.05 or less.

location of campus; number of buildings on campus; and the number of nonfarm acres on campus. There was also a variable reflecting gains from legal and illegal activities and community tolerance for crime and a variable reflecting campus administrative and student desires for security activity.

Crime data for the study were collected from the 1975 Uniform Crime Reports Budget data, campus physical and location data, and student population data

were obtained by a survey of the security departments of 75 universities. There were 38 complete responses resulting in a 51% response rate. Data on unemployment rates were obtained from the Bureau of Labor Statistics.

Using a two-stage least squares regression, three variables (percent of student body living in dorms, the unemployment rate in the nearest city, and security expenditure per capita) were found to be significant at the .05 level in the crime equation. The results for the security expenditure equation show dormitory population as a proportion of student enrollment and the indigenous crime variable significant at the .05 level. The author concluded that the model suggested that campus crime rates are influenced by forces both on and off campus and that the results of the study suggest that closing campuses to nonstudents would reduce crime rates, but would place severe restrictions on personal freedom on the campus.

Sigler and Formby (1982) conducted a study of the victimization of students and personnel during the 9-month academic year, 1977-78, at the University of Alabama. The 9-month victimization rates were converted to 12-month rates to facilitate comparison with other studies. The comparison data were taken from the Uniform Crime Reports for 1974 to 1978, Criminal Victimization in the United States: 1978, and Trends in Criminal Victimization: 1973-1978.

Victimization data for the campus were collected by a victimization survey adopted from the National Crime Survey instrument. The survey was administered by telephone. A stratified random sample of faculty, staff and students was drawn proportionally for sex, faculty, staff, and year of attendance for the student. The goal was to obtain a 1% sample, but because of refusal to participate, or other loss, the final sample was only 0.73% of the population. Because the study was focused on victimization which occurred on campus, those cases which occurred off campus were removed from the analysis and the number of victims in the sample was

reduced to forty-one. The sample was representative except that women and blacks were overrepresented. The 41 victims were compared with the 90 nonvictims across all variables and no measurable differences were found.

The victimization survey found that black subjects were victimized at a higher rate than white subjects in theft from auto and burglary, while white subjects were victimized more often than black subjects for larceny and attempted larceny.

Male subjects had a higher victimization for burglary than females, while females experienced higher victimization rates for theft from auto, larceny, and attempted larceny.

Women tended to be victimized near their residences while men tended to be victimized away from their residences. Women were more likely to be victimized inside a building, while men were victimized more often outside a building.

Finally, victims were more likely to report victimizations which occurred in their residence and when the loss was over \$30. The campus crime rate was significantly higher than national rates for all offenses reported.

RESIDENCE HALLS

Bynum and Purri (1984) investigated the manner in which the physical environment influenced the incidence of crime and criminal behavior in the residence halls on the campus of Michigan State University. At the time of the study, the 26 undergraduate residence halls on campus housed over 17,000 students.

The residence halls were grouped into five complexes. The 11 residence halls in Complexes A and B were older, three story buildings with a common bath on each floor. These residence halls housed an average of 390 students. Complex C consisted of six residence halls containing four floors and housing an average of 460 students. The 9 residence halls in Complexes D and E were newer buildings containing 6 to 10 floors and housing an average of 1,100 students. These residence

halls were designed with 2 rooms sharing a bath and some apartments. Some floors were also used for classrooms and office space. For their study, Bynum and Purri divided the residence halls into low-rise and high-rise categories. They did not state this clearly, but, it appears that the low-rise category consisted of Complexes A,B, and C while the high-rise group were those in Complexes D and E.

A victimization survey, utilizing a disproportionate sample, stratified on the basis of the complex, as described above, was administered to 3,000 randomly selected on-campus students during the winter quarter of 1980. The survey was designed to measure the students' on-campus victimization the previous quarter. The overall response rate was 62% with the return of 1,872 questionnaires. The return rate for the complexes ranged from 60.8% to 64.6%, but the response rate for both high- and low-rise categories was 61%.

The study included all incidents of theft in which the value of the item stolen was greater than ten dollars. The rates of theft were calculated per 1,000 students. Bynum and Purri found a rate of theft in the high-rise residence halls that was twice that of the low-rise (22.80 v 46.64). The rate of theft of items less than \$50 was 19.54 for low-rise and 34.70 for high-rise residence halls while the rate of theft for items greater than \$50 was 11.93 for high-rise and 3.26 for low-rise. However, the last rate was based on only three incidents in the low-rise and eleven incidents in the high-rise residence halls.

When assessing the feelings of community cohesion in the residence halls, the authors found that residents of both low- and high-rise residence halls described their immediate neighborhood similarly. However, the residents in the low-rise buildings were more likely to feel that they could ask their immediate neighbors for a favor than were those who lived in high-rise residence halls.

Significant criticisms of evaluations of the relationship between crime and environmental design presented by the authors include an overreliance on official statistics, the nonrandom assignment of students to the residence halls, and concern that resident and social environment characteristics may be intervening factors which must be evaluated.

Bynum and Purri concluded that despite the limited ability to generalize the results of their study, "the issues of the impact of building design on human interaction and behavior appear to warrant consideration in the design and construction of multi-unit residential areas" (p.193).

Hood and Hodges (1974) conducted a study to examine student residents' attitudes toward security in their residence halls at the University of Iowa. Soon after the initial study was completed, a coed was murdered in one of the residence halls. The original study was replicated to determine the impact of the murder on students' attitudes toward residence hall security.

The study utilized a 30-item questionnaire to elicit responses about:

- the university's responsibility for security,
- students' responsibility for security,
- the effect of open visitation on security,
- concern about crime in the residence hall,
- personal behavior related to security, and
- reactions to various institutional security measures. (p.353)

The sample was taken from the eight residence halls on campus, housing from 300 to 975 residents each. Five of the residence halls were coed, with halls, floors, and wings varying on the proportion of class standing and visitation privileges. Floor plans were examined to gather a sample that would be representative with regard to sex, visitation policy, and year in school. An equal number of high- and low-traffic rooms were chosen. Two rooms were randomly chosen from each selected floor plan.

The initial questionnaires were distributed early in the evening during the first part of the week prior to the final examination period. The questionnaires were collected approximately 30 minutes later.

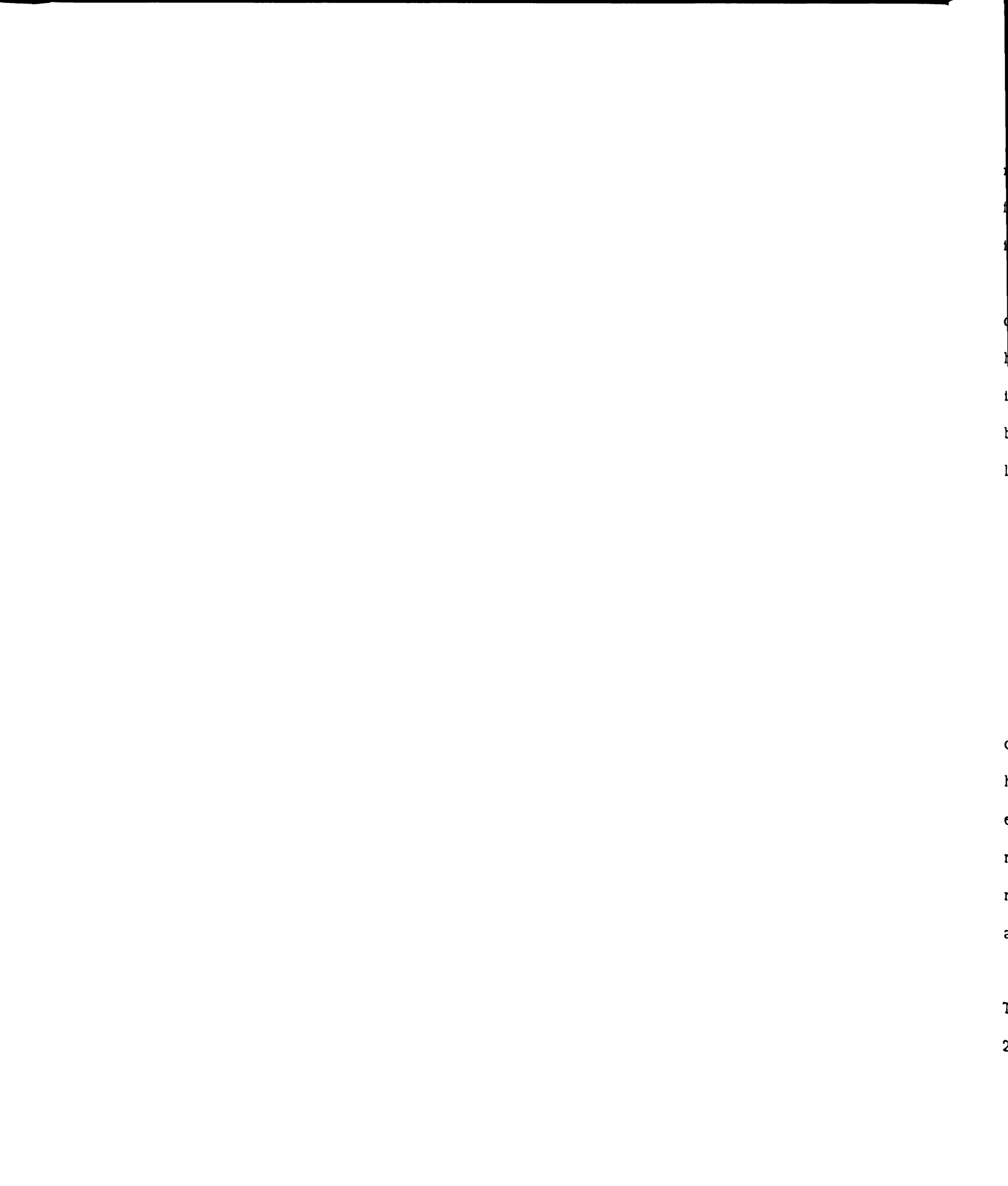
The initial survey resulted in 71 completed questionnaires (36 male, 35 female) while the follow-up survey also resulted in 71 completed questionnaires (38 male, 33 female). The follow-up questionnaire was administered fifteen days after the coed's murder. The murderer was still at large and the police had not released information about what evidence they possessed.

Approximately 75% of the respondents said they had not been concerned about a lack of security in their residence hall and there was no significant change in this response after the murder. When asked if they were concerned about violent crime in their residence hall, 90% of the respondents in both samples did not believe that a violent crime was likely to occur.

Prior to the murder, over 50% of the respondents felt the university should be responsible for the security of students and their belongings. After the murder, approximately 66% agreed with this statement.

All of the males stated they locked their room door when leaving the residence hall, both before and after the murder. For the females, 94% before and 85% after the murder stated that they locked their door. While taking a shower, 64% and 74% of the males and 37% and 45% of the females (before and after, respectively) locked their room door.

Of the males, 22% before and 8% after the murder locked their doors while studying in the room. For the females, 0% before and 8% after the murder locked their doors. While sleeping in the room, 75% of the males before and 84% after the murder locked their doors, while 83% of the females before and 84% after the murder locked their doors.



The authors concluded that the murder of a coed in the residence hall did not significantly affect residents' security related behavior. The students may have felt that this was an isolated event and there were no important consequences or implications for them.

The authors stated that residence hall administrators may find it difficult to convince residents about the need for additional security measures in the residence hall. However, it may be possible that the residents' attitudes might change if the impact of more common events such as burglary and theft from the rooms were felt by a larger number of residents. Residents might then feel that they were more likely to be a victim and consider changes in their behavior as being necessary.

According to Baum and Davis (1980):

control over social experience appears to be an important aspect of response to high density; when such control is threatened or reduced, crowding and associated costs are more likely to occur. Group formation in these settings is an influential component of this control; the structures provided by a group reinforce individual members' ability to regulate interaction. Thus, the designs of different dormitories determine residential group size, which in turn influences group development and regulatory control.(p.473).

For this study the authors used three settings: a long corridor, a short corridor, and a long corridor altered by architectural intervention. It was hypothesized that residents of the long corridor altered by intervention would exhibit more positive social experience, less withdrawal, and less helplessness than residents on the long corridor without alteration. Experiences and behaviors of residents on the short corridor should be similar to those of the residents of the altered corridor.

The second floor of a residence hall was selected as the intervention floor. The third floor was the long corridor with 40 residents and the short corridor with 20 residents was in a different, but comparable residence hall. The intervention on

the second floor consisted of bisecting the floor by converting three rooms into a lounge area with unlocked doors on either side.

The residents of the residence halls were primarily freshmen and the floors chosen housed women only. On the first day of registration and after 5 and 12 weeks, the subjects completed questionnaires assessing their feelings about college and residence hall life. Questionnaires varied in format over the administrative periods. All 86 residents completed the first survey, but attrition reduced the final group to 67 residents.

An observation of resident behavior was conducted three times a week at 10-11pm during week nights between the 3rd and 14th weeks by a college age male. The observer was not aware of the experimental hypothesis.

A laboratory assessment was conducted between the 5th and 11th week to assess resident behavior. Each subject arrived at the laboratory alone, expecting to participate in a study of "impression formation." Each subject was asked to wait until the experiment began, in a room where a confederate had been placed. Subjects were told that the confederate was also waiting for the experiment.

Data from the questionnaire provided evidence that long corridor residents reported increasing difficulty in regulating social contact, were more likely to have problems with the large number of people they lived with, and expressed less confidence in their ability to control experience inside and outside the residence hall. Long corridor residents felt that small groups were less likely to form on their floor and they felt more crowded in the residence hall.

The behavioral observation resulted in the finding that long corridor residents participated in less social activity and were less likely to leave their doors open as an invitation to interaction.

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The laboratory assessment resulted in the finding that long-corridor residents sat further away from a confederate, looked at her less, and felt more uncomfortable following a five minute waiting period. Long corridor residents also expected to have less control over the session once it started.

The authors did not feel that the extra lounge space provided by the intervention affected the findings because observations indicated the lounges were rarely used, and in any case, were not fully furnished until the semester following the study semester. Overall, the intervention of the long-corridor floor resulted in (1) more positive interaction, (2) more local group development, (3) more confidence about ability to control events in the residence hall, and (4) less withdrawal in both residential and non-residential environments than the unaltered long corridor.

Holahan, et al. (1978) reported that previous research had reported less living satisfaction and social cohesion in high-rise residence halls in contrast to low-rise residence halls. In previous research, this dissatisfaction had been interpreted as a function of crowding, whereas in the present study, the effect of floor level on both levels of social satisfaction and friendship development were considered.

The subjects for this study were 346 (208 males and 138 females) randomly selected residents of a 14 story, coed residence hall on the campus of a large southwestern university. The hall housed approximately 3,000 residents who were randomly assigned to their rooms. The population size and living space per resident were the same on all floors.

A questionnaire was developed which measured social participation, social privacy, and an index of friendships formed within the residence hall. The questionnaires were handed out to subjects by the resident assistants on their floors. The questionnaires were completed anonymously and returned to the resident

assistant's mailbox within 2 days. Five hundred questionnaires were administered and a return rate of 58% was achieved.

All the measures showed a strong relationship to floor level , with the high floors having the lowest scores on all measures. However, the relationship of low to middle floors varied across the three measures.

The authors concluded that the development of relationships on the lower floors may have been related to the greater use of rooms on the lower floor because of their ease of access. The social privacy dissatisfaction of lower floor residents may have been a result of the use of lounges, study areas, and dining facilities on lower floors by residents of other floors. Social privacy dissatisfaction on the upper floors may have been influenced by acting out behavior that was reported to have occurred on these floors or may have been a negative response bias.

Bickman, et al. (1973) examined the "relationship between dormitory density and the behavior and attitudes of the students who live in these dormitories." The research focused on density within a structure which can be measured by persons per structure or units per structure. These measures are related to the number of different persons a resident could interact with in laundry rooms, hallways, elevators, lobbies, and communal bathrooms. Bickman, et al. suggest that a benefit of conducting research in college residence halls is that age, education, quality of housing, overcrowding, and sometimes, social class are similar across different levels of research variables.

In this study, the concept of helping behavior was used as an indicator of resident attitudes toward others. In the first measure of helping behavior, stamped, addressed letters without a return address were dropped in residence hall hallways. Picking up the letter and mailing it should reflect a helping behavior. The second

measure involved asking students to save milk cartons for an art project being conducted by other students.

The first study subjects were the 2,384 undergraduate residents of 10 female residence halls at the University of Massachusetts and the 2,161 female undergraduates in 37 houses at Smith College. Two 22 story towers housing 522 and 535 students were designated as high-density residence halls. The medium-density residence halls were 8 residence halls from four to seven stories tall, housing an average of 165.9 residents. The low-density residence halls housed between 16 and 81 students, with an average of 58.4 residents.

A 69 item questionnaire assessing the character of the residence halls, living habits, self-perceptions, and perceptions of neighbors was distributed to 30 subjects in the high-density, 60 in the medium-density, and 36 in the low-density residence halls. The authors did not state how these subjects were selected.

As a result of the lost letter technique, Bickman, et al. reported that percentages of letters returned were 63% in high-density, 87% in medium-density, and 100% in low-density residence halls. After counting 18 envelopes not picked up as being not mailed, the percentages were 58%, 79%, and 88%, respectively.

Questionnaire responses showed no difference in desire to move based on density. Eighty-one percent of the students in the low-density and eighty-three percent of the students in the medium-density residence halls said their residence halls were friendly, while the students in the high-density residence halls were split between friendly and impersonal. When assessing trust of other students in the residence hall, 88% of the low-density, 74% of the medium-density, and 48% of the high density residence hall students said they trusted other students. In the high-density residence halls, 97% of the residents said they locked their doors compared to 82% in the medium-density and 48% in the low-density residence halls. When

asked what they would do if they found a window broken in a common area, 82% of the low-density, 60% of the medium-density, and 33% of the high-density residents stated they would report the broken window.

The subjects in the second study were the 3,526 male and female residents of four University of Pennsylvania residence halls and 64 non-university town houses. The high-density residence halls were two 25 story halls, housing an average of 954 residents. Two 4 story residence halls housing an average of 233 residents were the medium-density residence halls. The low-density housing consisted of 64 townhouses located close to campus which housed an average of 12 persons per house. The average height of the town houses was 3 stories. The authors stated that most of the residents in the town houses were students, but did not state what percentage and did not give any information about the other residents.

In the low-density housing, 90.6% of the letters were returned compared to 77.4% in the medium-density and 63.6% in the high-density residence halls. In the milk carton test, using a ratio of the actual number given to the maximum which could be given, the authors found that low -density residents gave 55%, medium-density 54%, and high-density 37% of the maximum cartons which could be given.

Analysis of the questionnaires revealed that high-density residents had the least positive opinions of their resident group. The lower the density, the more cheerful, friendly, relaxing, unrestrictive, diversified, spacious, and warm the residence hall was perceived to be. However, the high- and medium-density residence halls were perceived to be better kept and safer than the off campus low-density town houses. This may not be a factor of density, but may be related to a difference in administration and maintenance procedures.

In the first study, the researchers found that students in high-density residence halls reported less trust, cooperativeness, and responsibility in their

residences and that higher density residents behaved in a less socially responsible manner toward other residents. The first study was limited by the fact that the low-density housing was located on a different campus and that the residence halls were female only. The results might have been different in a male only or mixed residence hall. The authors also found that density was inversely related to the length of residency. In the second study, the researchers found that residents of high-density residence halls rated other residents lower on sense of community and friendliness and considered their residence halls to be more impersonal, unfriendly, and cold.

Schroeder (1976) stated that when designing high-rise residence halls, little emphasis had been placed on the individual needs and interactions of the residents, resulting in resident dissatisfaction about lack of privacy, roommate conflicts, personal space, enforced sociability, and lack of opportunity for personalization. Schroeder described the residence halls at Auburn University as being characterized by long, narrow corridors, communal baths, and 10ft by 12ft double occupancy rooms. Residents' behavior problems resulted in damage to the residence halls, roommate conflicts, and discipline cases.

The author proposed that territoriality and the group system were two strategies that could be used to reduce the problems in the residence halls. Territoriality was defined as the "acquisition, demarcation, and defense of a spatial area." (p.386) The group system was considered to be a basic social structure which provides opportunities for freedom, stimulation, security and order which present conditions for human development.

In the Magnolia Dormitories at Auburn University, students were encouraged to personalize their rooms by painting and decorating and floor units as groups were encouraged to paint and decorate hallways, stairs, and group rooms. Each fall a

contest determined the best decorated personal and group areas and a prize of \$600 was awarded. In addition, territoriality was developed by providing several private rooms in addition to the double occupancy rooms.

To provide for the group system, roommates were paired on the basis of shared majors and personality types and floors were assigned on the basis of commonality of dominant process as determined by the Myers-Briggs Type Indicator. Certain floors were partitioned to create groups of 8-20 persons.

Within three years, occupancy was up 30%, damages were down 78% ,and retention from spring to fall was 72%. Schroeder concluded that territoriality and the group system appeared to be significant strategies for structuring residence hall environments and called for empirical research to evaluate the impact of these strategies on residents' behavioral development.

SUMMARY

A summary of the literature review is contained in Table 2.3.

Table 2.3 Summary of Literature Review

AUTHOR	ENVIRONMENT	CEPTED FEATURE	HYPOTHESIS	RESULTS
Jacobs, 1961	City	Short blocks, functional variety, building variety, density	Public and private spaces defined, buildings oriented for surveillance	Theoretical
Angel, 1968	Public areas with pedestrians	Defined territories, controlled accessibility, controlled density, surveillance	Level of intensity of use determines amount of crime	Theoretical
Jeffery, 1971		Target hardening, urban planning and design, environment and behavior, citizen participation	Behavior is a product of the interaction of organism and environment	Theoretical
Newman, 1972	Public Housing	Low-rise versus high-rise, ten unidentified physical features	Control crime by establishing a defensible space	Physical variables more strongly related to location than crime rate.
Booth, 1981	Urban households	Non-resident access, surveillance	Easy non- resident access and limited surveillance by residents encourages crime	Limited access and increased surveillance prevents crime in some areas, but not in others
Merry, 1981	Small inner city housing project	Defensible versus non- defensible areas	Relationship between design features and actual intervention	Defensible space necessary, but not sufficient for crime prevention. Requires resident intervention and surveillance.

Table 2.3 Continuation

AUTHOR	ENVIRONMENT	CPTED FEATURE	HYPOTHESIS	RESULTS
Pyle, 1976	Public Housing	Row house, 3- story walkup, High-rise.	Does architectural type and general location help explain distribution of crime?	Architectural type significant at .05, but not at .01.
Schroeder, 1980	Residence Hall	Enhance territorial function.	Enhanced territorial function will facilitate territorial behavior of residents.	Theoretical
McCarthy & Saegert, 1979	Low income housing.	High-rise versus low-rise.	High-rise residents experience more social overload; less control, safety, and privacy; more withdrawal and alienation.	Hypothesis supported.
Molumby, 1976	Married campus housing.	Building type, placement, lighting, and traffic flow.	Exploratory research.	Crime rates were a reflection of street usage and pattern, building design, and surrounding environment.
Fox, 1977	Campus	N/A	Viability of mailed victimization survey, distribution of campus crime, comparison of campus crime distribution with general population.	Mailed victimization survey is feasible for campus use. Victimization was highest in afternoon. Campus victimization rate different than city rate.

Table 2.3 Continuation

AUTHOR	ENVIRONMENT	CPTED FEATURE	HYPOTHESIS	RESULTS
McPheters, 1978	Campus	Demographic data, physical aspects of campus, outside forces, level of campus security.	Crime has a systematic and identifiable relationship to stated design features.	Campus crime rates are influenced by forces on and off campus. Closing campus to non-students would reduce crime, but restrict freedom.
Sigler & Formby, 1982	Campus	N/A	Victimization survey and comparison with national rates.	Campus rate higher than national rate. Blacks victimized more frequently than whites. Males are more likely auto theft victim. Females more likely burglary victims.
Bynum & Purri, 1984	Residence halls	Low-rise versus high-rise.	Influence of physical design on incidence of crime.	High-rise theft rate twice that of low-rise.
Hood & Hodges, 1974	Residence halls.	N/A	Determine impact of coed murder on attitudes toward security.	No significant change in concern about lack of security. No significant change in security related behavior.
Baum & Davis, 1980	Residence halls.	Corridor length intervention.	Short corridor residents will experience less withdrawal and helplessness and a more positive social experience.	Long corridor residents experienced more crowding and control problems and less social activity.

Table 2.3 Continuation

AUTHOR	ENVIRONMENT	CPTED FEATURE	HYPOTHESIS	RESULTS
Holahan, et al, 1978	Residence halls.	Floor level in high-rise residence hall.	Relationship of social participation, social privacy, and friendships formed with floor level.	All measures had strong relationship to floor level with high floors having the lowest scores.
Bickman, et al, 1973	Residence halls.	Residence hall density.	Socially responsible behavior is related to density of residents.	High density residents exhibited less trust, cooperativeness , and responsibility; less sense of community, and friendliness.
Schroeder, 1976	Residence halls.	Territoriality. group system.	Territoriality and group system will reduce damages, increase occupancy & retention.	Damages down 78%, occupancy up 30%, and fall to spring retention up 72%.

CHAPTER III. DESIGN OF STUDY

DESIGN

This study is a quasi-experimental, cross-sectional, static group comparison. Due to the research being done in a 'real life' environment, use of a true experimental design was not practical and manipulation of physical design features would be very costly and disruptive. The non-random sampling of residence halls to ensure variation in design limits the use of an experimental design.

The study is cross-sectional rather than longitudinal to ensure that the study would be manageable in relation to resource and time limitations.

Because limitations of this study precluded the ability to establish cause-effect relationships among variables, the study is descriptive rather than explanatory. The study is a combination of hypothesis testing and exploration. Hypothesis testing will be conducted on hypotheses developed from established concepts which have been previously tested in environments different from the current study environment.

The majority of previous studies have been conducted in public housing environments. This study will be conducted in a campus residence hall environment which may be in some respects homogeneous, but has diversity in areas of socioeconomic background, nationality, culture, etc. Also, attitudes toward police, crime, and fellow students may be significantly different than those of previous studies.

Finally, this study explores the use of the Student Opinion Survey as a measurement of intervening variables in the relationship between physical design and the occurrence of crime.

HYPOTHESES

The general hypothesis for this study is:

The frequency of occurrence of burglary, larceny, and malicious destruction of property is related to the physical design features.

The specific research hypotheses are as follow:

H1: The frequency of occurrence of burglary, larceny, and malicious destruction of property is positively related to hall length.

H2: The frequency of occurrence of burglary, larceny, and malicious destruction of property is positively related to the percentage of residence room doors facing room doors across the hall.

H3: The frequency of occurrence of burglary, larceny, and malicious destruction of property is positively related to the number of rooms per floor.

H4: The frequency of occurrence of burglary, larceny, and malicious destruction of property is positively related to the number of rooms per residence hall.

H5: The frequency of occurrence of burglary, larceny, and malicious destruction of property is positively related to the number of floors in the residence hall.

H6: The frequency of occurrence of burglary, larceny, and malicious destruction of property is positively related to the floor level.

H7: The frequency of occurrence of burglary, larceny, and malicious destruction of property is greater in residence halls with common bath facilities than in residence halls with two rooms sharing a bath.

Student Opinion Survey scores (SOS) are the mean scores of student resident responses to questions assessing attitudes and behavior of residents which may be related to the crime rate in the residence halls. The Student Opinion Survey hypotheses are as follow:

SOS H1: SOS scores are negatively related to residence hall crime rates.

SOS H2: SOS scores are negatively related to the percentage of residence room doors facing room doors across the hall.

SOS H3: SOS scores are negatively related to the number of rooms per floor.

SOS H4: SOS scores are negatively related to the number of rooms per residence hall.

SOS H5: SOS scores are negatively related to the number of floors in the residence hall.

SOS H6: SOS scores are negatively related to the floor level.

SOS H7: SOS scores will be lower in residence halls with common baths than in residence halls with two rooms sharing a bath.

SAMPLE

The site for this study is the campus of Michigan State University in East Lansing. The campus consists of 5,263 acres, with 3,163 acres devoted to experimental farms, outlying research facilities and natural areas. The northern half of the campus contains most of the buildings of the campus including the library, administrative building, classrooms and offices, and residence halls. The majority of the southern half of the campus is farm acreage and associated agricultural facilities. This north/south division is emphasized by railroad tracks which pass through the entire campus.

The north, east, and west boundaries of the campus are very distinct, being marked by major north/south and east/west streets. To the north is a business district serving the campus and adjacent city of East Lansing. The areas to the west and east are generally residential areas, with some businesses to the west which serve the campus community and nearby residential areas. No major highways or streets bisect the interior of the campus, although there is one east/west campus street which terminates at each border where it intersects with north/south streets. The majority of traffic on the campus is related to campus activity.

The campus is approximately quartered by one north/south street and the east/west street mentioned previously, with both streets terminating where they intersect with the boundary streets.

Crime statistics and population figures for this study were collected for the 1986-87 academic school year. For the 1986 fall term, 41,897 students were enrolled on MSU's East Lansing campus. Approximately 17,000 students were residents of the 27 residence halls on campus.

The residence halls are grouped by geographic location into five complexes of 4-6 halls each. The complexes are located, one in each corner of the northern half

of the campus, with the fifth complex located near the center of the northern boundary of the campus. The complexes and the halls that comprise them follow.

BRODY	Armstrong, Bailey, Butterfield, Bryan, Emmons, Rather
WEST CIRCLE	Campbell, Gilchrist, Landon, Mayo, Williams, Yakely
RED CEDAR	Abbot, Mason, Snyder, Phillips, Shaw
EAST	Akers, Holmes, Hubbard, McDonel, Owen, Van Hoosen
SOUTH	Case, Holden, Wilson, Wonders

The halls in the West Circle and Red Cedar complexes, with the exception of Shaw Hall, are older halls, constructed in approximately the 1920's/1930's. Brody Complex was constructed in the 1950's and Shaw Hall, East Complex, and South Complex were constructed in the 1960's and 1970's.

Shaw hall is unique in that it is situated by itself west of the east complex and south of the Red Cedar complex in the interior of the campus. Owen Hall is unique in that it houses almost exclusively graduate students while the rest of the halls house mostly undergraduates.

Students can request to be placed in a specific hall and with specific roommates. Without a specific request, room assignments are made for the student. There are no designated freshmen halls, however, some halls are predominantly freshmen because returning students request halls toward the center of campus leaving empty spaces in residence halls on the edge of campus. These empty rooms are then filled with incoming freshmen. Room assignments are generally made by class standing first and then age.

Crime data used for the study were the incidents of burglary, larceny, and malicious destruction of property which occurred in the residence halls during the school year September, 1986 to June, 1987, as reported by the Department of Public Safety. There were 599 incidents in all halls and 221 incidents in the eight selected halls which will be used for analysis. Purposive sampling of the residence halls was done to draw a sample which contained variation in physical design, geographic location, and crime rate.

The residence halls selected were Bailey, Rather, Williams, Shaw, Case, Wonders, Hubbard, and McDonel. Rather and Bailey are both located in Brody Complex and have the same physical design features. However, the crime rates were very different. Williams Hall is located in West Circle Complex and has the highest crime rate of that complex. Shaw Hall has a different physical design than all the other halls and is located by itself, towards the interior of campus. McDonel and Wonders Halls are the same physical design, are located in different complexes, and have significantly different crime rates. Case Hall is located in South Complex next to Wonders Hall. Both halls are 6 story buildings and the room designs are similar, however, Case has a significantly lower crime rate. Finally, Hubbard Hall is located in East Complex and at 12 stories, is the tallest residence hall on campus.

The eight selected residence halls, the complex, number of floors, population, and crime rate are shown in Table 3.1. Information for the remaining halls is provided in Appendix D.

Table 3.1 Hall, #Floors, Population, and Crime Rate

HALL	# FLOORS	POPULATION	CRIME RATE
Williams	4	227	44.1
Rather	4	448	17.9
Bailey	4	458	50.2
Shaw	6	994	30.2
Case	6	954	15.7
Wonders	6	1144	57.7
McDonel	6	1082	24.0
Hubbard	12	1204	36.5

MEASURES

CRIME DATA

The occurrence of crime and the calculation of the crime rate is based upon the measurement of incidents of burglary, larceny, and malicious destruction of property which occurred in the residence halls during the period September, 1986

to June, 1987. These crimes were selected because they comprise approximately 57% of all crimes in all residence halls, excluding Owen Hall, and 62% of all crimes in the eight selected halls during the study period.

During the same period, there were 122 false alarms and 95 nuisance/obscene phone calls in all halls, excluding Owen Hall, and 25 false fire alarms and 30 nuisance/obscene phone calls in the eight selected halls. Since the incidents of burglary, larceny, and malicious destruction of property accounted for such a significant portion of the crime, they were chosen for this study. Additionally, the next largest group of crimes, false fire alarms and nuisance/obscene phone calls, most likely would be only slightly influenced by the physical design.

The limitations of the use of official crime statistics, as described by many authors, (Black, 1970; Bottomley & Coleman, 1981; Coleman & Bottomley, 1976; Feinberg, 1981; Reiss, 1986; Skogan, 1974; Sparks, Genn & Dodd, 1977) were considered when deciding to use crime statistics from the MSU Department of Public Safety. However, some authors (Miller & Groves, 1985; Reiss, 1986; Skogan, 1986b; Sparks, Genn & Dodd, 1977; Sparks, 1981; Van Dijk & Steinmetz, 1984) have shown problems and limitations with the use of victimization surveys also. Although a victimization survey may have contributed to this study, this method was not utilized due to limitations of time and resources.

DESIGN FEATURES

The design features utilized as measurements of CPTED concepts were adapted from previous CPTED research. The measurements used in this study are identified in the following section.

Hall Length- It is theorized that residents of short hallways will exhibit more positive territorial behavior than residents of long hallways. This positive territorial behavior should inhibit the occurrence of crime.

Measurements of the hall lengths were made by measuring 'to-scale' floor plans with a ruler. The major source of possible unreliability occurred in the hallways which connect. The interconnecting portion of the two hallways was not split between the hallways, but was given entirely to one hallway depending on placement of the rooms at the intersection.

Percentage Of Residence Room Doors Facing - Residence halls with a greater proportion of room doors facing room doors across the hall should have higher crime rates than halls with a smaller percentage of room doors facing. Similarly, floors with greater percentage of doors facing than offset should have a greater crime rate. (Heiwell, 1973)

Possible threats to reliability are computational error and not knowing exactly which rooms were occupied. Unoccupied rooms may have been counted.

Number Of Rooms Per Floor - This type of measurement is based upon density within a unit. This type of density reflects the number of interactions that take place with the same individuals over time. Privacy, social obligations, and overstimulation should vary with the density level. Higher density should result in a higher crime rate.

Threats to the reliability of this measurement are counting error and not knowing exactly which rooms were occupied and which might have been unoccupied.

Rooms Per Residence Hall - This measurement is based upon density within a structure. This density is related to the number of different individuals a resident can interact with in shared facilities such as laundry rooms, hallways, elevators, lobbies, and bathrooms. This measurement will have the same threats to reliability as rooms per floor.

Number of Floors - It is theorized that residence halls with a higher number of floors will have a higher rate of crime than residence halls with a lower number of floors. This measurement contains no apparent threat to reliability.

Floor Level - It is theorized that higher floors will have higher crime rates than lower floors. Threats to reliability for this measurement may be improper reporting of floor level by the complainant or improper recording of the floor level by the recording officer.

Common Bath Versus Two Rooms Sharing A Bath - Residence halls with two rooms sharing a bath will have lower crime rates than residence halls with common bath facilities. This measurement is based upon density. Prolonged exposure to high social density engenders the experience of crowding and causes residents to avoid one another. Residents on floors with common bath facilities are more likely to feel that their floor is crowded, that there are too many others with whom they must interact, and that there are others whom they would prefer to avoid. (Baum, et al, 1975) Information for this measurement was taken from residence hall blue prints and should be very reliable.

DATA COLLECTION

CRIME INCIDENTS

Information about the incidents of burglary, larceny, and malicious destruction of property were collected from the official records of MSU Department of Public Safety. Some incident information was gathered from records stored on computer tapes. This information included the following:

- Complaint number
- Geographic code of residence hall
- Date complaint received
- Date incident occurred
- Time incident occurred
- Fileclass of incident

Tool or weapon used
Damage value
Type of item stolen
Value of item stolen
Victim and suspect information

Using the complaint numbers of incidents from the computer files, further information was taken from DPS incident reports. This information included:

Day incident was reported
Room number
Crime location
Floor
Whether door was open, closed, locked, or unlocked.
Miscellaneous information

Data from the computer tapes were compared with the incident reports to eliminate discrepancies. This provided data which was relatively free of recorder error. This process provided a total of 221 useable cases in the eight selected residence halls

HALL POPULATION DEMOGRAPHICS

Demographic data such as gender, class standing, and total population were provided by the MSU Housing Assignments Office for Fall 1986, Winter 1987, and Spring 1987. Population figures for the three terms were averaged to produce a figure to compute the crime rate for each residence hall.

STUDENT OPINION SURVEY

Student responses to the Student Opinion Survey administered in January, 1987 by the University Housing Programs Office to the residents of MSU residence halls were used to assess the attitudes and behavior of residents which may be related to the crime rate in the residence halls. The Student Opinion Survey was administered to the entire population of the residence hall system. Of the 17,000 surveys distributed, 9,087 were returned for a rate of 53.9%. The return rate for the eight halls selected for this study was 52.7%.

The surveys were given to the resident assistant of each floor. The method of distribution was left to the discretion of each resident assistant. The most common method of distribution was for the survey to be placed under each room door and the room resident returned the survey to a collection point. Other resident assistants may have personally gathered the completed surveys. Some resident assistants may have offered incentives for completed surveys.

Demographic data provided by the questionnaire about the respondents included:

- Number of terms lived in MSU residence hall
- Class standing
- Age
- House option of resident
- Sex
- Housing arrangements planned for next year

In addition to the demographic questions, 42 questions were asked about resident assistants, resident hall programs, hall administration, relations with other residents, and physical condition and maintenance of the residence hall. These questions were five-option Likert-type design.

Twelve, three-option Likert-type questions were asked about the respondents increased personal skills since the first of the term.

Finally, 13 true/false questions were asked about hall administration, resident assistants, knowledge about how to contact appropriate residence hall administrators, and using residence hall programs.

The questions utilized for this study were taken from the first section and were those that assessed attitudes about residence hall cleanliness, physical condition of the residence hall, relationships between residents, safety in the residence hall, and general attitudes about life in the residence hall.

The questions listed below are those that were selected as representing intervening variables in the relationship between the residence hall physical design and the occurrence of crime.

- VV14 Most residents on my floor are concerned about me.
- VV15 Most residents try to keep the floor clean and free of damage.
- VV16 Most residents on my floor respect my rights.
- VV17 Most residents respect the property of one another.
- VV18 People on my floor respect each other.
- VV19 The level of quiet on my floor is satisfactory.
- VV41 I feel safe living in this residence hall.
- VV42 This hall is a clean place to live.
- VV44 Living in residence halls has been beneficial to me.
- VV45 I would recommend residence halls to someone else as a good place to live.
- VV48 The custodial staff responds to maintenance concerns in a reasonable amount of time.
- VV50 The residence hall is in good repair.

Each question contained 5 response choices; Strongly Agree, Agree, No Opinion, Disagree, and Strongly Disagree. Response values were, consecutively, 5,4,3,2, and 1 for each question. All individual scores were summed and then divided by the number of individuals to provide a mean score for analysis.

An item analysis was conducted to determine the ability of each item to discriminate between high response scores and low response scores, providing the discriminative power (DP) for each item. The items and their respective discriminative powers are listed in Table 3.2.

Reliability of the scales was evaluated with the split-half reliability test. Correlation of the two halves resulted in a reliability coefficient of .47 for the responses from the eight halls selected for this study.

Table 3.2 SOS Item Analysis

ITEM	DP
VV14	1.58
VV15	1.61
VV16	1.54
VV17	1.14
VV18	1.44
VV19	1.61
VV41	1.00
VV42	1.37
VV44	1.21
VV45	1.23
VV48	0.92
VV50	0.98

INTERVIEWS

Key person interviews were conducted with DPS officials, residence hall administrators, and housing programs personnel to gather background information and other information which might assist in the interpretation of study findings. The interviews were conducted by the same person and interview notes were written up immediately after each interview to increase recording accuracy.

ANALYSIS PROCEDURES

Univariate data analysis procedures included frequencies, rates, and percentages. Bivariate data analysis procedures included Pearson's r , Spearman's Rho, and the t-test for difference of means. Significance tests were conducted utilizing the t-test.

CHAPTER IV. ANALYSIS OF RESULTS

CRIME DATA

DESCRIPTIVE

During the study period, 221 incidents of burglary, larceny, and malicious destruction of property were reported in the eight selected residence halls. Burglary occurred most frequently with a total of 105 incidents comprising 47.5% of all reported incidents. In each individual hall, burglary comprised at least 40% of all incidents.(see Table 4.1)

Table 4.1 Crime Types and Number of Incidents

HALL	Hall Code	LARCENY	MALICIOUS DESTRUCTION	BURGLARY
Williams	308	5	1	4
Rather	311	1	1	6
Bailey	315	5	3	15
Shaw	317	6	9	15
Case	321	6	3	6
Wonders	323	19	20	27
McDonel	324	11	2	13
Hubbard	331	19	5	19
TOTAL		72	44	105

At least one incident occurred on each floor level with the highest frequency of incidents occurring on the first (58) and second (44) floors for all 8 halls combined. (see Table 4.2) In each individual hall, incidents also occurred most frequently on the first and second floors, except for Hubbard Hall which had 8 incidents on the 12th floor.

Table 4.2 Floor level and Number of Incidents

FLOOR	HALL CODE								
	ALL	308	311	315	317	321	323	324	331
Basement	9				1	2	4	1	1
Terrace	6				6				
Ground	8				4				4
First	58	5	3	5	8	4	19	10	4
Second	44	3	2	11	7	3	12	5	1
Third	19	1	2	3	2	2	5	1	3
Fourth	19			3		2	8	1	5
Fifth	11					2	4	4	1
Sixth	9						6	3	
Seventh	2								2
Eighth	5								5
Ninth	1								1
Tenth	1								1
Eleventh	5								5
Twelfth	8								8
Unknown	2	1			1				
Missing	10		1	1	1		5	1	1
Misc	4						3		1

Approximately 52% of all incidents occurred in residence rooms. The next most frequent crime locations included study lounges, bikerooms, and lobbies. (see Table 4.3)

Table 4.3 Crime Location

LOCATION	HALL CODE								
	ALL	308	311	315	317	321	323	324	331
Residence	114	6	7	13	17	8	28	12	23
Study lounge	18	2		2	4	2	8		
Bikeroom	14						1	8	5
Lobby	13						7	2	4
Laundry Room	11			5		1	1		4
Stairwell	9			2			6		
Elevator	7				1		6		
Hallway	7				2	1	1		3
Cafeteria	4				1		1	1	1
Reception Desk	4				2		2		
Missing/Unknown	7	1			2	2	2		
Misc	13	1	1	1	1	1	3	3	2

The most common items stolen were in the miscellaneous category (81), followed by currency and notes (36). (see Table 4.4) The value of items stolen

totaled almost \$20,000 in the combined eight halls. Individual hall totals ranged from \$520 to \$4,337. (see Table 4.5)

Table 4.4 Class of Stolen Items

ITEM	HALL CODE								
	ALL	308	311	315	317	321	323	324	331
Notes	44		3	5	7	3	11	6	9
Currency									
Jewelry	12	1			1	1	5		4
Precious Metals									
T.V'S	13		3	3	2	1	1	1	2
Radio's									
Clothing	22		1	3		4	9	2	7
Furs									
Office Equip	1								1
Household Goods	6				1		5		
Consumable Goods	3	1			1			1	
Misc	103	7	2	10	12	8	33	15	20
Blank	232	11	1	4	12	3	22	6	7

Note: Misc includes vehicle parts, books, pets, etc.

Table 4.5 Dollar Value of Stolen Items

	HALL CODE								
	ALL	308	311	315	317	321	323	324	331
Value	19831	520	709	1534	1510	794	8141	2246	4337
Range	2-1500	5-250	14-400	2-206	3-350	4-150	4-1500	5-450	5-892

Note: Values are in dollars.

Reported damage values in the eight halls totaled \$5,103 and each incident ranged from \$10 to \$800. (see Table 4.6) Reported incidents of malicious destruction of property (MDOP) may not give an accurate picture of the amount of damage occurring. One police officer stated that residence hall personnel handled a large portion of the MDOP incidents internally. The officer suggested that damage cases were reported to DPS only when the individual causing the damage could not be controlled or it was a very clear case of deliberate vandalism. However, a university housing official stated that damage over \$50 was reported to DPS and all other incidents were handled by the residence hall system.

Table 4.6 Dollar Value of Damage Incidents

	HALL CODE								
	ALL	308	311	315	317	321	323	324	331
Value	5103	50	25	545	1376	900	1580	276	351
Range	10-800	50	25	30-405	10-300	50-800	15-250	10-150	10-120

Note: Values are in dollars.

Crime incidents occurred most frequently on Saturday (90), followed by Friday and then Thursday for all eight halls together. Incidents occurred most frequently on Saturday for each individual hall. (see Table 4.7)

Table 4.7 Day Crime Incident Occurred

DAY	HALL CODE								
	ALL	308	311	315	317	321	323	324	331
Sunday	17		1	1	6	1	6	1	1
Monday	21		1	2	2		6	1	9
Tuesday	19	1		3	1	1	6	3	4
Wednesday	16	2	1	3	1	2	4	2	1
Thursday	24	1	1	2	2		10	3	5
Friday	34	2	1	4	4	3	10	5	5
Saturday	90	4	3	8	14	8	24	11	18

The tool used to perpetrate the crime in 74 incidents was personal (hands, fist, feet, etc.). The tool used was unknown in 50 incidents and blank in 89 incidents. (see Table 4.8) A specific tool was recorded in only 8 incidents. The large number of incidents in the personal category may be partially explained by the number of incidents (59) in which the door to the room was unlocked.

Table 4.8 Tools Used In Crime

Type of Tool	HALL CODE								
	ALL	308	311	315	317	321	323	324	331
Prying Instrument	1						1		
Cutting Instrument	3						1	1	1
Blunt Object	2				2				
Personal	74	5	5	4	8	6	22	4	20
Bypass Instrument	1							1	
Other	1			1					
Unknown	50	1	1	11	7	3	8	8	11
Blank	89	4	2	7	13	6	34	12	11

In only 2 incidents were individuals in police custody at the time the incident report was written. In 29 incidents an individual was cited and there was a suspect in 32 incidents. In 2 incidents the complaint was dismissed by motion. Forty-eight individuals were acquitted by a judge and the disposition information was not provided for 171 incidents.

HYPOTHESES

H1: The frequency of occurrence of burglary, larceny, and malicious destruction of property is positively related to hall length

$$\begin{array}{ll} r = -.062 & t = .783 \\ r^2 = .004 & P = .05 \\ N = 161 & DF = 160 \end{array}$$

Does not support hypothesis.

H2: The frequency of occurrence of burglary, larceny, and malicious destruction of property is positively related to the percentage of residence room doors facing room doors across the hall.

$$\begin{array}{ll} r = -.015 & t = .037 \\ r^2 = .000 & P = .05 \\ N = 8 & DF = 7 \end{array}$$

Does not support hypothesis.

H3: The frequency of occurrence of burglary, larceny, and malicious destruction of property is related to the number of rooms per floor.

$$\begin{array}{ll} r = -.15 & t = 1.029 \\ r^2 = .022 & P = .05 \\ N = 48 & DF = 47 \end{array}$$

Does not support hypothesis.

H4: The frequency of occurrence of burglary, larceny, and malicious destruction is related to the number of rooms per residence hall.

$$\begin{array}{ll} r = -.122 & t = .30 \\ r^2 = .015 & P = .05 \\ N = 8 & DF = 7 \end{array}$$

Does not support hypothesis.

H5: The frequency of occurrence of burglary, larceny, and malicious destruction of property is related to the number of floors in the residence hall.

$$\begin{array}{ll} r = -.019 & t = .047 \\ r^2 = .000 & P = .05 \\ N = 8 & DF = 7 \end{array}$$

Does not support hypothesis.

H6: The frequency of occurrence of burglary, larceny, and malicious destruction of property is related to the floor level.

$$\begin{array}{ll} p = .145 & t = .528 \\ p^2 = .021 & P = .05 \\ N = 15 & DF = 14 \end{array}$$

Does not support hypothesis.

H7: The frequency of occurrence of burglary, larceny, and malicious destruction of property is greater in residence halls with common bath facilities (X_1) than in residence halls with two rooms sharing a bath (X_2).

$$\begin{array}{l} t = .220 \\ P = .05 \\ X_1 \text{ mean} = 35.7 \\ X_2 \text{ mean} = 33.5 \\ DF = 6 \end{array}$$

Does not support hypothesis.

STUDENT OPINION SURVEY

DESCRIPTIVE

There were 9,087 responses to the Student Opinion Survey from all residence halls on campus. From the eight residence halls selected for this study there were 3,432 responses. (see Table 4.9)

Over 50% of the respondents had lived in the residence hall system for two or less terms. Freshmen and sophomores comprised approximately 70% of the respondents. Eighty percent of the respondents were below the age of 21 and 40% of the respondents lived in special designated housing options such as limited visitation, quiet house or hall, coed by suite, or honors college floor.

Females comprised 58% of the respondents and males were 42% of the total. When considering housing plans for the next year, approximately 80% were evenly divided between moving off campus, staying in the same hall and being undecided. The remainder were either graduating or leaving or moving to a different hall.

Table 4.9 Hall Population, SOS Responses

HALL	POP	SOS	% POP	% SOS
BAILEY	458	238	7.0	6.9
RATHER	448	253	6.9	7.3
WILLIAMS	227	78	3.5	2.2
SHAW	994	592	15.3	17.2
CASE	954	245	14.7	7.1
WONDERS	1144	559	17.6	16.3
HUBBARD	1204	691	18.5	2.0
MCDONEL	1082	776	16.6	22.6

SOS HYPOTHESES

SOS H1: SOS scores are negatively related to residence hall crime rates.

$$\begin{array}{ll} r = -.688 & t = 2.32 \\ r^2 = .473 & P = .05 \\ N = 8 & DF = 7 \end{array}$$

Does not support hypothesis.

SOS H2: SOS scores are negatively related to the percentage of residence room doors facing room doors across the hall.

$$\begin{array}{ll} r = .608 & t = 1.876 \\ r^2 = .37 & P = .05 \\ N = 8 & DF = 7 \end{array}$$

Does not support hypothesis.

SOS H3: SOS scores are negatively related to the number of rooms per floor.

$$\begin{array}{ll} r = .421 & t = 3.147 \\ r^2 = .177 & P = .05 \\ N = 48 & DF = 47 \end{array}$$

Does not support hypothesis.

SOS H4: SOS scores are negatively related to the number of rooms per residence hall.

$$\begin{array}{ll} r = .632 & t = 1.998 \\ r^2 = .4 & P = .05 \\ N = 8 & DF = 7 \end{array}$$

Does not support hypothesis

SOS H5: SOS scores are negatively related to the number of floors in the residence hall.

$$\begin{array}{ll} r = .147 & t = .446 \\ r^2 = .022 & P = .05 \\ N = 8 & DF = 7 \end{array}$$

Does not support hypothesis.

SOS H6: SOS scores are negatively related to the floor level.

$$\begin{array}{ll} p = .016 & t = .058 \\ p^2 = .000 & P = .05 \\ N = 15 & DF = 7 \end{array}$$

Does not support hypothesis.

SOS H7: SOS scores will be lower in residence halls with common baths (X₁) than in residence halls with two rooms sharing a bath (X₂).

$$\begin{array}{l} t = 1.71 \\ P = .05 \\ X_1 \text{ mean} = 43.1 \\ X_2 \text{ mean} = 44.7 \\ DF = 6 \end{array}$$

Does not support hypothesis.

SUMMARY

H1: The hypothesis that the frequency of occurrence of burglary, larceny, and malicious destruction of property is positively related to hall length was not supported at the .05 significance level. The critical t value was not met and the correlation was in a negative direction.

H2: The hypothesis that the frequency of occurrence of burglary, larceny, and malicious destruction of property is positively related to the percentage of residence room doors facing room doors across the hall was not supported at the .05 significance level. The critical t value was not met and the correlation was in a negative direction.

H3: The hypothesis that the frequency of occurrence of burglary, larceny, and malicious destruction of property is positively related to the number of rooms per floor was not supported at the .05 significance level. The critical t value was not met and the correlation was in a negative direction.

H4: The hypothesis that the frequency of occurrence of burglary, larceny, and malicious destruction of property is positively related to the number of rooms per residence hall was not supported at the .05 significance level. The critical t value was not met and there was a slight correlation in a positive direction.

H5: The hypothesis that the frequency of occurrence of burglary, larceny, and malicious destruction of property is positively related to the the number of floors in the residence hall was not supported at the .05 significance level. The the critical t value was not met and the correlation was in a negative direction.

H6: The hypothesis that the frequency of occurrence of burglary, larceny, and malicious destruction of property is positively related to the floor level was not supported at the .05 significance level. The the critical t value was not met and there was a slight correlation in a positive direction.

H7: The hypothesis that the frequency of occurrence of burglary, larceny, and malicious destruction of property is greater in residence with common bath facilities than in residence halls with two rooms sharing a bath was not supported at the .05 significance level. The t-test for difference of means did not meet the critical value.

SOS H1: The hypothesis that SOS scores are positively related to residence hall crime rates was not supported at the .05 significance level. The critical t value was met, but the correlation was in a negative direction.

SOS H2: The hypothesis that SOS scores are negatively related to the percentage of residence room doors facing room doors across the hall was not supported at the .05 significance level. The critical t value was not met and the correlation was in a positive direction.

SOS H3: The hypothesis that SOS scores are negatively related to the number of rooms per floor was not supported at the .05 significance level. The critical t value was met, but the correlation was in a positive direction.

SOS H4: The hypothesis that SOS scores are negatively related to the number of rooms per residence hall was not supported at the .05 significance level. The critical t value was met, but the correlation was in a positive direction.

SOS H5: The hypothesis that SOS scores are negatively related to the number of floors in the residence hall was not supported at the .05 significance level. The critical t value was not met and there was a slight correlation in a positive direction.

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SOS H6: The hypothesis that SOS scores are negatively related to the floor level was not supported at the .05 significance level. The critical t value was not met and there was a slight correlation in a positive direction.

SOS H7: The hypothesis that SOS scores will be lower in residence halls with common baths than in residence halls with two rooms sharing a bath was not supported at the .05 significance level. The critical t value was not met in a difference of means test.

CHAPTER V. SUMMARY AND CONCLUSIONS

SUMMARY

The belief that campus crime is a problem just as serious as crime off campus is increasingly being accepted. As campuses become communities with populations of differing values, cultures, and philosophies, campus administrators are faced with the same type of problems facing non-campus communities.

In an attempt to deal with the increased awareness and concern about crime on campus, many administrators are utilizing techniques of crime prevention. One of these techniques of crime prevention is Crime Prevention Through Environmental Design (CPTED). This technique is based upon the assumption that environmental design can play a part in preventing crime and reducing the level of fear of crime.

Most of the research examining CPTED and its relationship to the frequency of occurrence of crime has been conducted in public housing environments which were generally composed of low to middle income families. Little research has been done in the residence hall environment to contribute to the development of CPTED theory. This lack of research in the residence hall environment has also left campus administrators with little information for rational campus planning in their attempts to deal with a major portion of campus crime, that which occurs in the residence hall.

The purpose of this study was to explore the relationship between the physical environmental design and the frequency of occurrence of crime in selected residence halls on the campus of Michigan State University. The residence halls were selected based upon their location on campus, similar or dissimilar physical design and crime rate. The crime incidents used for the study were burglary, larceny, and malicious destruction of property.

This study was a quasi-experimental, cross-sectional, static group comparison. Due to the research being conducted in a 'real life' environment, use of a true experimental design was not practical and manipulation of physical design features could be very costly and disruptive.

Because the limitations of this study preclude the ability to establish cause-effect relationships among variables, the study was descriptive rather than explanatory. This study was a combination of hypothesis testing and exploration.

The general hypothesis for this study was that the frequency of occurrence of burglary, larceny, and malicious destruction of property is negatively related to the degree of physical design features which can be measured.

Crime data used for the study were the incidents of burglary, larceny, and malicious destruction of property which occurred in the residence halls during the school year, September, 1986 to June, 1987, as reported to the campus Department of Public Safety. Purposive sampling of the residence halls was done to draw a sample which contained variation in physical design, geographic location, and crime rate.

The physical design features utilized were hall length, percentage of residence room doors facing doors across the hall, number of rooms per floor, number of rooms per residence hall, number of floors, floor level, and common bath versus two rooms sharing a bath.

Student responses to the Student Opinion Survey (SOS), administered to the residents of Michigan State University residence halls in January, 1987 by the University Housing Programs Office, were used to explore the relationship between SOS scores, physical design, and crime rates.

CONCLUSIONS

The general hypothesis that the frequency of occurrence of burglary, larceny, and malicious destruction of property is related to physical design features was not supported. A list of each research hypothesis and its result follows

H1: The frequency of occurrence of burglary, larceny, and malicious destruction of property is positively related to hall length. Rejected at the .05 significance level.

H2: The frequency of occurrence of burglary, larceny, and malicious destruction of property is positively related to the percentage of residence room doors facing room doors across the hall. Rejected at the .05 significance level.

H3: The frequency of occurrence of burglary, larceny, and malicious destruction of property is positively related to the number of rooms per floor. Rejected at the .05 significance level.

H4: The frequency of occurrence of burglary, larceny, and malicious destruction of property is positively related to the number of rooms per residence hall. Rejected at the .05 significance level.

H5: The frequency of occurrence of burglary, larceny, and malicious destruction of property is positively related to the number of floors in the residence hall. Rejected at the .05 significance level.

H6: The frequency of occurrence of burglary, larceny, and malicious destruction of property is positively related to the floor level. Rejected at the .05 significance level.

H7: The frequency of occurrence of burglary, larceny, and malicious destruction of property is greater in residence halls with common bath facilities than in residence halls with two rooms sharing a bath. Rejected at the .05 significance level.

The Student Opinion Survey hypotheses are as follow:

SOS H1: SOS scores are negatively related to residence hall crime rates. Rejected at the .05 significance level.

SOS H2: SOS scores are negatively related to the percentage of residence room doors facing room doors across the hall. Rejected at the .05 significance level.

SOS H3: SOS scores are negatively related to the number of rooms per floor. Rejected at the .05 significance level.

SOS H4: SOS scores are negatively related to the number of rooms per residence hall. Rejected at the .05 significance level.

SOS H5: SOS scores are negatively related to the number of floors in the residence hall. Rejected at the .05 significance level.

SOS H6: SOS scores are negatively related to the floor level. Rejected at the .05 significance level.

SOS H7: SOS scores will be lower in residence halls with common baths than in residence halls with two rooms sharing a bath. Rejected at the .05 significance level.

DISCUSSION-FUTURE RESEARCH

The two major limitations of this study are the non-random sampling procedure used and the small number of cases in some hypothesis tests. These limitations restrict any contribution to the examination of the relationship between physical design and the frequency of occurrence of crime. These limitations could be eliminated in future research by utilizing the total population of residence halls on campus. This would result in a study of 24 residence halls which would provide a larger sample size and remove the problem of utilizing a non-random sample.

In this study the hypothesized relationship between the Student Opinion Survey Scores, physical design and the crime rate was not supported. This could have been a result of the survey not being an accurate measure of the intervening attitudes which influence the frequency of occurrence of crime. Future research would benefit from the development and use of a survey instrument to measure these intervening attitudes. This survey could be administered during the same time period as the crime statistics are drawn.

The use of a victimization study would provide a comparison to the official crime statistics. An analysis of crime victimization results might reveal a different relationship than an analysis of official statistics.

The accuracy of future research could be improved by actual verification of room occupancy in the residence halls. This information was not gathered for this study so floor crime rates and the number of residence rooms per floor could be different from the actual figures. These different figures could result in different findings.

Each hall used in future research should be checked for special crime prevention programs or any 'community building' programs which might influence study findings. A residence hall with a crime prevention program may have a lower crime rate than a residence hall without a crime prevention program. Also a hall or floor with a special community program might have a different crime rate than on without.

Future research might also benefit from the use of multiple correlation to examine the effect that gender, class standing, age, major, or other special grouping might have on the relationship between physical design and the frequency of occurrence of crime.

Finally, it is possible that a form of intervention might be utilized to conduct research in a design that is closer to a true experiment. Existing doorways could be identified which could be locked and entry allowed by key to residents and guests of a specific floor or section of floor. This intervention could be used to examine the influence of territoriality on the frequency of occurrence of crime.

APPENDICES

APPENDIX A

APPENDIX A

DEFINITIONS

BURGLARY, Entry with or without force without intent to commit. Entry with or without force without the intent to commit a theft or other felony.

BURGLARY, Entry without force with intent to commit. Entry without force made for the purpose of committing a theft or other felony.

BURGLARY, Forced Entry. All offenses where force of any kind is used to unlawfully enter a structure for the purpose of committing a theft or felony.

CITED. For a subject who has been identified as responsible for a criminal incident to the point that the case is ready for the prosecutor and that the subject is either on personal recognizance, released on an appearance ticket, or released on bond.

CONSUMABLE GOODS. Liquor, meat, perishable goods, canned foods, cigarettes, etc.

CURRENCY, NOTES, ETC. Items of currency and legal documents which are interpreted as being negotiable in the open market.

DAY REPORTED. The date the incident was received at the department.

HOUSEHOLD GOODS. Beds, sofas, chairs, appliances, etc.

LARCENY. The unlawful taking, carrying, leading, or riding away of property from the possession or constructive possession of another.

MALICIOUS DESTRUCTION OF PROPERTY. The willful malicious destruction, injury, disfigurement, or defacement of any public or private property, real or personal, without consent of the owner or person having control.

MISCELLANEOUS. Items not accounted for in any other category. Ex. - vehicle parts, boat, trailers, books.

PHYSICAL DENSITY. The amount of space available to a particular number of people.

SOCIAL DENSITY. The number of people occupying a fixed amount of space.

APPENDIX B

APPENDIX B

MAP OF CAMPUS

APPENDIX C

APPENDIX C

CRIME STATISTICS

Table C.1 Campus Crime Statistics

OFFENSE	1985	1986	1987	1988
Murder/Manslaughter	0	1	0	1
Kidnapping	2	0	3	2
Criminal Sexual Conduct	20	33	19	19
Robbery	12	5	7	10
Aggravated Assault	45	35	32	20
Non-Aggravated Assault	106	135	125	112
Burglary	599	592	547	474
Larceny	1574	1475	1783	1604
Malicious Destruction	459	470	508	526
Arson	30	36	26	46
Drug Violations	100	20	58	27
Weapons Laws	24	29	33	23
UDAA	52	54	59	62
Window Peeping	22	18	31	19
Indecent Exposure	22	15	25	17
Other Sex Offenses	23	15	21	10
Liquor Violations	23	58	117	73
Drunkenness	14	23	23	27
False Fire Alarms	144	158	161	92
Nuisance Telephone Calls	169	119	188	115
All Others	280	274	240	241
TOTAL	3270	3565	4006	3520

Table C.2 Crime Statistics For All Halls

RESIDENCE HALL	CODE	BURGLARY	LARCENY	MALICIOUS DESTRUCTION
Landon	305	0	2	1
Van Hoosen	319	1	0	2
Mary Mayo	309	3	2	1
Campbell	304	6	1	0
Rather	311	6	1	1
Bryan	312	4	5	0
Williams	308	4	5	1
Butterfield	310	7	2	2
Armstrong	316	5	5	4
Case	321	6	6	3
Emmons	314	9	8	0
Owen	320	2	14	2
Gilchrist/Yakely	306	12	6	1
Bailey	315	15	5	3
Phillips/Snyder	300	14	10	4
McDonel	324	13	11	2
Shaw	317	15	6	9
Abbot/Mason	302	14	10	7
Hubbard	331	19	19	5
Holden	332	27	16	4
Akers	326	23	18	9
Wilson	322	23	23	5
Holmes	330	37	12	6
Wonders	323	27	19	20

Table C.3 Residence Hall Crime Rates

RESIDENCE HALL	CODE	CRIME RATE FOR 3 STUDY CRIMES	TOTAL ALL CRIMES	CRIME RATE FOR ALL CRIMES
Landon	305	9.6	15	48.1
Van Hoosen	319	37.5	3	37.5
Mary Mayo	309	24.7	10	41.2
Campbell	304	23.5	13	43.6
Rather	311	17.9	16	35.7
Bryan	312	19.4	16	34.6
Williams	308	44.1	15	66.1
Butterfield	310	27.0	21	51.6
Armstrong	316	30.2	27	58.2
Case	321	15.7	44	46.1
Emmons	314	37.8	28	62.2
Owen	320	22.4	31	38.7
Gilchrist/Yakely	306	36.8	39	75.6
Bailey	315	50.2	35	76.4
Phillips/Snyder	300	37.5	44	60.0
McDonel	324	24.0	40	37.0
Shaw	317	30.2	51	51.3
Abbot/Mason	302	41.1	53	70.3
Hubbard	331	36.5	70	59.0
Holden	332	38.0	99	80.0
Akers	326	40.8	89	72.7
Wilson	322	46.7	100	91.6
Holmes	330	43.4	84	66.2
Wonders	323	57.7	86	75.2

APPENDIX D

APPENDIX D

RESIDENCE HALL POPULATION DESCRIPTIONS

Table D.1 Residence Hall Populations Of Eight Sample Halls

HALL	CODE	FRESH	SOPH	JUNIOR	SENIOR	OTHERS	MEN	WOMEN
Williams	308	18	48	65	85	11	92	134
Rather	311	294	109	37	5	4	223	225
Bailey	315	353	76	19	8	2	226	232
Shaw	317	379	363	171	74	7	478	516
Case	321	420	306	158	66	5	482	472
Wonders	323	423	529	159	31	1	562	582
McDonel	324	56	278	434	300	14	590	492
Hubbard	331	884	211	69	34	5	597	607

Note: Population figures are an average of three terms.

Table D.2 Residence Hall Populations Of All Halls

RESIDENCE HALL	CODE	NUMBER OF FLOORS	POPULATION
Landon	305	3	312
Van Hoosen	319	2	80
Mary Mayo	309	3	243
Campbell	304	3	298
Rather	311	4	448
Bryan	312	4	463
Williams	308	4	227
Butterfield	310	4	407
Armstrong	316	4	464
Case	321	6	954
Emmons	314	4	450
Owen	320		802
Gilchrist/Yakely	306	4	516
Bailey	315	4	458
Phillips/Snyder	300	4	746
McDonel	324	6	1082
Shaw	317	6	994
Abbot/Mason	302	4	754
Hubbard	331	12	1204
Holden	332	6	1238
Akers	326	6	1225
Wilson	322	6	1092
Holmes	330	6	1268
Wonders	323	6	1144

Note: Population figures are an average of three terms.

APPENDIX E

APPENDIX E

SOS SURVEY INSTRUMENT

**UNIVERSITY HOUSING PROGRAMS OFFICE
MICHIGAN STATE UNIVERSITY
STUDENT OPINION SURVEY**

Dear Residence Hall Student:

This survey is designed to obtain information from you about selected aspects of the residence hall living environment. The results are used by hall staff and student groups so that they can do a better job for you. Please carefully consider each question, but omit any question that is not clear or is offensive to you. **YOUR INDIVIDUAL RESPONSES ARE CONFIDENTIAL** will not be identified in any way.

INSTRUCTIONS: Please use a number 2 pencil and mark the answer on the answer sheet that is correct for you. Your resident assistant will help you complete items 1 through 4. **ANSWER THE QUESTIONS BASED ON YOUR EXPERIENCE FOR THIS ACADEMIC YEAR.** Thank you for your cooperation.

- | 1.-2. | Hall Code | 3.-4. | Floor Code |
|---|--|------------------------------|------------------|
| 5. How many terms have you lived in a MSU Residence hall? | | | |
| | 1. one | 3. three | 5. five or six |
| | 2. two | 4. four | 6. seven or more |
| 6. What is your class standing? | | | |
| | 1. Freshman | 3. Junior | 5. Graduate |
| | 2. Sophomore | 4. Senior | 6. Other |
| 7. What is your age? | | | |
| | 1. less than 18 | 3. 19 | 5. 21 |
| | 2. 18 | 4. 20 | 6. 22-23 |
| | | | 7. 24-25 |
| | | | 8. over 25 |
| 8. What option house are you living in? | | | |
| | 1. Limited Visitation | | |
| | 2. Quiet House or Hall | | |
| | 3. Coed by Suite | | |
| | 4. Honors College Floor | | |
| | 5. Combined Honors College & Quiet House | | |
| | 6. Other | | |
| 9. What is your sex? | | | |
| | 1. male | 2. female | |
| 10. What is your legal residence? | | | |
| | 1. U.S. | 2. foreign country | |
| 11. What is your racial/ethnic group? | | | |
| | 1. White/Caucasian | 2. Black/Afro-American | |
| | 3. Chicano/Mexican American | 4. Spanish American/Hispanic | |
| | 5. American Indian | 6. Asian Pacific Islander | |
| | 7. Other | | |
| 12. Do you have a physical handicap? | | | |
| | 1. yes | 2. no | |
| 13. What housing arrangements are you planning for next year? | | | |
| | 1. Moving off campus | | |
| | 2. Remaining in same hall | | |
| | 3. Moving to a different hall | | |
| | 4. Graduating or leaving school | | |
| | 5. Undecided | | |

PLEASE INDICATE YOUR RESPONSE TO EACH OF THE STATEMENTS BELOW BY USING THE FOLLOWING CODE IF YOU:

- 1 - Strongly Agree
- 2 - Agree
- 3 - Does Not Apply/No Opinion
- 4 - Disagree
- 5 - Strongly Disagree

14. Most residents on my floor are concerned about me.
15. Most residents try to keep the floor clean and free of damage.
16. Most residents on my floor respect my rights.
17. Most residents respect the property of one another.
18. People on my floor respect each other.
19. The level of quiet on my floor is satisfactory.
20. Alcohol use by other floor residents has been a problem to me.
21. Our floor representative keeps me informed about hall government and its activities.
22. Our floor representative asks my opinions in programs and activities.
23. Things of value are accomplished through hall government.
24. My RA has made an effort to get to know me.
25. My RA has made me aware of my rights and responsibilities as a hall resident.
26. I feel listened to when I talk to my RA.
27. My RA is open to opinions of others that differ from his/hers.
28. My RA could provide me with resource information.
29. I am satisfied with the contact I have had with my RA.
30. My RA helps make the floor a positive place to live.
31. My RA treats people with respect.
32. I respect my RA.
33. My RA helps me get along with other people.
34. My RA does his/her job well.
35. My RA has helped me with my academic life (classes, career plans, major, study habits, etc.).
36. I am satisfied with my RA's availability.
37. I have been satisfied with the contact I have had with the Minority Aide.
38. I understand the purpose of the Caucus/culture room.
39. Things of value are accomplished through Caucus.
40. I should support the policies of this residence hall.
41. I feel safe living in this residence hall.
42. This hall is a clean place to live.
43. There is adequate space in this hall to study.
44. Living in residence halls has been beneficial to me.
45. I would recommend residence halls to someone else as a good place to live.
46. Participation in IM sports through the residence halls is important.
47. I understand the differing roles of the Resident Director and the Hall Manager.
48. The custodial staff responds to maintenance concerns in a reasonable amount of time.
49. The desk receptionists in this hall are helpful and courteous.
50. This residence hall is in good repair.
51. I have gained knowledge from attending floor programs.
52. I have been positively influenced by floor programs.
53. I have gained knowledge from attending all-hall programs.
54. I have been positively influenced by all-hall programs.
55. Residence hall programming has helped me develop in the following areas: social, physical, sexual, emotional, life planning, intellectual, values, and human awareness.

PLEASE INDICATE YOUR RESPONSE TO EACH OF THE STATEMENTS BELOW BY USING THE FOLLOWING CODE IF YOUR ABILITY HAS INCREASED:

- 1 - To a great extent
2 - To some extent
3 - Not at all
-

SINCE SEPTEMBER, I HAVE INCREASED MY ABILITY TO:

- 56. Understand the consequences of excessive drinking.
- 57. Manage stress.
- 58. Be confident of myself.
- 59. Develop study skills for college work.
- 60. Manage my time effectively.
- 61. Protect myself against sexual assault.
- 62. Become comfortable with my sexuality (gay, straight, bisexual).
- 63. Learn to stand up for my rights.
- 64. Resolve conflicts with roommates/suitemates.
- 65. Make friends in new situations.
- 66. Decide what is "right" or "wrong" for me.
- 67. Understand the values and beliefs of others.

THE NEXT SERIES OF QUESTIONS ARE TRUE/FALSE STATEMENTS. PLEASE MARK A (1) IF THE STATEMENT IS TRUE, AND A (2) IF THE STATEMENT IS FALSE.

- 68. I know who our floor representative to government is.
- 69. If I had a conflict with my roommates/suitemates, I would attempt to resolve it.
- 70. If my rights are violated, I would know how to use the campus judicial system.
- 71. I know how to contact the Resident Director.
- 72. I know how to contact a Graduate Advisor.
- 73. I have been harassed in this or other residence halls because of my: gender, racial/ethnic background, sexual orientation or religion.
- 74. I have gone to talk with my RA.
- 75. My RA has explained Wellness.
- 76. I know how to contact the Minority Aide.
- 77. I have contacted the Minority Aide in my building.
- 78. I have used the culture/Caucus room.
- 79. I have participated in a Caucus-sponsored event.
- 80. I know how to contact the Hall Manager.

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