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# Exploring the Relationship Between Hotel Characteristics and Crime

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### Exploring the Relationship Between Hotel Characteristics and Crime

#### **Abstract**

Knowledge of crimes that have occurred in hotels has been scares. The authors explore the nature and causes of hotel crimes in a U.S. metropolitan area. Levels of crimes were directly related to size of the hotel, target market of business travelers, access to public transportation, and an unsafe image of the environment surrounding the hotel. Crime prevention programs based on the findings can be developed to protect the safety of guests and property.

# Exploring the relationship between hotel characteristics and crime

by W.S. Wilson Huang, Michael Kwag, and Gregory Streib

Knowledge of crimes that have occurred in hotels has been scarce. The authors explore the nature and causes of hotel crimes in a U.S. metropolitan area. Levels of crimes were directly related to size of the hotel, target market of business travelers, access to public transportation, and an unsafe image of the environment surrounding the hotel. Crime prevention programs based on these findings can be developed to protect the safety of guests and property.

Crime has become a growing concern in the hotel industry as a result of the increased number of lawsuits against various lodging establishments and a growing fear on the part of citizens of crime in recent years. A secured hotel can not only reduce its risk of being sued, but, more importantly, can protect its guests from being victims of crime. However, security measures alone cannot ensure guests' safety; a hotel equipped with a comprehensive security system may still have a high number of crimes because employees are not trained for security awareness or screened for criminal records. Some hotels, due to their size and location, may also be at greater risk of being victimized. Thus, an analysis of the relationship between crime and various hotel characteristics is important to an understanding of the causes of hotel crimes, and what the lodging industry can do to reduce crime risk.

Research into hotel crime has been rare. Prus and Irini³ observed activities of such persons as strippers, bartenders, waitresses and desk clerks working in the hotel business. Their study was primarily devoted to the understanding of prostitution, gambling, and other deviant activities in the lodging business and was unable to address the extent of violent or property crimes in hotels. Rutherford and McConnell surveyed legal and security officers in hotels regarding their opinions about the importance of several court-mandated security standards.<sup>4</sup>

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Their research focused on a review of various security rules and did not evaluate how these rules affect the level of hotel crime. Berger surveyed 227 frequent business travelers and presented descriptive information about victimization experiences of these travelers.<sup>5</sup> Berger's research, as the two prior studies, did not perform a statistical evaluation of hotel characteristics and crime. None of these studies examined the distribution and rate of crimes in hotels, let alone causes of crime.

Since the literature on the nature and causes of hotel crimes is limited, this study explores and seeks information involving the two issues. The exploration intends to find out answers for such questions as the types of crime that take place in hotels, the rates of these crimes, the amount of crime associated with hotels' structural factors, and security services and equipment employed by hotels to protect guests from crime. The study's findings permit an assessment of the extent of the crime problem in hotels, and identification of the attributes that have the greatest influence on crimes.

#### Two explanations can describe hotel crimes

The explanations that can best describe hotel crimes can be found in Cohen and Felson's idea of routine activities, and Newman's notion of defensible space discussed in the criminology literature. According to Cohen and Felson, victimization risk is high among persons, households, and properties with routine and constant exposure to criminals and criminogenic environment. Their explanation, frequently referred to as the routine activities theory, postulates that a high degree of suitability as a crime target, close proximity to a potential pool of motivated offenders, and low-level guardianship of the object contribute to the risk of victimization.8 Research has shown that these routine activities factors correlated significantly with crime measures. For instance, Stahura and Sloan found that target suitability and proximity to offenders led to violent and property offenses;9 Miethe, Hughes, and McDowall found significant effects of guardianship on rates of homicide, robbery, and burglary;10 Cohen, Kluegel, and Land found guardianship and proximity correlated significantly with victimization risk.11

These three factors may affect the amounts of crimes in hotels as follows:

• Target suitability reflects the attractiveness and accessibility of an object as a crime target. Attractiveness can indicate the material or symbolic value of a hotel to potential offenders. The greater the attractiveness of the hotel, the higher the incentives for crimes. Accessibility is the ease with which potential offenders can access the property. As the accessibility of the hotel to the

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offender increases, so does the convenience for this offender to commit crimes.

- Proximity to a potential pool of offenders refers to the physical distance between the location of the potential crime target and areas where relatively large populations of potential offenders are found. <sup>13</sup> This indicates that the physical proximity of the hotel to the pool of potential offenders varies directly with crimes. It also implies that hotels located downtown are more likely to be victimized than those in areas outside downtown.
- Guardianship is the effectiveness of persons or objects in preventing crimes from occurring by their presence or action. The term "target hardening" was frequently used to describe measures that can increase the difficulty for offenders to carry out crimes against targets. Examples of such target-hardening measures are security guards, door locks, or video monitoring systems, the presence of which are expected to hinder crime commission and decrease opportunities for crime.

#### Environmental factors have an influence

Focusing on the environmental features of buildings, Newman's defensible space theory argued that crimes can be controlled by reducing the physical vulnerability of properties. He maintained that the design and location of a physical structure can increase opportunities for surveillance, and create a positive image in the protection of the property, thereby decreasing the probability of its being victimized. His concepts of "natural surveillance" and "image and milieu" can apply directly to hotel crimes.

- **Natural surveillance** refers to the capacity of residents or pedestrians to casually and continually observe non-private areas, inside or outside, of an environment.<sup>17</sup> This factor suggests that a centralized entrance of a hotel building can create a natural way for surveillance, and thus reduce crime.
- Image and milieu are related to the general perception of a property and its surrounding environment. If the image is negative, the property will be stigmatized and its residents more likely to be victimized. For example, if an area surrounding the hotel is perceived as an unsafe zone characterized by panhandlers, littering, and graffiti, this hotel will suffer a greater victimization risk than those in areas without such problems. In the property of the p

Prior research has found that crime measures were related inversely to improved opportunities for surveillance, and directly to an image as an unsafe zone.<sup>20</sup> A recent study summarized findings of previous research, reporting that "...features of the physical environment at

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the street block and neighborhood levels have proven relevant to predicting crime rates." The study indicated that crimes could be reduced significantly via the implementation of defensible measures either inside or outside of buildings.

In addition to the above organizational and environmental factors, the nature of the operating environment, as in size, ownership, and business affiliation, may also have a close tie with hotel crimes. These characteristics may connect with the previously mentioned factors in affecting the amount of hotel crime. To understand the nature and causes of crimes in hotels, therefore, it is important to take into account a large array of hotel characteristics in relation to crime.

#### Hotel and Travel Index served as sample

The study was conducted in a metropolitan area in the southern U.S. The name of the study site was concealed to protect the image of the area. The *Hotel and Travel Index* published in the summer of 1994 was used to identify the lodging establishments located in the study area in that year.<sup>23</sup> Addresses and telephone numbers of 214 hotels were listed in the Index. The number of hotels listed under the heading "Hotels" in the Yellow Pages phone directory published in December of 1994 was 240. Though the *Index* listed a smaller number of hotels than did the Yellow Pages directory, the Index was adopted as the primary source to sample hotels operated in 1994 for two reasons. First, the *Index* provided the names of general managers of hotels, which facilitated the identification and contact potential survey recipients. Second, the *Index* was published in the summer, suggesting that the listed hotels would probably have operated their business for at least half a year at the end of 1994. The Yellow Pages, on the other hand, were published in December; thus, some listed hotels might have just started operation in late 1994. These newly-opened hotels needed to be avoided to reduce bias in estimating crimes for the full vear of 1994.

The study used a mail survey consisting of 42 multiple-choice and open-ended questions. While developing the survey, the project investigators visited a business meeting of hotel security directors to describe the study and distribute a draft questionnaire for participants' comments. Three meeting participants provided written notes on the questionnaire. After the suggested changes were made, the questionnaire was mailed to the 214 sampled hotels in the spring of 1995.

Several steps were taken to increase the accuracy of responses and the return rate. For one, before the survey was mailed, a research assistant telephoned each hotel to verify the hotel's address, and identify the person with the best knowledge of the hotel's security system and crime records. The questionnaire, along with a letter of introduction signed by the project investigators, was then mailed to 214 identified

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representatives. The majority (67 percent) of the representatives were general managers or assistant general managers; 27 percent were security officers or directors, and the rest were chief engineers (2 percent), front office managers (2 percent), and operation managers (2 percent). To increase the response rate, the same survey was sent again to these representatives three weeks later. Survey recipients were also promised the opportunity to see the survey results upon request. These efforts resulted in a response rate of 43 percent (92 of the 214), a very satisfactory outcome compared to those of other recent mail surveys<sup>23</sup> of U.S. hotel professionals. The high response rate improved the diversity of the hotels being studied. Respondents' hotels varied widely in many characteristics, suggesting a good representation of hotels in the area.

#### Various crimes and their rates were measured

Crime was measured by the number of incidents that occurred during the 12 months of 1994. Because the level of crime may vary by type, the study examined eight crime categories: murder, physical attack, sexual assault, robbery inside the hotel, robbery outside around the hotel, burglary, larceny/theft, and auto theft. Hotel respondents were asked if these crimes had occurred in their hotels and how often. Drug crimes and prostitution were also included in the survey upon the suggestion of security directors.

A measure of hotel crime rate was also created. Crime rate is typically measured by the number of crimes over the number of inhabitants of an area for a year. This rate indicates the number of crimes per person per year. Another widely used measure is the household crime rate adopted by the National Crime Victimization Survey. This indicates the number of property crimes (e.g., burglary, auto theft, theft of household items) per household per year. Because the value of the ratio is too small, the Bureau of Justice Statistics (BJS) multiplied the ratio by 1,000. Using the same procedures, hotel crime rate can be computed by dividing the number of reported incidents over the number of guest rooms, then multiplying by 1,000, as follows:

hotel crime rate = <u>number of incidents reported x 1,000</u> number of guest rooms studied

This figure represents the annual number of crimes per 1,000 rooms among the studied hotels.

Crime statistics reported by several hotel respondents did not cover the entire study period. Eight hotels were newly opened in 1994, and their data included a period shorter than 12 months. Three hotels that had operated the full 12 months reported for a different period. Because these 11 hotels' data were incomparable to those of others, they were excluded in the analysis of crime incidents.

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#### Hotel structural characteristics were also measured

The survey included more than 20 variables measuring organizational, environmental and security features of hotels. Among them, 12 variables were designed specifically to measure the concepts delineated by the routine activities theory and the defensible space theory. The average daily rate measured the symbolic attractiveness of the premises, and a primary market of business travelers gauged the material attractiveness of the hotel. The number of minutes it takes to walk to the hotel from the nearest public transportation was used to estimate the accessibility of the hotel. A downtown location indicated a hotel's close proximity to a pool of potential offenders.

The concept of guardianship consisted of two categories, direct and indirect guardianship. Direct guardianship involved gauges that can improve target-hardening including the employment of security officers to patrol room areas, the use of video-camera monitoring systems, and the installation of one-way viewing mirrors (peep holes) and dead bolts/chain locks on doors. Values of the four variables were added to formulate an index of direct guardianship. Indirect guardianship referred to the items that can increase the effectiveness of direct guardianship, including the hotel's system of screening prospective employees for prior criminal activity; the security instruction for new employees; the use of newsletters, cards, boards, and signs to educate guests about personal safety; and the regular maintenance of incident reports. The presence of a centralized internal entrance was used to gauge the natural surveillance of a hotel. Respondents were asked whether their hotel rooms were accessible only through a lobby or inside corridors.

The image of an unsafe zone was assessed by two items: panhandlers or uncivil people hanging around on nearby streets, and littering or graffiti in surrounding areas. Other explanatory factors of crime included in the survey were size (the numbers of guest rooms and full-time employees), business affiliation (independent operation or chain), the extent of guest services (room service only, or other additional guest services), and the use of a security service (in-house or contractual operations, or none).

#### Structural characteristics varied among hotels

A descriptive analysis was performed on the survey data to examine percentage distributions of organizational, environmental, and other structural characteristics of the 92 responding hotels. The analysis showed that the majority of the hotels had a chain affiliation (77.2 percent) through franchise, corporation, or management contract. The size of the hotels ranged widely, from 18 to 1,279 rooms, with 79.6 percent having between 100 and 400 rooms. The number of full-time employees covered a span from a single owner up to 1,000

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employees. Most of the hotels (64.4 percent) had fewer than 100 employees. The average daily rates fell primarily between \$40 and \$120, with half the hotels having rates between \$61 and \$100. Among the 92 hotels, 72.5 percent indicated business travelers as one of their major targets. Additional guest services were available to customers at 80.4 percent of the hotels. These services included restaurants, meeting rooms, gift shops, valet service, airline offices, or golf courses.

The examination of percentage distributions of the hotels' environmental characteristics found that the majority had easy access to public transportation. Of the 92 hotels, 64.8 percent were located fewer than five minutes walking distance to bus stops or train stations; 9.9 percent were within 6 to 10 minutes walking distance from public transportation, and the last 25.3 percent had low access. A centralized internal entrance was found in 70.7 percent of the lodging establishments. In these hotels, guest rooms could be accessed only through a lobby or inside corridor. The data on hotel location indicate that 18.7 percent of the responding hotels were located downtown, and the rest were scattered around malls and other commercial areas. Though nearly 20 percent of the respondents indicated some problem or a big problem with panhandlers or uncivil people bothering guests, the majority (80.1 percent) did not perceive such a problem. Similarly, most hotels (87.9 percent) reported little or no problem with littering or graffiti in their surrounding areas.

#### Security measures were used widely in hotels

The study found that a variety of devices and systems were utilized by the hotels to maintain guest safety. Chain locks and dead bolts (98.9 percent) and one-way viewing mirrors (81.3 percent) were typically installed on guest room doors. Centralized video camera systems were less popular, but even so they were used in more than half (52.2 percent) of responding hotels. A 24-hour security patrol on guest room floors was employed in only 31.5 percent of the hotels. Slightly more than half (55.6 percent) conducted criminal record checks on new employees; close to half (49.5 percent) used such systems as printed safety tips, video cassettes, or warnings on bulletin boards to educate guests about crime prevention. Security instruction was given to new employees in 92.4 percent of responding hotels. The majority (90 percent) indicated that they kept crime records on a regular basis.

The descriptive analysis on the types of security operations revealed that slightly more than half (56 percent) of these hotels ran their own security operations. Contractual operations were found in 30.8 percent of the hotels, and 13.2 percent had no security service at all. Most hotels had a small number of full-time security officers. More than half (51.4 percent) indicated that they had one or two

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Table 1
Number, Percentage, and Rate of Crime by Type

Crime types	Number of incidents	Percentages of total incidents	Rate per 1,000 rooms	
Murder	2	.2	.11	
Physical attack	8	1.0	.43	
Sexual assault	4	.5	.21	
Robbery inside premise	15	1.8	.8	
Robbery outside				
around premise	17	2.1	.9	
Burglary	39	4.8	2.07	
Larceny/theft	632	77.1	33.56	
Auto theft	103	12.6	5.47	
Total	820	100.0	43.54	

security officers; 39.1 percent had between three and 10 officers, and 9.5 percent had more than 10.

#### Hotel crime rates were low

The numbers, percentages, and rates of crime by type are presented in Table 1. As shown in the second column of the table, the crimes that happened most often in hotels were thefts of guests' belongings. This finding is consistent with Baum's report that thefts were a dayto-day big problem in hotels.25 The current study found 632 larcenies and thefts, or about 34 larcenies and thefts per 1,000 rooms. These accounted for 77.1 percent of total crimes. The next most frequent offense was auto theft with 103 incidents, or 12.6 percent of the total. Guest room burglary accounted for a slightly greater percentage (4.8) percent) of total incidents than did the sum (3.9 percent) of the two robbery categories. Robbery rates for either inside or outside the hotels were about the same. This suggests that the chances of being robbed were almost identical in these two settings. The three violent offenses — murder, physical attack, and sexual assault — had only a total of 14 incidents reported in 1994. They accounted for less than 2 percent of the total crimes, and represented less than 1 incident per 1,000 rooms. These findings suggest that violence in hotels was scarce.

Since these rates are annual estimates, they may be compared with the BJS's yearly measures of personal and property crimes. Though BJS statistics were national estimates with crime definitions different from the ones used in the present study, they were the closest ones that can be used for simple comparison. According to the 1994 BJS

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Table 2
Percentage Distributions of Other Problems

Problem items	Response categories	Percentages of cases
Drug problems inside hotel	no problem	65.6
	little problem	25.6
	some problem	7.8
	big problem	1.1
Drug problems outside around hotel	no problem	60.0
	little problem	31.1
	some problem	6.7
	big problem	2.2
Prostitution	no problem	75.6
	little problem	20.0
	some problem	4.4
	big problem	0.0

data,<sup>26</sup> rates were 42.7 and 2.0 per 1,000 persons for physical attack and sexual assault. This study reported only .43 and .21 per 1,000 rooms for these two offenses. The BJS's robbery rate was 6.1 in contrast with the study's 1.7 rate for the two robbery categories combined. These comparisons indicate that the study reported a much lower rate than did the BJS across the violence categories.

For property offenses, the study also found a relatively smaller rate than did the BJS. For example, this study reported 33.56, 2.07, and 5.47 per 1,000 rooms for theft, burglary, and auto theft, respectively, in contrast to the BJS's 235.7, 54.4, and 17.5 per 1,000 households for the same offenses. Though these statistics consistently showed a lower crime risk in hotels than in households, it is premature for this research to conclude that hotels are safer than personal residences. It is possible that the hotels with the highest crime rates did not respond to the survey. Further research needs to be conducted to address the issue more thoroughly.

The study also examined such illegal behaviors as drug crimes and prostitution, which might disturb the operations of a hotel. This research found that the problems were minor. As demonstrated in Table 2, only about 9 percent of hotel respondents reported a problem in drug trafficking or usage inside the hotel or in the area surrounding their property. Only 4.4 percent of hotels expressed a concern about prostitution. It was interesting to find that the three items correlated significantly with one another. This means that the hotels that reported some problem with drug crimes experienced a similar level of

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Table 3
Slope Coefficients in Regression Analyses

Structural factors	Larceny/ Theft	Auto- theft	Burglary	Robbery	Violence
Number of rooms	.396*	.020	048	.396*	001
Daily room rate	032	148	218	144	029
Target market of	.310*	082	027	.160	.485
business travelers					
Access to public transportation	.043	.302*	081	.020	566
Location in downtown	253	081	.070	.066	383
Direct guardianship	.082	.131	.025	018	209
Indirect guardianship	050	.089	.102	063	.340
Centralized internal entrance	.045	.219	195	.017	.712
Unsafe image	034	130	.022	.301*	.580
Chain affiliation	003	.201	074	.001	-1.08
Additional guest service	s .074	019	025	155	.232
Use of security service	.019	028	.121	.049	6.75

<sup>•</sup> Significant at the p < .05 level

problem with prostitution. These vice crimes seem to cluster in hotels, but even so, the level of their appearance was low in general.

#### Several characteristics are related to crime

Regression techniques were performed to evaluate the independent effects of the hotel characteristics on different types of crime. It can be observed from Table 3 that several hotel characteristics had significant effects on the measures of crime incidents. In the larceny/theft category, the number of rooms had a positive effect, indicating that the hotel size correlated directly with the number of larceny and theft cases. Unexpectedly, the target market of business travelers, a measure of economic attractiveness, was inversely related to larceny and theft. The hotels that primarily targeted business travelers tended to have a smaller number of thefts than did those hotels targeting nonbusiness travelers. Easy access to public transportation was associated positively with the number of auto thefts. This finding supports the idea that the accessibility of a hotel to a pool of potential offenders increases the likelihood of crime. As to robbery, hotel size and unsafe image/milieu had direct effects on the number of incidents. No significant effect of hotel characteristics was found on burglaries or violent incidents.

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#### Crime prevention programs can be developed

The fact that certain structural attributes have resulted in higher risk of crime provides an important implication for hotels' crime prevention programs. The finding that hotels with easy access to public transportation tended to have a greater number of auto thefts, for example, suggests that hotels located near public bus stops or train stations should consider employing security officers to patrol parking lots or garages. This would not only reduce the incidence of auto theft, but would also create a sense of safety for guests. Similarly, the finding that an unsafe image and milieu around the hotel increased guests' risk of being robbed implies that the removal of panhandlers, littering, and graffiti is important to the reduction of robbery incidents. Hotel managers may need to cooperate with public officials to clean up these unsafe signs and consider using ecological measures such as lighting and landscaping to ameliorate the hotel's environment.<sup>27</sup>

No significant effects were found on violent crime occurrence, indicating that hotel characteristics are probably irrelevant with regard to personal violence. The finding suggests that programs focusing on individual characteristics may be more effective than organizational or environmental factors in the prevention of personal violence. Programs such as safety tips and guardian services may be developed to accommodate the special needs of female guests traveling alone. Giovanetti<sup>28</sup> has suggested a free limousine service provided to female guests who need transportation to a deserted area during the late evening or early morning hours. Personal escorts may also be provided to intoxicated guests to reduce both their own vulnerability and potential risk to other guests.

#### More hotel factors should be studied

The study found that most hotel characteristics, including those security measures, did not have significant effects on crime incidence. Although these characteristics did not have a direct influence on crime, their effects might have been suppressed by factors not included in the study. For instance, hotels highly equipped with security devices might have crime incidents similar to those of less secured hotels because of the poor design of their physical structures or the lack of formal training of security officers. Without controlling for these characteristics in the analysis, the significant effect of security devices on crime could not be assessed sufficiently.

The study also found the hotels that primarily targeted business travelers tended to have a smaller number of thefts than did those hotels targeting non-business travelers. Though we might assume from this that hotels targeting business travelers may be more professional and effective in dealing with crime problems, it is equally possible that business travelers are more likely than non-business

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people, such as family travelers or long-term hotel residents, to take precautions to avoid theft. It is also likely that thefts against business travelers were unreported because these travelers were too busy to report their victimization to hotels during their stay or they may have considered the monetary loss as minor. Future research needs to take into account these individual characteristics in conjunction with various hotel characteristics to assess the relative importance of these factors in the explanation of crime.

#### Research on hotel crimes should continue

This exploratory study provided a base for future research into hotel crimes. The theoretical explanations, methodological procedures, and various crime measures introduced in the study can be applied in other locations. Research results can be compared to examine whether the nature, distribution, and causes of hotel crimes differ across geographic areas. This further knowledge would enable us to evaluate the extent of the crime problem in the industry and to assess the need for greater resources for addressing the problem.

The crime rates presented in the current study can also be used as criteria by which the level of risk of other hotels can be assessed. Hotels exhibiting a crime level higher than the study's average would need to make efforts to identify factors that contributed to their high crime incidence and refine these factors to improve safety. Hotels with a relatively lower level of crime, however, should not underestimate the undesirable consequences that crimes may have on their operations. A single notorious incident could severely damage the hotel's reputation and financial status.<sup>29</sup> Hoteliers should continue to be mindful of the changes in the nature, extent, and causes of hotel crimes. Research into hotel crimes provides an important way to better understanding of these changes and developments.<sup>30</sup>

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