

THE RELATIONSHIP OF CAMPUS CRIME TO CAMPUS AND STUDENT CHARACTERISTICS

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This research draws upon merged national databases containing federal crime statistics, community demographic data, and campus characteristics. The study displays the trends in campus crime since 1974, and using 1990 data, examines the relationships between three measures of campus crime and 23 predictors developed for this study. The results show that campus rates of both violent crime and property crime are falling, especially since 1985. Moreover, students are considerably safer on campus than in the cities and communities surrounding them. The lowest average crime rates are found at two-year colleges, while the highest overall rates are at medical schools and health science centers. None of the community characteristics, including community crime and poverty rates, are significantly associated with campus crime. While campus organizational measures in general are more highly related to campus crime than are student characteristics, we find differences in the patterns of variables associated with violent crime versus property crime. Factors associated with property crime are partially consistent with existing theory on criminal activity. Factors associated with violent crime are more complex and difficult to predict.

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Campus crime has received heightened media attention the past three years, but is not yet well understood in the academic community. The higher education community must be able to show that it understands the problem and is addressing it, but very few investigative studies have been conducted. This study examines the correlates of campus crime. We focus on the associated characteristics of campuses, of students, and of the communities that surround them.

The Student Right-to-Know and Campus Security Act of 1990, largely a

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result of a grass roots movement to make campus crime data available to current and prospective students, has further directed public attention toward campus criminal activities and safety. For the first time, in 1993, every college and university receiving federal funds was required to issue, upon request, an annual security report to employees, to students and their parents, as well as to the secretary of education. The report is to include a statement of security policies and crime statistics for the preceding three years covering the crimes occurring on campus in the following categories: murder, rape, aggravated assault, burglary, motor vehicle theft, and alcohol and drug violations.

In February 1994, the *Chronicle of Higher Education* published 1993 crime rates for 774 institutions of higher education. In 1993, these campuses reported 17 murders, 914 rapes and sex offenses, 1,353 robberies, and 21,478 burglaries (Ledderman, 1994).

While many concerned individuals and organizations welcome the new law requiring the disclosure of campus crime data, many college officials see the disclosure as a potentially damaging act. They express a concern that people will use the crime data to "sensationalize or stereotype institutions" (Burd, 1992). Indeed, the legislation does not provide a context for interpreting the data. It does not seek to distinguish between residential and commuting institutions. Colleges are wary that crime numbers will be used out of context. Most administrators believe that there is significantly less crime on campus than off (*Chronicle*, Jan. 20, 1993).

Many people familiar with the issue believe that colleges are merely concerned with their images, not about student safety. To them the debate over crime reporting is about its impact on money generated by enrollments and alumni contributions (Burd, 1992). Regardless of one's feelings about campus crime reporting, it is the law, and campus crime is an issue of concern to all who attend and support colleges and universities. Moreover, there is a dearth of descriptive and analytical studies.

THEORETICAL FRAMEWORK

In order to examine the relative influences of student, campus, and community characteristics on the crime rate, we drew upon several branches of the organizational, higher education, and criminal theory literature. The conceptual framework guiding our model development and variable selection incorporates two theoretical perspectives. The first reflects structural/functional perspectives from the organizational literature; the second incorporates criminal theory.

Structural/functional perspectives from the organizational literature encourage researchers to give greater attention to those variables that reflect the influence of organizational characteristics. Studies have shown that organizational goals, size, wealth, complexity, technology, and environment influence the be-

havior and values of organizational members (Hall, 1991). Studies of colleges and universities, as particular types of organizations, have shown that campus mission, size, wealth, and selectivity exert significant influences (ranging from small to large) on a variety of college outcomes including student values, aspirations, educational attainment, career development, and earnings (Pascarella and Terenzini, 1991). Volkwein (1986) has demonstrated that a variety of these organizational characteristics tend to vary together, and that other behaviors such as salary disparities (Regan and Volkwein, 1993) and student loan defaults (Volkwein and Szelest, 1995) correlate with these dimensions. Given the relationship between campus organizational characteristics and a variety of outcomes, we hypothesize that the influence of these campus characteristics also extends to campus crime.

The literature on criminal behavior has generated a variety of theoretical perspectives—economic, psychological, cultural, social, and biological (Nettler, 1984; Pepinsky, 1980). Much crime in society falls within the framework of Routine Activities Theory, which incorporates several of these perspectives. Most criminal acts require convergence in space and time of likely offenders, suitable targets, and the absence of capable guardians (Cohen and Felson, 1979). Routine activities bring these three conditions together. Likely offenders are found within the surrounding community, if not within the student body itself, and their motivations to commit crime range from economic to psychological. Colleges and universities by their nature contain suitable targets for offenders—accessible motor vehicles, bikes, and items of high value per unit size, such as stereo equipment and desktop computers. If a capable guardian is absent, then the probability of crime occurring becomes higher. Few academic institutions can afford a large investment in security. Moreover, college students are generally regarded by law enforcement officials to be notoriously poor guardians—individual rooms rarely locked, people coming and going at all hours, unattended or poorly secured buildings. Thus, criminal theory leads us to hypothesize the existence of “spillover” effects between community and campus (Hakim and Rengert, 1981).

Residential campuses are unique institutions in American society because many have a relatively homogeneous population with respect to age, are comprised of a highly mobile population, and have a well-defined sense of university community. Furthermore, colleges and universities pose an “environment that can be subjected to alteration and control” (Fox and Hellman, 1985). Additionally, universities have direct responsibility for, if not control over, dormitories and other campus buildings. Even with the demise of *in loco parentis*, colleges and universities are generally responsible for student safety, especially on campus, and are widely believed to exert considerable influence on the personal activities of their students (Richmond, 1990). Parents, students, and legislators alike expect colleges to “do something” about campus crime.

OTHER RESEARCH ON CAMPUS CRIME

While there is an extensive literature on crime in society generally, the research on crime at colleges and universities consists mainly of descriptive statistics. Our literature search found only three analytical studies of campus crime that might inform public policy—two published and the other as yet unpublished. Using an economic model, McPheters (1978) conducted a study at only 38 campuses and examined the relationship between the crime rate and several campus and community variables. He found a significant relationship between campus crime and high community unemployment and high proportions of students living in campus residences.

Fox and Hellman (1985) conducted a study of factors that influence the campus crime rate as reported by the 1980 FBI *Uniform Crime Report* (1979 data). They examined such things as student characteristics, structural features of the campus, administrative staffing, and location. This study used data from 222 campuses and was published several years prior to the recent explosion of media attention on campus crime. The authors found that colleges and universities have less crime than their surrounding communities, and that location had little or no influence on the ratio of campus to community crime. Fox and Hellman found positive, significant correlations between campus crime and tuition cost, the percent of male students, population density, and campus police staffing levels.

Although her study of 241 campuses is not yet published, Morriss (1993) uses a combination of economic and criminal theory to develop a model containing measures of community crime, campus accessibility, campus wealth, and deterrents. She finds support for the hypotheses that campus wealth and accessibility are associated with higher crime rates, and campus deterrents with lower crime rates. Consistent with Fox and Hellman, she finds no relationship between campus crime and various characteristics of the surrounding community. Her study, however, does not examine the separate dynamics of violent crime versus property crime.

Within the framework of a richer array of theoretical perspectives, and using a larger more elaborate database, we sought to revisit the 1970s research, especially in view of recent media attention and expressed concern by students and parents.

METHODOLOGY

Using both longitudinal and cross-sectional databases, and both bivariate and multivariate analyses, this study examines the trends and correlates of campus crime. We first examine the trends in campus crime since 1974, and then analyze 1990 cross-sectional data for relationships between campus crime and college characteristics. Our study examines reported crime at 416 institutions c

higher education using several sources of data: national databases of federal crime statistics and community demographics, the Integrated Post-secondary Education Database System (IPEDS) containing rich information on campus financial and enrollment characteristics, and College Board Survey data on campus diversity, selectivity, and location. The research has proceeded in three phases: database building, variable reduction, and analysis.

Database Building

Two data sets have been constructed using the Federal Bureau of Investigation's (FBI) Uniform Crime Report (UCR) data on campus crime. The first is a time series database that plots crime rates from 1974 to 1991 for colleges that have reported consistently. These data allow us to view trends in specific types of crime over time. Because the number of colleges reporting instances of crime to the FBI has increased each year, another version of this database records crime data on all colleges reporting each year.

The second database is a cross section of the colleges reporting on the UCR in 1990. Variables include crime rates for specific types of crime. We obtained access to these data-sets from the Consortium for Higher Education Campus Crime Research (CHECCR), located at SUNY Albany. While some campus and student body characteristics are included in the 1990 UCR data set, these measures were enhanced by merging the CHECCR data with IPEDS data and the College Board Survey.

These data sets allow us to test several hypotheses about the character and correlates of specific types of campus crime. For example, what are the trends in campus crime since 1974? Is campus crime more influenced by the characteristics of the student body or the characteristics of the institutions? Is there a "spillover" effect between campus and community?

Variable Reduction

Merging the 1990 CHECCR crime data with the 1989–90 IPEDS and College Board databases supplies nearly 500 separate variables as potential correlates of campus crime. For this study we concentrate on those variables that are congruent with organizational and criminal theory. Many variables in the database either provide redundant information or are not relevant to either of our theoretical frameworks.

Our research questions and theoretical frameworks led us to group the independent variables into three broad categories: community, organizational, and student variables. The process of dividing the variables into three groups aided variable reduction. The three groupings appear to fit well into Cohen and Felson's Routine Activities Theory. Community characteristics may provide likely

offenders, students or their property comprise accessible targets, and the organizational characteristics act as a surrogate for capable guardians. It should be noted that there is not always a clear delineation between each of the categories. For instance, some student characteristics, such as the percent of students living off-campus, can also be thought of as an organizational characteristic.

The refined data set of predictors was reduced down to 71 variables—21 community characteristics including 10 types of community crime, 20 surrogates for student characteristics, and 30 surrogates for campus organizational characteristics. Separate factor analyses (principle components analyses) were conducted for each grouping, aiding in the adoption of 23 variables for the final regression equations. The factor analyses group together those variables that reflect similar aspects of the campus, student, and community characteristics. We would have preferred to use the factor loadings in the regression analysis, but the number of missing values for some variables reduced the number of cases too severely, so we selected variables on the basis of having high factor loadings, a large number of cases, and lacking colinearity.

Table 1 shows the results of a principal components analysis on the community characteristics. The "community" variables are created by using FBI and U.S. Census data for the city or municipality within which each campus is located. If a campus is not located in a city, or if the local data are missing, we use the corresponding data for the county. These include various crime rates, population measures, indicators of education, income, and poverty, and one measure of climate (included because of the documented role of warmer tem-

TABLE 1. Factor Analysis for Community Characteristics

Variables	Crime	Population	Poverty
Community total crime	.96		
Community property crime	.95		
Community violent crime	.80		
Community police per 100,000	.74		
Urban/Nonurban	.67	.33	
Temperature average	.43		
Population		.90	
Persons age 18–20		.96	
Persons age 21–24		.86	
Number of female-headed households		.79	
Poverty			.82
Income			-.76
Unemployment			.75
% of 25-year-olds with high school diploma		-.40	-.63

TABLE 2. Factor Analysis for Organizational Characteristics

Variable	Wealth	Size	Cost	Density	Complexity
Total revenue per student	.96				
Instruction expenditures per stu.	.95				
Total expenditures per student	.92				
Appropriations per student	.87				
Campus police per capita	.82				
Support expenditures per student	.79		.48		
Research expenditures per student	.73	.32	.31		
Grants & gifts income per student	.72		.36		
Total enrollment		.93			
Faculty size		.91			
Graduate enrollment		.89			
Library titles		.85			
Total library acquisitions		.81			
Highest degree = doctorate		.61			
Medical school/hospital	.43	.47			
Tuition and fees out of state			.87		
Room and board			.77		
Public college			-.72		
Average faculty salary		.40	.68		
Percent faculty with Ph.D.			.48		
Campus size (in acres)		.35		.92	
Campus police per acre		-.30		.86	
Density (students per acre)				.79	
Percent full-time faculty					.80
Percent in dormitory					.63
Auxiliary income per student		.32	.41		.56
Library holdings per student	.36		.47		.51
Highest degree = bachelor's					
Highest degree = master's		-.52			
Student/faculty ratio	-.43		-.38		

perature as a factor in some types of crime). The community characteristics, when subjected to principal components analysis, factored into three separate groupings: crime, poverty, and population.

The organizational characteristics also were subjected to principal components analysis, and these measures separated along the basic lines shown in Table 2: measures of organizational wealth (such as per student revenues and expenditures), organizational size variables (such as student enrollment, faculty size, and library holdings), measures of cost (such as tuition, room and board), measures of population density (such as students per acre), and measures of

TABLE 3. Factor Analysis for Student Characteristics

Variable	Selectivity	Off-Campus & Transfer	Geographic Diversity	Ethnic & Financial Diversity
Percent accepted	-.81			
Total SAT score	.79		.44	
Graduation rate '90	.77	-.43		
Average age	-.60	.42		
Percent minority	.55	.38		
Percent living on campus		-.90		
Total transfer enrollment		.79		
Percent foreign			.80	
Percent in state		.45	-.78	
Percent African American				.74
Percent graduate			.48	.63
Percent receiving financial aid		-.41	-.35	-.60
Freshmen with need		.45		-.58
Percent male				
Percent in fraternities/sororities	.37		.30	

complexity (such as large dormitory and auxiliary operations). These results are highly congruent with the organizational literature.

Next, the student characteristics were analyzed and the resulting four factors are shown in Table 3. They reflect one dimension of selectivity (such as acceptance rate and SAT score), and three dimensions of diversity (such as percent transfers, percent foreign, and percent African American).

Based on the factor loadings in Tables 1-3 and the number of available cases, we selected many of these variables for the regression analyses. Variables that violated ordinary least squares error assumptions and caused considerable multicollinearity were able to be replaced with variables that explained similar degrees of the data variance but did not violate such assumptions.

Table 4 displays the means, standard deviations, and number of cases for the three dependent and 23 independent variables used in the final regression analysis. We distinguish between violent crime and property crime because the amounts and character of these types of crime vary so widely. We examine the total crime rate omitting petty larceny in order to aggregate all the more serious crime incidents. Moreover, nine out of ten reported crimes involve larceny, so an examination of total crime would otherwise amount to an examination of petty larceny.

The community variables include measures of population, poverty, education level, community crime, police per capita, average temperature, and urban location.

TABLE 4. Variables Used in the Final Regression

Variable	Mean	Standard Deviation	Number of Cases
Campus Crime Data (Dependent Variables)			
Campus property crime per 100,000	2,683.5	2,962.1	365
Campus violent crime per 100,000	75.6	156.3	365
Campus total crime rate w/o larceny	467.5	574.8	365
Community Variables			
Population	248,982.3	657,149.6	365
Urban/Nonurban	.5	.5	364
Percent below poverty	14.1	7.8	365
Percent 25-year-olds w high sch. diploma	77.6	9.3	365
Average temperature	57.0	7.0	365
Community violent crime per 100,000	578.7	527.7	352
Community property crime per 100,000	6,065.7	3,268.7	416
Community police per 100,000	175.5	89.2	352
Campus Organizational Variables (Mission/Size/Wealth/Cost/Complexity)			
Public institution	.8	.4	416
Total (head-count) enrollment (in 1,000s)	13.2	9.9	416
Number of campus acres	558.3	783.6	356
Total revenues per student (in 1,000s)	19.9	45.5	412
Room and board cost	3,283.1	1,056.6	353
Library holdings per student	67.2	73.6	416
Campus police (per 10,000 students)	38.3	70.7	359
Medical school/hospital	.13	.3	416
Highest degree = doctorate	.51	.5	412
Student Characteristics (Selectivity/Affluence/Diversity)			
Percent applicants accepted	72.8	20.0	416
Percent receiving financial aid	55.3	19.6	370
Percent male	46.4	9.8	357
Percent African American	8.8	15.2	409
Percent foreign	2.5	2.5	368
Percent in residence halls	23.6	18.4	336

The organizational variables include having a mission as a public institution, total enrollment size, campus acres, and wealth (revenues per student). Tuition, room and board costs appear in the same factor, but tuition strongly reflects public versus private, while room and board costs reflect student affluence and are more strongly associated with campus crime. Library holdings per capita is a measure associated with a number of factors (wealth, cost, complexity), and it

has a large number of valid cases. While campus police per acre is considered a possible indicator of guardian coverage, it does not fit as well as campus police per capita in subsequent regression equations. Having a medical facility and conferring degrees through the doctorate reflect size, wealth, and complexity. The faculty variables (faculty size, percent full-time, and student/faculty ratio) caused collinearity problems in the regressions and were excluded from the final analysis.

Only six of the student characteristic variables made their way into the final model. The admissions acceptance rate is available for most campuses as the surrogate for selectivity. We included several measures of student diversity: the percent receiving financial aid, the percent foreign, the percent male, the percent African American, and the percent living in residence halls.

RESULTS

Trends in Campus Crime

As a first step, we examined the longitudinal data set for trends in specific types of crime over time. These crime data are reported per 100,000 students. The campus crime rates, therefore, would be even lower if the database included faculty, staff, and visitors in the population. For example, a single sports event on a Saturday night can attract tens of thousands of visitors to the campus, and several CHECCR institutions report that a significant amount of their campus crime is associated with such events.

Figure 1 compares violent crime on campus to the national trends and shows

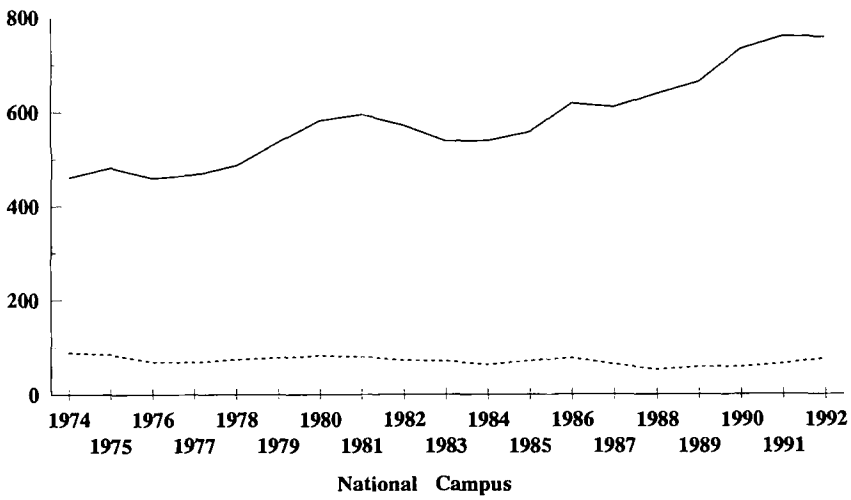


FIG. 1. Violent crime rates per 100,000 national and campus crime rates.

that campuses are over 10 times safer than the nation in general. Violent crime includes murder, assault, rape, and robbery, with assault generally constituting over 75 percent of the incidents, and robbery another 15 percent. In 1991, for example, there were more than 750 violent crimes per 100,000 people in the nation, but only about 64 per 100,000 students on campus.

Figure 1 also reflects a 27 percent decrease since 1974 in violent crime on campus (from 88 to 64 per 100,000), while crime was increasing in the nation by 41 percent (from 460 to 758 per 100,000). The data for the individual crimes of homicide, assault, rape, and robbery are each relatively consistent with this overall trend—rising for the nation as a whole, but falling on campus. As the country becomes more dangerous, campuses are becoming safer. These findings are particularly striking when one considers that campuses are full of young people, and these are the most likely to become involved in crime, whether as victims or as offenders.

Figure 2 compares property crime on campus to the national trends. Property crime includes larceny, burglary, and vehicle theft. Larceny is the largest component of the overall crime rate, and generally accounts for over 80 percent of campus crime and 55 percent of crime in the country. Campus property crime in general, and larceny in particular, exhibited similar trends until 1985 when the campus rate began to decrease as the national rate increased. Burglary and vehicle theft rates are substantially higher in the nation than they are on campuses, but burglary rates have been falling while campus vehicle thefts have remained essentially level.

The decreased rates of both violent and property crime on campus seem

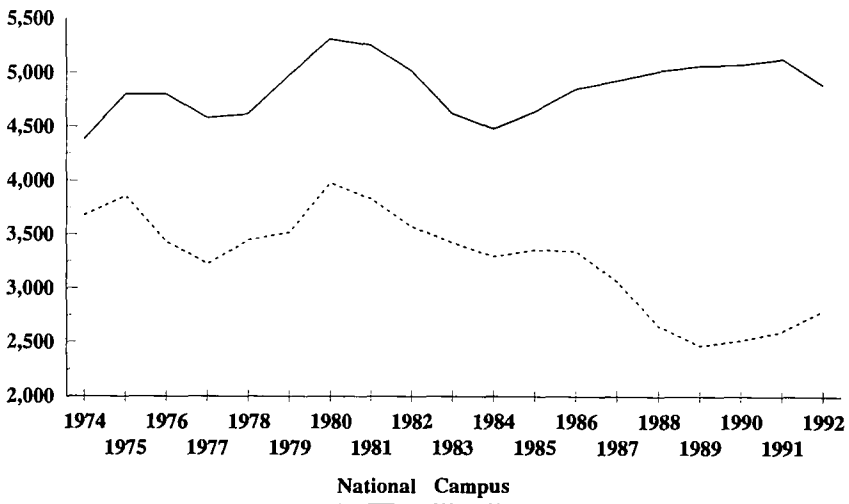


FIG. 2. Property crime rates per 100,000 national and campus crime rates.

inconsistent with the impressions the public and legislators receive from exposure to the media. It seems logical to attribute the overall improvement in campus crime rates to local crime prevention efforts that have been spurred by the attention received.

Campus Crime by Campus Type

For the 390 institutions on which we have both campus and community crime data, Figures 3 and 4 display the rates of violent crime and property

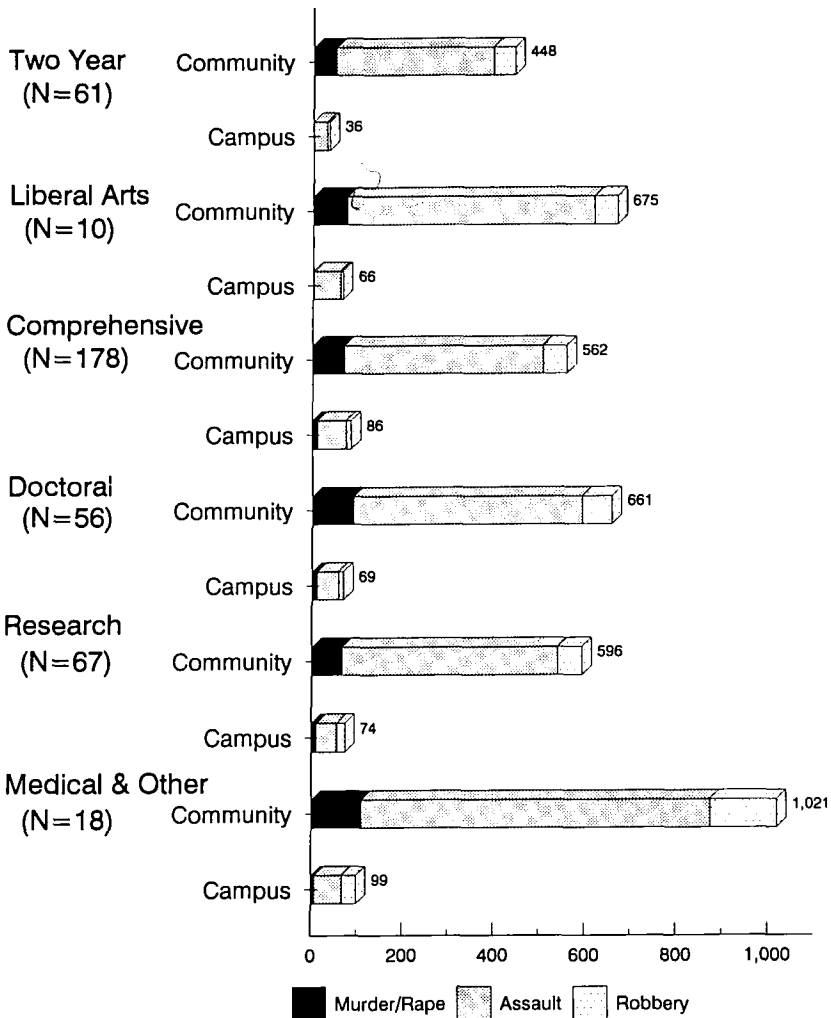


FIG. 3. On-campus versus community violent crime rate (per 100,000) by Carnegie type.

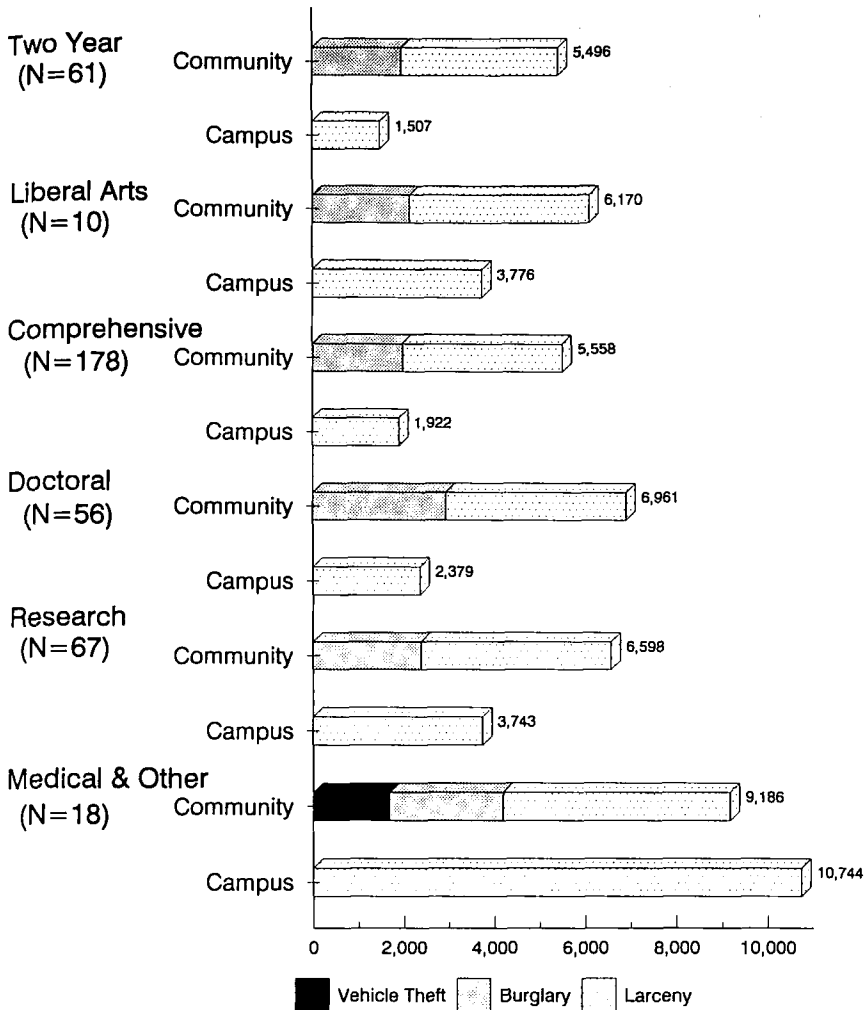


FIG. 4. On-campus versus community property crime rate (per 100,000) by Carnegie type.

crime by Carnegie institution type (1987 classification). We find significant differences by campus type. The lowest violent and property crime rates are at two-year institutions—campuses that are mostly nonresidential. The highest rates, especially property crime, are at medical schools and health science centers—institutions with many affluent personnel, with expensive equipment, with indigent, often inner-city clientele, and with a relatively small student body.

Figures 3 and 4 also compare the campus crime rates with the crime rates in

the cities and communities in which they are located. Figure 3 shows that students are 6 to 10 times safer from violent crime when they are on campus than when they are in the community. The shading on the bars shows that assault is the most frequent type of violent crime, both on campus and off. In Figure 3, the rates of violent crime range from only 36 per 100,000 at two-year colleges to only 99 per 100,000 at the 18 medical schools (compared to 448 and 1,021 in their respective communities). Apparently, two-year institutions on average are located in communities with the lowest rates of violent crime, and health science centers tend to be located in communities with the highest rates.

Figure 4 shows the corresponding comparison for property crime rates. Property crime rates in surrounding communities substantially exceed those on campus for every type of institution except for medical and health science centers. The rates of property crime range from 1,495 per 100,000 at two-year campuses to 10,705 at medical and health institutions, where the rate exceeds even that of the cities in which they are located. (A partial explanation for this finding may be the relatively small number and proportion of medical students at these institutions in comparison to the total number of employees and visitors. This translates a few crimes into a high rate per student.) Figure 4 also shows that larceny accounts for most crime, both on campus and off. On average the rates of campus burglary and vehicle theft are quite small at all types of institutions.

The Influence of Community, Campus, and Student Variables

As noted above, we used the merged database and hierarchical regression to examine the relationships among crime rates and the community, campus, and student characteristics. Table 5 shows the *R*-square changes for each group of variables with the three dependent variables: violent crime (mostly assault),

TABLE 5. Multiple Regression Results (*R*² Changes for Each Group of Variables)

Group of Variables	Violent Crime	Property Crime	Total Crime Without Larceny
Community	.01	.03	.02
Campus/organizational	.04	.73*	.30*
Student	.27*	.03	.12*
Total <i>R</i> ²	.32*	.79*	.44*
Community	.01	.03	.02
Student	.25*	.22*	.14*
Campus/organizational	.06	.54*	.28*
Total <i>R</i> ²	.32*	.79*	.44*

**R*² significant at < .0001.

property crime (mostly larceny) and total crime without larceny. Hierarchical regression allows us to examine the unique contribution of each group of variables to the explained variance in the three types of crime.

Based on prior theory and research, we add the community variables to the regression first. In other words, we make the assumption that campuses are more likely to attract crime than to cause it, especially in view of the patterns in Figures 3 and 4. Likely offenders are generally present in greater numbers off campus than on campus.

The top half of Table 5 displays the results when we enter the campus organizational variables second and the student characteristics third. The bottom half of Table 5 shows the *R*-square results when the student variables are entered second and the organizational characteristics third. In the top half of the table we assume that campus organizational characteristics should be entered second because they are more enduring than students, whereas in the bottom half of the table we assume that student characteristics should be entered second because many crimes may be caused by students.

We draw four conclusions from the results shown in Table 5. First, the eight community variables by themselves do not explain significant amounts of the variance in any of the three types: violent crime, property crime, and total crime (*R*-squares range from 0.01 to 0.03). Second, the six student characteristics explain the greatest amounts of the variance in violent crime, (25 percent to 27 percent, while the nine campus organizational features explain the most variance in property crime (54 percent to 73 percent). Third, our 23 variables explain 79 percent of the variance in property crime, but less than one-third of the variance in violent crime. Fourth, the total serious (nonlarceny) crime is influenced by a blend of both student and organizational characteristics, and their relative influences vary little when the student variables are entered second versus when they are entered third.

Correlates of Violent Crime

In contrast to the hierarchical regressions in Table 5, Tables 6–8 display the stepwise regression results for the three separate campus crime variables. Table 6 gives the stepwise regression results using violent crime as the dependent variable. The beta weights in the first data column show the results of the final regression with all variables in the equation controlling for all others. Beta weights are standardized coefficients—the larger the beta, the more influential the variable.

Table 6 shows that the average campus in the study reports less than 8 violent crimes (most of which are assault) for each 10,000 students, and only three of the 23 variables are significantly associated with violent crime. Campuses with the highest rates of violent crime tend to be those with higher than average

TABLE 6. Violent Crime: Stepwise Regression Results

Independent Variables	Significant Beta Weights*	B Crime Rate per 100,000
Community Characteristics		
Population		
Urban/nonurban		
Education level		
Poverty percent		
Average temperature		
Community violent crime		
Community property crime		
Community police per capita		
Campus Characteristics		
(Mission/Size/Wealth/Cost/Complexity)		
Public institution		
Total (head-count) enrollment (in 1,000s)		
Number of campus acres		
Total revenue per student (in 1,000s)	.17	0.60
Room and board cost (in 100s)		
Library holdings per student (in 100s)	.10*	0.14
Campus police (per 10,000 students)		
Medical school/hospital		
Highest degree = doctorate		
Student Characteristics		
(Selectivity/Affluence/Diversity)		
Percent applicants admitted		
Percent on financial aid		
Percent male		
Percent African American	.49	5.10
Percent foreign		
Percent in residence halls		
Mean Rate of Campus Violent Crime		
Total R ² (Adjusted)	.27 (.26)	75.6

*All beta weights significant at $<.001$, except Library holdings per student $<.06$.

percentages of African American students and higher than average resources in terms of per student revenues and library holdings. Even the level of violent crime off campus bears no significant relationship to violent crime on campus. Acting together, these three measures explain only 27 percent of the variance (26 percent adjusted). (This *R*-square value is lower than that shown in Table 5 because the enter procedure forces all variables into the analysis, whereas the stepwise procedure selects only those that significantly increase *R*-square.)

The beta weights show that the percent of black students is almost three times as influential as per student revenues in predicting violent crime on campus. The second data column in Table 6 contains the unstandardized coefficients and indicates the impact of each variable on the crime rate produced by a one-unit change in the respective independent variable. Each one percent increase in the percent of black students is associated with an increase of 5.1 violent crimes per 100,000 students. Each \$1000 increase in the revenue per student is associated with an increase of 0.6 in the crime rate.

Correlates of Property Crime

Table 7 shows the stepwise regression results for campus property crime. As suggested by the data in Table 5, several of the campus organizational variables and a few student characteristics are significantly associated with campus property crime, but none of the community variables. Even the level of property crime off campus bears little statistical relationship to property crime on campus. Property crime is strongly associated with the nature of the campus and its students with an *R*-square of 0.79 (0.78 adjusted). The most significant beta weight (two to six times greater than the others) is per student revenue. Each \$1000 increase in revenue per student is associated with an additional 39.7 property crimes per 100,000 students. Other significant organizational wealth measures include room and board costs, library holdings, and campus police per capita. Although the proportion of students living in residence halls is significantly correlated (bivariate) with campus property crime, this variable is overwhelmed in the regression by related variables such as room and board cost and revenue per student. The second largest beta weight is the one for public institutions. Public colleges and universities experience 2,034 more property crimes per 100,000 students than do private institutions, controlling for all other variables in the analysis.

Several measures of complexity, diversity, and selectivity also are influential. Higher rates of property crime on campus are associated with having a medical school or hospital, selective freshman admissions, higher percent on financial aid, more male students, and fewer foreign students.

Correlates of Total Serious Crime

Table 8 displays the stepwise regression results for all nonlarceny crime. Since most crime is petty larceny, to include this in the analysis would produce results similar to those in Table 7. Table 8 shows that the average campus in the study reports 46.8 burglaries, auto thefts, and violent crimes for each 10,000 students. As expected from Tables 5, 6, and 7, no community characteristics are

TABLE 7. Property Crime: Stepwise Regression Results

Independent Variables	Significant Beta Weights*	B Crime Rate per 100,000
Community Characteristics		
Population		
Urban/nonurban		
Education level		
Poverty percent		
Average temperature		
Community violent crime		
Community property crime		
Community police per capita		
Campus Characteristics (Mission/Size/Wealth/Cost/Complexity)		
Public institution	.25	2,034.0
Total (head-count) enrollment (in 1,000s)		
Number of campus acres		
Total revenue per student (in 1,000s)	.61	39.7
Room and board cost (in 100s)	.15	42.8
Library holdings per student (in 100s)	.10	4.2
Campus police (per 10,000 students)	.14	56.6
Medical school/hospital	.19	1,701.3
Highest degree = doctorate		
Student Characteristics (Selectivity/Affluence/Diversity)		
Percent applicants accepted	-.11	-16.24
Percent on financial aid	.13	19.37
Percent male	.10	28.84
Percent African American		
Percent foreign	-.10	-113.23
Percent in residence halls		
Mean Rate of Campus Property Crime (Includes Petty Larceny)		
Total R ² (Adjusted)	.79 (.78)	2683.5

*All beta weights significant at <.01.

significantly associated with this campus crime rate either. The measures of organizational wealth (library holdings, revenues, room and board cost) are strongly associated with this crime rate, as are the diversity measures (percent of African American, percent male, percent on financial aid) and being a public institution. Although campus crime rates are comparatively low, attending a well-supported, public institution with an ethnically and financially diverse student body increases the probability of experiencing crime.

TABLE 8. Total Crime Rate Without Larceny: Stepwise Regression Results

Independent Variables	Significant Beta Weights*	B Crime Rate per 100,000
Community Characteristics		
Population		
Urban/nonurban		
Education level		
Poverty percent		
Average temperature		
Community violent crime		
Community property crime		
Community police per capita		
Campus Characteristics (Mission/Size/Wealth/Cost/Complexity)		
Public institution	.25	393.3
Total (head-count) enrollment (in 1,000s)		
Number of campus acres		
Total revenue per student (in 1,000s)	.18	2.3
Room and board cost (in 100s)	.15	7.9
Library holdings per student (in 100s)	.50	3.9
Campus police (per 10,000 students)		
Medical school/hospital		
Highest degree-doctorate		
Student Characteristics (Selectivity/Affluence/Diversity)		
Percent applicants accepted		
Percent on financial aid	.10	2.9
Percent male	.11	6.5
Percent African American	.26	9.9
Percent foreign		
Percent in residence halls		
Mean Rate of Non-Larceny Crime		
Total R ² (Adjusted)	.39 (.37)	467.5

*All beta weights significant at <.01, except Room and board, Percent male, and Percent on financial aid <.05.

DISCUSSION AND CONCLUSION

The literature contains few studies on the topic of campus crime, despite its importance. This study utilizes three national databases to examine, first, the trends in campus crime, and second, the correlates with 23 various community, organizational, and student measures. The study produced several intriguing findings.

First, despite the impressions one might receive from the media, campus

crime rates are falling, and they are falling in all categories except campus vehicle theft, which remains level. Moreover, no observers believe the decline in campus crime rates can be attributed to declines in the frequency of reporting criminal acts by campus victims and police. In fact, the current environment encourages the reporting of crime, especially crimes like rape and assault, to a far greater extent than a decade ago.

Second, campuses are much safer than the communities in which they are located. The cities and counties in which colleges are located generally experience twice the rate of property crime and ten times the rate of violent crime than the campuses themselves. In fact, we believe the contrast between campus and community crime rates is in reality even more extreme than shown in this study because our data overestimate campus crime by including only crime per 100,000 students, ignoring the presence of employees and visitors. On most campuses, faculty and staff add another 20 percent to 30 percent to the campus full-time population, and large sports events like football and basketball attract many thousands of visitors to events that are notoriously associated with criminal acts, according to many campus police officials. Moreover, the law requires campuses to report all crimes committed, not just those involving student victims. We do not know how many crimes are committed against employees and visitors versus students. Thus, the crime rate data overestimate the likelihood of students becoming victims, both because students are the only population in the "crimes per capita" denominator and because students are not the only population in the numerator.

Third, we find major differences in crime rates at different types of colleges and universities. Compared to students at two-year colleges, those in medical schools and health science centers are three times more likely to be victimized by violent crime, and seven times more likely to experience property crime. However, some of these results derive from the small population at some institutions where a few crimes translate into a high rate per 100,000 students.

Fourth, campus mission, wealth, and student characteristics are the best predictors of campus crime. We expected to find influential community characteristics linked to crime rates, but did not. Ours is the third study (Fox and Hellman, 1985; Morriss, 1993) to report no evidence of crime spillover from community to campus.

Fifth, violent crime and property crime exhibit different dynamics and patterns of causality. Our variables explain 79 percent of the variance in property crime, but barely one-quarter of the variance in violent crime. Moreover, a single student characteristic explains most of the small variance in violent crime, while property crime is substantially explained by a combination of organizational features reflecting organizational wealth, mission, and complexity. These results reflect the fact that property crime is relatively rational or goal oriented, compared to violent crime, which is both infrequent and intensely

irrational. While it is more difficult to identify the variables that explain violent crime, our findings regarding campus property crime are at least partially consistent with Routine Activities Theory.

The Evidence for Crime Spillover

Routine Activities Theory suggests that three elements must be present in order for crimes to occur (Cohen and Felson, 1979). First, there must be an offender who is sufficiently motivated, and perhaps skilled enough, to commit a crime. Second, there must be a target of the crime—for example, an auto to steal, a person to assault, or a stereo to take. Third, the target of the crime must lack a sufficient guardian to deter the crime. This theory suggests that campuses with higher percentages of affluent students living in dormitories should expect higher rates of burglary and larceny.

Offenders typically seek the highest payoff from a crime for the lowest cost (Heineke, 1978; Taylor, 1978). Certain types of offenders from the community may see the campus as being an easy target relative to targets in the community. This should be particularly true of economically motivated crimes that require criminal expertise. In other words, crimes like motor vehicle theft, burglary, and armed robbery on campus are less likely to be committed by students than by professional criminals from the community. Most property crime consists of larceny—an offense that does not usually require professional talent. College students may themselves carry out larceny, but they are unlikely to work their way through college by means of armed robbery and auto theft.

Thus, we expected to find evidence of crime spillover from community to campus, but did not. Even the bivariate correlations between community crime and campus crime fail to exceed 0.10. Since ours is the third study since 1985 to report no evidence of a spillover effect, it appears that crime on campus is relatively independent of crime and poverty in the surrounding community. In view of the relatively low rates of campus crime, perhaps students are not viewed by criminals as “easy targets” until they leave the campus and enter the community (where the crime rates are higher).

Implications

The results of this study are at least partially consistent with criminal theory. When asked why he robbed banks, Willie Sutton replied: “Because that’s where the money is.” Though campus crime rates are comparatively low, the reported property crime in this study is significantly associated with affluent institutions attended by selective students living on campus and paying higher than average room and board charges. This may produce some dissonance for students and parents who face a college choice decision and who view the avoidance of

crime as an important component. The more selective and affluent colleges, where one presumably receives a better or at least a more prestigious education, are more likely to have higher rates of crime.

Our findings regarding violent crime need to be interpreted with caution. First of all, the incidents of violent campus crime are so small that one wonders why all the national fuss? Second, our measures account for only 27 percent of violent crime, so we are unable to predict the vast majority of such crime on campus. What our data reveal about violent campus crime, three-fourths of which is assault, is that it is more prevalent at campuses with above average numbers of black students and above average revenues and cost. This is a distressing finding to those of us who believe in the educational value of ethnic diversity and in the social value of access to higher education by disadvantaged groups. At the very least, our results suggest the need for special programs when affluent institutions recruit and place minority and needy students into an environment where there is a severe contrast in student racial and economic backgrounds.

The significant relationship between campus property crime and campus police is an interesting one. Campus police per capita does load heavily on the organizational wealth factor, so affluent institutions that are experiencing crime evidently can afford more police. The high presence of campus police on campuses where crime is occurring may be a sign that administrators are acting responsibly. Some believe that crimes are more often reported and officially recorded at campuses with a large police force, but the crime literature demonstrates that police are better at responding to crime than they are at discovering it. The reporting issue is of particular interest to institutional researchers because they are the data managers and questionnaire respondents on most campuses. Studies like ours as well as appropriate policy responses to campus crime are heavily dependent on accurate reporting.

The Student Right-to-Know Legislation has focused national and campus attention on safety and security in higher education. The data in this study suggest that the legislation may be fulfilling one of its purposes, but not one of its others. On the one hand, the falling campus crime rates since 1985 suggest that the legislation may have stimulated collective preventive steps that are working. Moreover, campus crime rates are low in comparison to the crime rates in the surrounding cities and counties.

On the other hand, we believe the legislation is an expensive burden that does not provide the intended useful information to students and parents. Crime rates reported by campuses and analyzed in this study seriously overestimate the amount of campus crime directed against students, and ignore completely the crimes involving student victims off campus. We question the value of reporting crime when much of it may not involve students as victims and when it ignores the true risks of victimization when students venture from the college into the community.

Future studies on this topic should include a wider array of the nation's colleges and universities and should examine the dynamics of different types of crime at different types of institutions over a period of years. Our database of 416 institutions includes only 62 private institutions and only 10 liberal arts colleges. In addition, we suspect that some institutions, like community colleges, may be more susceptible to certain types of crimes, like vehicle theft. One weakness of this study is the calculation of crime rates per 100,000 students. Basing crime rates on the number of students is statistically convenient, but future studies should attempt to calculate rates based on more complete campus population estimates. Moreover, some types of crime that are committed infrequently (such as murder, rape, and robbery) should be examined using multiyear aggregations of data. In our study, a single violent crime in a single year at a small college produces a high crime rate for that campus.

Providing insights to campus crime should help students, faculty, and administrators alike to develop more effective responses and strategies to address crime on campus. Such information also is needed to increase understanding among trustees, legislators, parents, and others concerned about the problem.

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