Comparison of Crime Rates Experienced on the Campuses of Higher Education Institutions with On campus Housing and Those Institutions without On campus Housing

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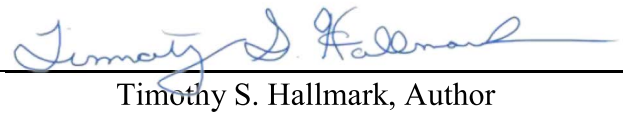
Signature 

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ABSTRACT

Since its enactment in 1990, the Jeanne *Clery Disclosure of Campus Security Policy and Campus Crime Statistics Act* has been the primary rule governing the management of security on the campuses of institutions of higher education. Although crime has decreased on college campuses in the quarter century since its first implementation, research has repeatedly shown that the standard has not achieved all its intended goals. In addition, this standard is frequently cited as burdensome by both the institutions that it regulates as well as other governmental agencies. With this failure to meet goals as well as its identified cumbersome nature in mind, this research has focused on the one-size fits all nature of the standard to determine if the historical data indicates that there is a reason for including institutions without on campus housing under the full requirements of the Clery Act. To examine if there is a reason for continued inclusion, quantitative research was conducted using secondary data obtained from the U. S. Department of Education. This data was utilized to test six Research Hypotheses focused on determining if there is a difference in the crime rates experienced by the group of institutions with on campus housing and the group of institutions without. This hypothesis testing overwhelmingly indicated that there was a difference in the crime rates experienced by these two groups of institutions except for the crimes of: 1) robbery; 2) motor vehicle theft; 3) hate crimes. This difference of crime rates suggest that policymakers should examine the need for inclusion of institutions without on campus housing in future revisions of the Clery Act.

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Chapter I

INTRODUCTION

Study Overview

Standing for over a quarter of a century, the J*eanne Clery Disclosure of Campus Security Policy and Campus Crime Statistics Act,* henceforth referred to as the Clery Act, the Act, or Clery, has been the rule book in the area of safety and security for institutions of higher education. Despite the significant reduction in crime rates on college campuses, this act has frequently been cited as burdensome and inefficient policy. In fact, the Government Accountability Office cited the Clery Act as a difficult requirement for higher education (Emrey-Arras, 2013). This onerous characteristic resulted in Senator Claire McCaskill stating, "my goal is to remove [the Clery Act,], or at a minimum, simplify it" (New, 2015, para. 4). Recognizing the burdensome nature of the requirements, there have been several bipartisan attempts to reform the Act in the last two years. The most recent attempt was initiated in April of 2017.

The majority of the reforms found in the April 2017 effort have focused on increasing the prescriptive requirements of the Act, especially in the areas of sexual misconduct on campus. In their formulation, these proposed modifications have either ignored or overlooked the important question of what institutions should be covered in the scope of Clery. In this area, there is very little academic research to lead policymakers to make informed decisions regarding where the most impact has been witnessed. This lack of study has left policymakers without data to guide and focus

regulatory attention to efficiently effect the most college students with the limited resources of the United States Department of Education as well as the resources of these institutions.

This study is based on the idea that institutions with on campus housing will experience the greatest amounts of crime due to the characteristic of having students live on them for twenty-four hours per day. The difference in crime rate between campuses with on campus housing and those without was theorized to be statistically significant. If the difference was statistically significant, it could provide policy makers with a research-based reason for classifying institutions into two groups with different requirements.

To accomplish this evaluation, this research has grouped institutions into the two categories of: 1) institutions with on campus student housing; 2) institutions without on campus student housing. The study has analyzed the crime rates between these two groups to determine if a significant statistical difference exists. The differences are important because in 2016 there were 6,700 institutions reporting data to Clery, but only 2,180 of these institutions reported having on campus housing. This means that the same regulatory requirements apply to all institutions even though all institutions do not have the same student resident time on campus. The concept of resident time on campus is of course important because the amount of time that a student spends on campus will represent the amount of time that they are potentially exposed to crime associated with that campus. This is of significance since according to the preamble to the Clery Act, "roughly 80 percent of campus crimes are committed by a student upon another student" (20 USC § 1092, 1990). To put it in the simplest terms, the less time on campus, the less time of exposure to crime associated with that campus. Resulting from this disparity in

student time on campus is an inequity for the two-thirds of institutions that do not have on campus housing. They are required to provide similar levels of programs even though they in theory expose their students to the potential for crime the least amount of time.

Research Questions

The intent of this study has focused on answering six research questions. These research questions are:

1) Is there a statistically significant difference in the overall Clery Crime Rates for institutions with on campus housing and those without on campus housing?
2) For each Clery Crime category, is there a statistical difference between crime rates experienced by institutions with on campus housing and those without on campus housing?
3) For Clery Crime, is there a predictive relationship between the number of crimes occurring in on campus housing as compared to the number of crimes for the rest of the campus for institutions with on campus housing?
4) For crimes identified in the *Violence Against Women Act* amendments to the Clery Act, is there a statistically significant difference in overall Clery Crime Rates for institutions with on campus housing and those without on campus housing?
5) For alcohol and drug related arrests and disciplinary referrals, is there a statistically significant difference in overall Clery Crime Rates for institutions with on campus housing and those without on campus housing?

6) Is there a statistical difference in the reported hate crime rate for institutions with on campus housing and those without on campus housing?

Historical Background

The birth of current college campus safety regulations can be traced back to a dorm room on the campus of LeHigh University in Bethlehem, Pennsylvania. For in this residence hall in the early morning hours of April 5th, 1986, the nation was shocked by the brutal rape and murder of Jeanne Clery by a fellow student. Following Ms. Clery's horrible murder, her family became aware of the number of violent crimes committed on the campus of LeHigh in the three years preceding the death of their daughter. This fact stunned the Clery family since they assisted their daughter in selecting LeHigh partially based on the sense of security they had perceived when visiting the University.

In coping with their loss, the Clery's responded to this tragedy by forming the interest group Security on Campus, Inc., which later became renamed the Clery Center (Carter, 2017). With the horrific nature of this crime in mind, the new interest group began lobbying state and federal policymakers to enact campus safety policies. The lobbying efforts resulted in a policy victory in their home state of Pennsylvania in 1988. Following this policy victory, Senator William Bradley of New Jersey introduced legislation into the United States Senate in March of 1989. This legislation was passed by Congress in 1990 and signed into law by President George Herbert Walker Bush in November of that same year. The legislation, which was formally titled the *Crime Awareness and Campus Security Act of 1990* (Title II of Public Law 101-542), was itself an amendment of the *Higher Education Act of 1965.* Since its initial passage, the Act has

been amended several times with the 1998 amendment renaming the law the *Jeanne Clery Disclosure of Campus Security and Campus Crime Statistic Act.*

Clery Act Overview

At its core, the Clery Act is a consumer protection regulation, which is applicable to all institutions of higher education that participate in the Title IV student financial assistance program. The central theme of the Act revolves around the concept that students choosing institutions of higher education must be informed with consistent, reliable information to aid them in their decisions. The Clery family felt that institutions should provide all families with this vital violent crime related information, which they felt Jeanne had not received from LeHigh University.

According to the preamble to the original *Crime Awareness and Campus Security Act* of 1990, the intent of the act is to:

> a) encourage the development on all campuses of security policies and procedures; b) for uniformity and consistency in the reporting of crimes on campus; c) to encourage the development of policies and procedures to address sexual assaults and racial violence on college campuses. (p. 2385)

The Act attempts to accomplish this by mandating seven major requirements. These major requirements are: 1) the formulation of campus safety related policy requirements and publication of an annual report; 2) the collection of crime statistics; 3) the issuance of campus alerts; 4) offering sexual misconduct educational activities; 5) the submission of crime statistics annually to the Department of Education; 6) maintaining a crime log if the institution has a security or police department; 7) compliance with fire statistics

collection requirements and missing student notifications if campuses have on campus living.

Although seemingly straightforward, the crime statistics portion of the Clery Act is actually quite complex. In order to properly understand crime statistics reporting, it must be understood that crime statistics must be collected on what is commonly referred to as Clery Geography. Clery Geography is broken into three separate geographical categories: 1) on campus; 2) public property; 3) non campus. The U.S. Department of Education (2016) in the *Handbook for Campus Safety and Security Reporting* defines on campus property as:

> Any building or property owned or controlled by an institution within the same reasonably contiguous geographic area and used by the institution in direct support of, or in a manner related to, the institution's educational purposes, including residence halls; and any building or property that is within or reasonably contiguous to the area identified, that is owned by the institution but controlled by another person, is frequently used by students, and supports institutional purposes (such as a food or other retail vendor). (p. 2-2)

The on campus component of the Clery Geography on the surface is the simplest part, but in practice there are issues associated with this defined geographic area. Some examples of the complexity include institutions that share campus space, institutions that lease spaces in other buildings such as strip malls, and various other real-world situations that make the concept of on campus geography multifaceted. In addition, many institutions have additional extended campuses, which are spread throughout a region or

even throughout the world. These institutions must report Clery statistics for each campus. This results in a single institution being mandated to make multiple Clery reports. It should also be noted that the Clery Act requires on campus geography to be broken down into separate categories for institutions with on campus student housing.

The second component of Clery Geography is public property. These locations are defined by the *Handbook for Campus Safety and Security Reporting* as, "all public property, including thoroughfares, streets, sidewalks, and parking facilities, that is within the campus, or immediately adjacent to and accessible from the campus" (U.S. Department of Education, 2016, p. 2-11). This geographic component can include parks, roadways, sidewalks, rivers or other publicly owned spaces that are contained within or abutted to the institution-controlled property.

The final component of Clery Geography is non campus geographic areas. This geographic area includes spaces owned or controlled by a college's affiliated student organizations. The U.S. Department of Education (2016) defines this area as:

> Any building or property owned or controlled by a student organization that is officially recognized by the institution; or any building or property owned or controlled by an institution that is used in direct support of, or in relation to, the institution's educational purposes, is frequently used by students, and is not within the same reasonably contiguous geographic area of the institution. (p. 2-18)

Some examples of these non campus geographic areas include fraternity and sorority housing, rented athletic facilities, or rented classroom space.

Once one comprehends where the data must be gathered, focus must then be placed on understanding what data is required to be collected on that Clery Geography. The Clery Act mandates the collection of a wide variety of reports of criminal offenses. These offenses are criminal homicide, sexual assault, robbery, aggravated assault, burglary, motor vehicle theft, and arson. The offense of criminal homicide is broken into the subcategories of murder, non-negligent manslaughter, and manslaughter by negligence. Additionally, the criminal offense of sexual assault is broken into the subgroups of rape, fondling, incest, and statutory rape. In order to standardize the categorization of these criminal offenses, the U.S. Department of Education has adopted the Federal Bureau of Investigation's Uniform Crime Reporting Program definitions. Additionally, the Clery Act mandates that data be collected for hate crimes occurring on the institution's Clery Geography. These hate crimes include all the criminal offenses that must be reported, but it also supplements these criminal offenses with those of simple assault, larceny-theft, intimidation, destruction, damage, or vandalism of property. In order for these crimes to be classified as hate crimes, there must be evidence of a bias based on one of the eight categories of: 1) race; 2) religion; 3) sexual orientation; 4) gender; 5) gender identity; 6) ethnicity; 7) national origin; 8) disability.

Another category of offense, which must be reported by a college, is mandated by the *Violence Against Women Reauthorization Act (VAWA) of 2013* amendments of the Clery Act. The crimes that must be reported include domestic violence, dating violence, and stalking. Even though, sexual assault is considered a VAWA offense, it is counted in the general criminal offense category.

The Clery Act also mandates that institutions compile statistics for three additional categories of arrest or disciplinary action referrals. Weapons violations are the first group in this arrest or disciplinary action referral category. These include carrying or possession of weapons in a manner that is either unlawful or noncompliant with institutional mandates. The second category is drug abuse violations, which include the illegal activities of manufacturing, dispersing, or using controlled substances. The final group of violations or disciplinary referrals that must be collected are alcohol violations. These alcohol violations include the production, trade, procurement, transportation, or possession of alcohol.

Public Administration Significance of Study

This research has focused on the Public Administration area of program evaluation. Rossi, Lipsey, and Freeman (2004) define program evaluation as "the use of social research methods to systematically investigate the effectiveness of social intervention programs in ways that are adapted to their political and organizational environments and are designed to inform social action in ways that improve social conditions" (p. 431). The study has used quantitative evaluation techniques to assess if the current Clery Act's policy approach of requiring every institution to comply with all aspects of the Act is rational. Considering that the cost of a college education has risen at rates even higher than that of health care (Patton, 2015), it is prudent to look for regulatory burdens that could be lifted to reduce the educational costs. Although much of this increase cannot be directly linked to the Clery Act, the arduous nature of the act, and its impact on the cost of education should not be underestimated. As an example, the University of Connecticut reports that it spends about $400,000 per year for programs to

ensure compliance with the requirements of the Clery Act (Gardner, 2015, p. A27). Even if institutions without on campus housing are not spending this amount, it is easy to see that these requirements will generate expenditures, which are transferred to the students.

Summary

The research undertaken in this study has provided critical data that can be used to provide policymakers with information to make research-based decisions if the Clery Act is reformed in the future. This study has provided a statistical rationale for creating a classification system for these institutions under the act. It also provides data that could guide regulators in focusing their compliance audits. In considering the inflation of education costs and the limited resources of the Department of Education, this research has provided information that could be considered when making future reforms and to focus policy implementation.

Chapter II

REVIEW OF LITERATURE

Problem Statement and Overview

Although the Clery Act has been in existence for over a quarter of a century, academic scholarship has focused on very narrow areas of the impacts and effects of the Act. Most of the publications on this Act have focused primarily on four areas: 1) general victimization studies; 2) studies on the effectiveness of the Act in communicating crime information to students and their families; 3) studies focused on crimes associated with sexual assaults; 4) campus safety perception studies. Other areas of research on the topic is limited to one or two publications. At the same time, policymakers have continued to refine the requirements of the Clery Act to include more mandates. Since 1990, the Act has been amended five separate times, and the Department of Education is currently on the third edition of their handbook to inform institutions how to comply with this standard. To demonstrate the complexity of the standard, it should be noted that the current 2016 edition of the handbook stands at 265 pages in length. The section on Clery Geography alone stands at 27 pages of regulatory guidance.

While these amendments have become progressively more intricate in their requirements, the academic literature to support these amendments has not kept pace to provide policymakers with information that can be utilized to make research-based decisions. Much of the academic research on the Clery Act has focused upon the Act's effectiveness in communicating with the campus community. These research efforts

have repeatedly shown that the Act has proven ineffective (Gregory & Janosik, 2006; Janosik, 2001; Janosik, 2004; Janosik & Gehring, 2003; Janosik & Gregory, 2002; Janosik & Plummer, 2005). The research has shown that students and their families by and large are unaware of the Act, and they also do not use it in making their college selection decisions.

Another major area receiving a large amount of study was sexual misconduct. This type of research has recently received major press coverage due to studies such as a recent poll by the Washington Post-Kaiser Family Foundation. This poll found that one in four college age women have experienced a sexual assault in the preceding four-year period (Anderson & Clement, 2015, para. 1). Additionally, research by Cantor, Fisher, Cibnall, Townsend, Lee, Bruce and Thomas (2015) found that 26.1% of female college seniors have experienced some form of nonconsensual sexual contact (p. xiv). Prior to these studies Robers, Kemp, Rathburn, Morgan, and Snyder (2014) found that forcible sex crimes occurring on college campuses increased by 52% in the decade occurring between 2001 and 2011 (p. 96). These three studies were published following the passage of the *Violence Against Women Reauthorization Act (VAWA) of 2013*, which amended the Clery Act to include provisions for handling and reporting crimes such as dating violence, domestic violence, and stalking. Their predecessors helped to ensure that this Act was finalized, and these amendments were made to the Clery Act. Since the passage of the *VAWA amendments of 2013*, the area of sexual assault has been inundated with fresh research on a regular basis, which will most likely continue for the foreseeable future.

The subject area of campus safety perceptions is another part of the standard that has been the foci of much academic research. The majority of this research has been very limited in its scope to focus on either a single institution or a region. Very few studies have been published that focus on perception of campus safety on a national level.

Even though these research areas are very critical in providing policymakers with information to make important future decisions about reforms to this Act, almost all the research neglects the larger question of what institutions should be covered under the policy. The data generated over the last decade has provided ample opportunity to perform much needed in-depth analyses, but most studies that have been published focus only on descriptive statistics rather than conducting hypothesis testing of the impacts of on campus residential housing on crime rates. This presence of on campus housing is significant since Lewis, Farris, and Greene (1997) found that campus crime "tended to vary substantially by institutional type, whether the institution had campus housing, and the size of the institution" (p. 43). Although research has consistently shown that institutions without on campus housing have crime rates less than those of institutions with on campus housing, this fact has repeatedly been treated as an afterthought in research. To date, there has been little literature published analyzing this phenomenon to determine if this difference is indeed statistically valid. The research conducted by this study is valuable because it will allow policymakers to potentially consider clear cut, research-based levels of applicability for future reforms of the Clery Act.

General Campus Crime Statistics

General research into crimes occurring on college campuses has been widely analyzed. Studies examining crimes on college campuses have focused on overall victimization of students and the effectiveness of the Clery Act on crime statistics. Baum and Klaus (2005) conducted an analysis of the victimization of college students between the years of 1995 and 2002, which found that college students appeared to be victims of less violent crime than their peers that are not enrolled in colleges (p. 1). The results were confirmed by Hart (2013), which found that except for sexual assault, students experienced less violent crime, robbery, aggravated assault, simple assault, and serious violent crime than nonstudents in the same age ranges (p. 144). Overall though, the multitude of research indicates that student exposure to crime is relatively rare (Bromley 1992; Fisher, Sloan, Cullen, & Lu, 1998; Sellers & Bromley 1996; Sigler & Koehlor, 1993).

One area of crime statistic research, which is particularly pertinent to this study, is identifying the locations where students have experienced crime. In their study, Baum and Klaus (2005) found that students tended to experience violent crime more off campus than on campus (p. 5). Hart's (2013) subsequent study of this topic confirmed this finding (p. 145). Of particular note, is that the Baum and Klaus (2005, p. 1) study found that 92% of violent crime occurred off campus, and these findings are similar to the earlier work of Sigler & Koehler (1993, p. 337) that found 86% of student crime experience occurred off campus. Consistent with these findings was the work of Sellers and Bromley (1996) that found only 11.8% of violent crime victimization occurred on campus (p. 20). Bromley (1999) noted that the violent crimes in cities were

approximately quadruple the proportion of the percentage of violent crimes on the community college campuses (p. 16). In the geospatial analysis by Nobles, Fox, Khey, and Lizotte (2013), only 3.5% of all arrests analyzed were made on campus property. These studies identifying the reduced numbers of violent crimes as well as arrests on campus may explain why Aliabadi (2007) found that 96.4% of the students surveyed in her study reported that they either felt very safe or somewhat safe during their first year at their university (p. 108).

A truly interesting item noted from this literature review was that, where students experience crime, and where they feel safe may not align. This is found when contrasting the research of Hart (2013) with Patton (2010). In his research, Hart (2013) found that students attending an institution in an urban environment are more likely to experience violent crime off campus, but students attending and living in rural areas are more likely to experience violent crime on campus (p. 146). Contrarily, Patton (2010) found that "the campus that had the highest student perception of campus safety was found to be rural while the campus with the lowest student perception of safety was urban" (p. 88). A potential explanation could be that even though students may experience crime more on campus in rural environments, the difference between the crime experience rate on campus and off campus is not noticeable to the student.

Hart (2013) also analyzed race effects on the location of crimes. He found that white college students experienced crime 14 times greater when off campus (Hart, 2013). Similar to white student crime experiences, Hart (2013) found that African American college students experienced crime 15 times greater when off campus. The experience of off campus crime by African American and white students pales in comparison to that of

Hispanic college students, which experience crime victimization rates 29 times greater off campus than on campus (Hart, 2013).

With increased usage of technology, the utilization of spatial analysis for the evaluation of crime frequency has been an area that has generated a great deal of interest in recent years. LaRue and Andresen (2015) found that the two universities in Ottawa drew crime to their locations (p. 206). Similarly, McGrath, Perumean-Chaney, and Sloan (2014) and Robinson and Roh (2013) reported that the areas of student congregation were the epicenters of crime. The results of the research in this area consistently demonstrate that crimes occur where students live, play, and gather on college campuses. This is potentially explained by lifestyle and routine activity theories. Pratt and Turanovic (2016) note that, "lifestyle and routine activity theories both view victimization through the lens of the convergence of a motivated offender, an attractive target/victim, and the absence of capable guardianship" (p. 335). The congregation of hundreds or thousands of students living away from home for the first time in one location most definitely would present an attractive target for a motivated offender.

Another area of study frequently found in the literature involves the types of crimes experienced by college students. In his study on the topic, Meisner (2005) found that some crimes were reported more often than others. Among those, burglary, forcible sex offenses, aggravated assault and motor vehicle theft were the crimes most frequently reported (Meisner, 2005). Fazari (2003) published similar findings in his analysis of the crime experiences of Northville University. His research revealed that motor vehicle theft, theft and burglary were the most common offenses witnessed (Fazari, 2003). Lewis et al. (1997) published comparable findings when conducting their national survey of

crimes occurring on campus noting that "property crimes (burglary and motor vehicle theft) were much more common than other types of crimes" (p. 13). Consistent with the other research, Barnes (2009) reported that property crimes were the majority of crimes on the campuses of institutions in Virginia. Robinson and Roh (2013) also found that theft was one of the most common crimes followed by alcohol violations, drug violations, and vandalism. Bromley (1999) concluded that the most commonly occurring crime on community colleges were property crimes instead of violent crimes. In their study of the gender of victims, Sigler and Koehler (1993) found that males were more likely to experience thefts, and women were more likely to experience sexual assaults. Both the Baum and Klaus (2005) and the Hart (2013) studies found that the most frequent violent crime experienced by college students was that of either simple or aggravated assault. Hart and Miethe (2011) analyzed the occurrence of student violent crime experience and found that the most common pattern was minor assaults on males off campus in front of witnesses.

A good deal of research has also been focused upon what student groups experience the most crime. Fazari (2003) found that undergraduate students experienced property theft at a much higher rate than other crimes. Baum and Klaus (2005) reported that male college students were more frequently the victims of violent crime than female students, and Hart (2013) similarly found that the total rate of violent crime experienced by males was two times greater than that experienced by female students. In his further analysis of this disparity, Hart (2013) found that this difference was statistically significant between the genders. Similarly, Robinson and Roh (2013) reported that all male dorms experienced greater crime rates. Part of this imbalance may be explained by

the research conducted by Hart and Miethe (2011), which suggests that "minor assaults among males that occur in off campus locations and in front of bystanders are the typical situations underlying the most prevalent contexts for student victimizations" (p. 174). The main exception to this phenomenon of males experiencing more violent crime than females is related to sexual assault. Hart (2013) found that females experience off campus sexual violence at rates much higher than their male counterparts.

In reviewing the literature on college student crime statistics, a common thread found throughout the research is that college students report crime to the police at a rate much lower than that of the general public (Brinkley, 2005; Fisher, Hartman, Cullen, & Turner, 2002; Hart, 2013; Hart & Colavito, 2011; Robinson & Roh, 2013). These findings are supported by the analysis conducted by Guffey (2013), which reported that there was a statistically significant under-reporting of rape and burglary associated with the Clery Act at universities. In their study on this topic, Hart and Colavito (2011) found that this discrepancy may be related to a difference in the reporting relationships for college students, which they surmise may be related to a general apathy on the part of students towards crime except for crimes that they view as severe in nature. To understand this under reporting phenomenon, Hart (2013) surveyed victims to ascertain their reasons for not reporting, and approximately a third of the victims stated that they found it to be a personal matter for both on campus and off campus victimization. For off campus crime, students reported that the second most common reason for not reporting was lack of proof (Hart, 2013). Finally, another important note from Hart's (2013) analysis is that only about 40% of violent crime experienced by students is reported to

law enforcement (p. 148). This consistent under-reporting of crimes is very important to all studies of campus crime.

In summary, the area of crime statistics on college campuses has been frequently studied. Several themes related to this research are found throughout the literature on this topic. First, the research repeatedly has shown the campuses of colleges in general have lower crime rates than the cities in which they reside, and that students are more likely to be exposed to crime off campus. The most common on campus crimes fall into the property crime category. When students do experience violent crimes, the victims of these crimes are most likely males, except for the victims of sexual assault, which are typically female. Finally, research has shown that college students generally report crimes to police less frequently than the average citizen.

Effectiveness of the Clery Act in Informing Parties

The effectiveness of the Clery Act in communicating crime statistics to students, their families, and the institutional faculty and staff is probably the most studied aspect of the Clery Act. This is most likely due to the importance placed on transparency by the Clery family during their initial lobbying effort. On this topic, the predominant finding reported in the literature was that the standard has not been successful in achieving its goal of informing students, student families, and faculties about college crime statistics. It has also underperformed when measured against its goal of impacting student decisions about which institution to attend. Finally, research reveals that the standard has been a failure at impacting student behavior such as protecting their belongings, being aware of their locations, and locking their doors.

This section of the literature review has been broken into three main components. The first focused on academic literature related to the Clery Act's impact on students. This has been followed with a subsection devoted to the Act's effectiveness related to impacting parents. The final section covers the efficacy of the Act related to institutional faculty and staff.

Effectiveness in Impacting Students

A great deal of academic scholarship has focused on the effectiveness of the Clery Act to inform students. The majority of research examining this topic has utilized survey instruments to provide answers to the research questions, but some of these studies have also used mixed method approaches. It should be noted that a great number of these studies have utilized the same survey instrument developed by Dr. Steven Janosik (2001), which makes results readily comparable.

Overwhelmingly, these studies have analyzed three main research areas. The first area commonly found in the literature focuses on students' knowledge of the Clery Act. Following up on this topic, most studies examine the impact of the Clery Act on the student's choice of institution. Finally, a good number of the research studies have analyzed the impact of the Clery Act on how students behave. With these main themes in mind, this section has examined the literature pertinent to each of these topics.

Most research on the efficacy of the Clery Act in informing students has reached the general consensus that the Clery Act has not met its intended goal of informing students about the Act. This conclusion has been surmised by all research into this topic (Aliabadi, 2007; Bush, 2011; Janosik, 2001; Janosik & Gehring 2003; Poole, 2014).

Table 1 is provided to summarize the findings of past literature on the topic of student knowledge of the Clery Act.

Table 1. *Summary of Research on Student Knowledge of Clery Act.*

Research Study	Percent of Students Knowledgeable of Clery Act
Janosik 2001	29%
Janosik & Gehring 2003	27%
Aliabadi 2007	14.4%
Bush 2011	25%
Poole 2013	6.4%

Note: Data presented adapted from Aliabadi (2007, p. 84); Bush (2011, p. 32); Janosik (2001, p. 357); Janosik & Gehring (2003, p. 83); Poole (2013, p. 175).

From these studies, the mean percentage of students indicating knowledge of the Clery Act was 20.4% with a median percentage of 25%. To explain the potential differences between the results of these investigations, an in-depth review of each study was conducted. The Janosik (2001) study reported the highest percentage of students knowledgeable of the Clery Act, and the Poole (2013) study yielded the lowest percentage of students knowledgeable of the Act. An analysis of their methodology revealed that both Janosik (2001) and Poole (2013) utilized the same Janosik (2001) survey tool to conduct their research. With both studies utilizing the same instrument, the conclusion that the survey tool itself is not the reason for the disparity can be drawn. In examining the method of distribution of the survey, many advances occurred in the decade that separates the Janosik (2001) and Poole (2013) studies. The study by Janosik (2001) was proctored through traditional mail whereas the study by Poole (2013) was delivered via online survey. The main differences that were noted between the two studies was that the Janosik (2001) study covered a community college, a comprehensive college, and a research university in contrast with the Poole (2013) study that limited it's

scope to private four-year institutions that were aligned with religious organizations. Although not thoroughly examined in the Poole study, one possible explanation for the difference could be related to the religious affiliation of the institutions included in the study. Simply put, it could be surmised that students intending to attend a religious affiliated institution may assume a sense of security, which prevents them from researching safety at institutions. This conclusion is supported by research conducted by Briggs (2014) that found respondents to his survey frequently answered that they "perceived the safer environment to be a private Christian-affiliated university" (p. 104). Another potential explanation could be that institutions that are religiously affiliated may place less emphasis on informing students of the Clery Act, due to their assumptions of safety, related to their student body. In either case, this phenomenon creates an area of research that could further be explored.

In addition to the previously described literature, Jee (2016) conducted a survey to evaluate if the students' awareness was significantly greater than the response of neutral. His research discovered that for the most part, students were aware of aspects of the Clery Act such as safety notices, emergency notifications, fire statistics, and similar information. However, when measuring knowledge of the Clery Act crime statistics, Jee (2016) found that "students are not aware of the Clery Act crime statistics to a significant extent" (p. 60). Another important conclusion of Jee (2016) was that the students who lived on campus were statistically more likely to know about aspects of the Clery Act than those residing off campus. Jee (2016) surmised that this was due to students living on campus having a greater interest in the hazards of the campus since they spend more time on it than those students who live off campus.

Even though there are discrepancies in the findings from each of these studies, it is evident that the Clery Act has not accomplished its mission of informing students about the Act itself. At best, approximately 71% of students are unaware of the Act (Janosik, 2001). Despite multiple amendments, research consistently shows that the vast majority of students are still not knowledgeable about the Clery Act.

One of the original tenets of the Clery family's crusade for campus safety originated with the idea that institutions must collect crime statistics and publish them so that students and their families can make informed choices when selecting institutions. With this premise in mind, the Clery Act mandated uniform statistics, which are required to be collected by each participating institution. Due to the importance placed on this aspect of the Clery Act, much research has been focused on the impact of Clery on student institution selection. From this review of the pertinent literature, one item of particular interest was that Janosik and Gehring (2003) found that only 9% of students who have previously been a victim of crime made their enrollment decision utilizing information generated due to mandates of the Clery Act. This note is troubling in regard to the potential efficacy of the Act. It would seem that this group would be most apt to read these publications and make decisions based upon this information. On the contrary, the research indicates that student victim status does not play a major role in selection of institutions based upon crime statistics. To summarize the findings of the applicable studies, Table 2 has been provided to display the results of this literature review.

Table 2. *Summary of Research Studies on the Clery Act Impact on Selection of Institution.*

Research Study	Percent of Students Selecting Institution Based on Clery Act Data
Janosik 2001	4%
Janosik & Gehring 2003	Total = 8% Public Institutions = 6% Private Institutions 10%
Aliabadi 2007	14.3%
Bush 2011	5.6%
Poole 2013	5.6%

Note: Data presented adapted from Aliabadi (2007, p. 85); Bush (2011, p. 32); Janosik (2001, p. 353); Janosik & Gehring (2003, p. 85); Poole (2013, p. 224).

To supplement this area of research, Janosik and Gregory (2009) asked college staff if they felt the Clery Act impacted student college selection. In their study, they conducted a survey of Senior Student Affairs Officers, and they found that only 10% of Senior Student Affairs Officers felt that the students used the report to make enrollment decisions (Janosik & Gregory, 2009). The views of these student affairs officers were echoed by those of victim rights advocates when surveyed. In fact, only 6% of these victims' rights advocates felt that the Clery Act data impacted the decisions of students on college selection (Janosik & Plummer, 2005, p. 116).

In all studies, the research literature consistently indicates that the Clery Act has had very little impact on student selection of institutions. This seems counterintuitive when compared to the research by Carrico (2016), which reported that students valued campus security as the fourth highest aspect when selecting an institution. There are two possible ways of interpreting this discrepancy. First, students may only say that they value campus security, but in actuality, they just assume that the college they want to select is safe. Another possible reason is that being the fourth most important aspect of

selecting an institution may fall so far behind the top three reasons that it has very little impact on their overall decision.

Another central idea of the Clery Act is that the informational reporting required by the Act will affect the way that students behave to protect themselves while attending an institution. Therefore, this impact of the Act on student behavior has been the foci of multiple studies as well. In general, the research has been broken into two different categories: 1) does the information change the way students protect themselves; 2) does the information change the way students protect their property. The literature on this topic again identifies that the majority of students have not been affected by Clery. By and large, their responses indicate the information provided by the act will not change their behavior. For convenience, the results for of the studies examining students changing behavior to protect themselves are presented in Table 3. Complementing this, Table 4 has been provided to display the research results of previous studies focused upon how students change their behavior in protecting their property based upon information required by the Clery Act.

Table 3. *Summary of Research Studies on the Clery Act Impact on Student Self Protection.*

Research Study	Percent of Students Changed Behavior for Self Protection Due to Clery Act Data
Janosik 2001	31%
Janosik & Gehring 2003	41%
Aliabadi 2007	28.2%
Poole 2013	10.9%

Note: Data presented adapted from Aliabadi (2007, p. 116); Janosik (2001, p. 354); Janosik & Gehring (2003, p. 85); Poole (2013, p. 181).

Table 4. *Summary of Research Studies on the Clery Act Impact on Student Property Protection.*

Research Study	Percent of Students Changed Behavior for Property Protection Due to Clery Act Data
Janosik 2001	31%
Janosik & Gehring 2003	37%
Poole 2013	10.9%

Note: Data presented for adapted from Janosik (2001, p. 354); Janosik & Gehring (2003, p. 86); Poole (2013, p. 181).

Related to research on this topic of student behavioral change is the beliefs of college personnel about the impact of the Clery Act. In their study on the impressions of senior residence life and housing administrators, Gregory and Janosik (2006) found that only 16% of these personnel felt that the crime data affected the way that the students protected themselves and 15% felt it affected the way that the students protected their property (p. 55). Janosik and Gregory (2002) found that 36% of campus law enforcement felt that the Clery Act affected how students protect their property. Overwhelmingly, the literature indicates that both college students and college personnel believe that the Clery Act does not impact student behavior.

In all areas of research on the impact of Clery on students, the literature has consistently provided that the Clery Act has performed poorly. The Clery Act is not well known, and it consistently does not play a part in student choice of institution. It only

partially changes student behaviors in protecting themselves or property. This failure of impact was consistently reported throughout the literature.

Effectiveness in Impacting Parents

In forming the interest group Security On Campus, Inc., the Clery family believed that parents play a collaborative role in selecting institutions for their children. Their lobbying effort was built upon the idea that through the usage of crime data, parents and their children can make a more informed selection of an institution. Surprisingly, only a couple of research studies evaluating the impact on parents have been published. In these studies, a few research themes recur. First, parental knowledge of Clery is frequently measured. Following this topic, research tends to focus on the impact of the Clery Act on college selection. The final research theme usually centers on whether parents believe that the information presented by the Act will affect their student's behaviors.

Since one of the first indicators of the effectiveness of the Clery Act in reaching parents would be parental knowledge of the existence of the Act, a couple of studies have attempted to evaluate parental awareness. In general, these studies indicate that the majority of parents are not aware of the Act (Briggs, 2014; Janosik 2004). This lack of awareness mimics the absence of knowledge displayed by the students. A summary of the results of overall parental Clery knowledge is presented as Table 5.

Table 5. *Summary of Research Studies on the Clery Act Impact on Parent Knowledge.*

Research Study	Percent of Parents Knowledgeable of the Act
Janosik 2004	26%
Briggs 2014	Heard of law = 11.49% Familiar with law, unable to explain = 3.72% Familiar with law, able to explain =3.72% Very familiar, volunteered on law behalf = 0.16%

Note: Data presented, adapted from Briggs (2014, p. 85); Janosik (2004, p. 46).

The central concept found in the Clery Act is that by providing consumer information to families, it will allow those families to make well informed decisions about which institutions their children should select. Several research studies have focused on this importance of safety to parents. Briggs (2014) found that parents of high school students viewed safety as their top parameter when helping their children select which institution to attend. Carrico (2016) found that the students also believed that their parents' top concerns were campus location followed by campus security. Although these two studies have found that security selection is very important to parents, the analysis completed by Poole (2013) found that "the majority of participants responded their parents had minor, if any role, in the actual final college selection" (p. 190). A caveat to this finding is that Poole's (2013) research focused solely upon religiously affiliated institutions of higher education. With this limitation of sample selection in mind, these findings may not be universally applicable.

In ascertaining the impact of the Clery Act on parents' evaluations of their student's college of choice, there is actually very little academic literature. The main source of information found on this topic was generated by Janosik (2004). In his analysis, Janosik (2004) found that only 6% of parents felt that the Clery Act data affected their children's enrollment decision. This, again, is very troubling since parents and their children feel that security is the parents' utmost concern, but the usage of Clery generated information in selecting an institution is miniscule. Similar to the research findings about students, parents state that they value security, but the published studies indicate that they are unaware of the standards set to ensure campus security.

Effectiveness in Informing Faculty and Staff

The other portion of the campus community that is focused on in the Clery Act is that of institutional employees. While informing employees is important, it must be recognized that their knowledge of the Clery Act is critical to implementation of the Act. With this in mind, most of the research on employee Clery Act knowledge is focused upon those areas of the institution that deal with the Act such as resident life personnel, campus security and law enforcement personnel, and student affairs personnel.

In their analysis of the perceptions of senior student affairs personnel, Janosik and Gregory (2009) found that 98% of personnel functioning in this area of higher education are aware of the Act. This overall awareness of student affairs administrators has been supported by the research of Colaner (2006). While Janosik and Gregory (2009) found that the majority of senior student affairs personnel were aware of the Act, several other pieces of research indicate that although these personnel may have a general knowledge of the Act, their knowledge of the specific requirements is very limited (Colaner, 2006, Debowes, 2014; Soden, 2006).

An additional interesting finding of Janosik and Gregory (2009) was that personnel at community colleges were less likely to be aware of the provisions of the Act. They posit the potential explanation that community colleges are less likely to have crime than the four-year institutions (Janosik & Gregory, 2009). However, these findings were contradicted by the findings of Soden (2006), which state "there is little difference in knowledge of the Clery Act between student affairs administrators at 2-year institutions and those at 4-year institutions" (p. 96).

Research Related to the Presence Residence Halls

In their study of national crime statistics on college campuses, Lewis et al. (1997), stated that crime rate "results tended to vary substantially by institutional type, whether the institution had campus housing and the size of the institution" (p. 43). Even though this phenomenon was identified over twenty years ago, the literature concerning the impact of residence halls on crime rate has for the most part been very limited. Most studies analyzed this factor peripherally to the main topic of examination. In general, the literature indicates that the presence of on campus housing results in greater numbers of crimes on campus, but very few studies have been conducted to determine the difference between institutions with on campus housing and those without. This section will examine what literature exists and how that literature relates to the central idea of this study.

Lewis et al. (1997) presented an analysis of all institutions participating in Title IV financial aid programs in the United States. They noted that the amount of property crime, violent crime, non-forcible sex offenses, and drug, liquor, and weapons violations go up as the number of students living in on campus housing increases (Lewis et al., 1997). Similar findings were reproduced by Barnes (2009) in her analysis of crimes on the campuses of institutions of higher education in Virginia. A spatial analysis study conducted by Robinson and Roh (2013) noted that they "consider all university dorms as crime generators because large numbers of students congregate there for a variety of reasons, including criminal behavior" (p. 274). In agreement with this assessment, McGrath et al. (2014) found that the hot spots on the campus of the University of Alabama at Birmingham were driven by locales where students were encouraged to

assemble in large groups. Consistent with this finding, Nobles et al.'s (2012) geospatial analysis of crime identified that there were a tremendous amount of arrests occurring near the residence halls and football stadium. Robinson and Roh (2013) surmise that dorms are the main center of activity for students, and thus the greatest opportunity for crime exists in these locations.

Few studies have evaluated the significance of on campus housing on the occurrence of crimes. Fleenor (2009) conducted a study that compared the crime rates on institutions with a residential college setting and those institutions without residential colleges. A residential college is defined as "small, permanent, cross-sectional societies of students and faculty within a larger university" (O'Hara 2016, para. 1). In Fleenor's (2009) analysis, there was no statistical difference between the number of criminal offenses, hate offenses, arrest or disciplinary actions for colleges with a residential college and those without a residential college. In a study of the Clery Act's impact, Reed (2015) analyzed the differences in crime rates before and after the 2008 amendments to the Clery Act. She found that the amendments produced no significant difference between the change in violent crimes experience for both groups of institutions with on campus housing and those without (Reed, 2015).

Perhaps the piece of scholarship closest to this proposed study was that of Ravalin (2014). In her analysis Ravalin (2014) performed an analysis of crime rates on community colleges in the state of California. According to Ravalin (2014), in the state of California, almost 10% of community colleges utilize residence halls on campus. One of the factors that Ravalin (2014) analyzed in her research was the statistical crime differences between institutions with residence halls and those without residence halls.

Through the use of analysis of variance statistical methods, Ravalin (2014) concluded that there was no statistical difference between the rate of personal crimes for institutions with residence halls and those without.

Although the literature has consistently proven that the presence of on campus housing has been associated with increases in crime rates for institutions of higher education, no study has focused solely on this topic. Considering that only about one-third of institutions mandated to comply with the Clery Act actually have on campus housing, and these institutions have repeatedly shown to experience greater crime rates. This area is a fertile topic in need of a great deal of additional research.

Campus Sexual Assault Literature

The analysis of sexual assault against college students has long been examined through a plethora of research studies. Research has repeatedly shown that this is in fact a prevalent crime that is experienced by female college students (Abbey, Zawacki, Buck, Clinton, & McAuslan, 2001; Cantor, Fisher, Chibnall, Townsend, Lee, Bruce, & Thomas, 2015; Copenhaver & Grauerholz, 1991; Krebs et al., 2007; Krebs et al., 2009a; Mohler-Kuo, M., Dowdall, G., Koss, M., & Wechsler, H., 2004; Mouilso, Fischer, & Calhoun, 2012). In addition to this being a prevalent crime, research has shown that this crime is also vastly under reported (Cantor et al., 2015; Yung, 2015). Issues such as the prevalence of sexual assault crimes being perpetrated against women spurred the Center for Public Integrity to begin an investigative series of this issue in 2009. Due in large part to a series of investigative reports by the center, policymakers responded to the shortcomings identified in the series by creating the Campus Sexual Violence Elimination Act or Campus SaVE Act, which was officially adopted into law under the

Violence Against Women Reauthorization Act of 2013 (VAWA) (Carter, 2017). This SaVE Act was developed with the goal of increasing transparency on the occurrence of sexual assault, domestic violence, dating violence, and stalking. To achieve this, the SaVE Act included provisions for victims' rights, conducting of disciplinary proceedings, implementing education programs, and increasing reporting requirements (Carter, 2017).

In the last 30 years, there have been numerous studies conducted to ascertain the percentage of female college students who have experienced sexual assault. These studies have consistently demonstrated that the victimization rates of female college students are somewhere around 20% to 25% (Abbey et al., 2001; Cantor et al., 2015; Krebs et al., 2007; Krebs et al., 2009a; Mouilso et. al., 2012). To summarize these studies, a table of previous sexual assault research has been provided as Table 6.

Table 6. *Summary of Research Studies of Sexual Assault of College Women.*

Research Study	Percent Experiencing Sexual Assault
Copenhaver and Grauerholz 1991	25% sorority members attempted assault. 17% sorority members completed rape
Abbey et al. 2001	25% of female college students
Mohler-Kuo et al. 2004	5% of female college students during academic year
Krebs et al. 2007	19% of undergraduate female students since enrolling in college.
Krebs et al. 2009	20% female college seniors experienced since beginning college. 28.5% female college seniors prior to college and since college.
Mouilso et al. 2012	19.3% female college students in freshmen year
Cantor et al. 2015	19.8% of senior female college students have experienced sexual assault.

Note: Data presented, adapted from Abbey et al. (2001, p. 43); Cantor et al., (2015, p. xiv); Copenhaver and Grauerholz (1991, p. 39); Krebs et al. (2007, p. 5-1); Krebs et al. (2009, p. 643); Mohler-Kuo et al. (2004, p. 42); Mouilso, Fischer, and Calhoun (2012, p. 78)

Although the research consistently shows that a vast majority of female college students experience sexual assault each year, it should also be remembered that research has repeatedly shown that these crimes are vastly underreported. In fact, Yung (2015) estimated that the actual number of sexual assaults could be up to 44% higher than what is currently reported under the Clery Act. This is supported by the conclusions of Cantor et al. (2015) that stated only about 28% or less of sexual assault incidents are reported to the institutions of higher education. This leads to the conclusion that policymakers are not being informed about the true prevalence of sexual assault on college campuses or as Yung (2015) states “policymakers, school administrators, campus police, municipal

police, and the public are underestimating the actual severity of campus sexual assault" (p. 7).

In addition to general studies about the prevalence of sexual assaults, many other studies have focused on the risk factors associated with membership in social organizations. In analysis of sexual assault risk related to sorority membership, there is contradictory research. Mohler-Kuo et al. (2004) reported that there is an increase in the prevalence of sexual assaults, which corresponds to sorority membership, and Copenhaver and Grauerholz (1991) reported rates of victimization at frequencies greater than previous surveys of all women. Contrasting with these findings, Franklin (2008) published scholarship that found members of a sorority are at no greater risk than nonmembers. Although Franklin (2008) did not find an increase in likelihood of assault associated with sorority membership, she did note that membership in sororities correlated to sexual assault predictors such as alcohol and drug use.

Other studies on prevalence of gender, race, and athletic organization memberships have also been conducted. Hines, Armstrong, Reed, and Cameron (2012) examined gender of victims as one variable in their study and reported that female college students are sexually assaulted at rates greater than their male counterparts. In studies focused upon the prevalence of sexual assault based upon race, Abbey, Ross, McDuffie, and McAuslan (1996) found that female African American students were statistically more likely to have been the victim of a sexual assault than female Caucasians. Limegrover (2011) analyzed the impact of athletics on female student sexual assault rates and noted that involvement in college athletics did not increase or decrease the risk of sexual assault. Still other studies such as Krebs et al. (2009b), reported

important conclusions, which found that female college students who are the victims of sexual assault prior to enrolling at a college have a greater likelihood of experiencing a sexual assault in college.

Another frequently analyzed aspect of sexual assault is the victim's relationship to the perpetrators. The conventional perception of rape and sexual assault portrayed in common culture is that of a stranger attacking women in a dark isolated area. This concept is not supported by the academic literature focused upon female college students. The preponderance of the research indicates that in fact the majority of these assaults are perpetrated by a person known to the female victims (Abbey et al., 1996; Copenhaver & Grauerholz, 1991; Hines et al., 2012; Lawyer, Resnick, Bakanic, Burkett, & Kilpatrick, 2010). The research presented by Abbey et al. (1996) indicates that this percentage of known perpetrators may be as high as 95%. Based upon a review of the research, the myth of an unknown assailant is proven to be a statistically rare event compared to sexual assault by a known individual. As Abbey et al. (1996) states "the prototypic sexual assault took place when participants were 20 years old, by a steady dating partner, in the man's home" (p. 162).

Research has also focused upon the role played by alcohol and drug use in the occurrence of sexual assault involving college students. This research has repeatedly shown that alcohol and drug consumption are a major factor in the occurrence of sexual assaults perpetrated on college students (Abbey et al., 1996; Abbey et al., 2001; Copenhaver & Grauerholz, 1991; Franklin, 2008; Hines et al., 2012; Krebs et al., 2009a; Krebs et al., 2009b; Mohler-Kuo et al. 2004; Montgomery, 2007; Spearman, 2006). With Mohler-Kuo et al. (2004) concluding that nearly three quarters (72%) of all rapes

reported involved alcohol to the point where the victim could not grant consent. Furthermore, studies have demonstrated that the usage of alcohol by either the victim or the perpetrator is a common characteristic of these sexual assaults (Abbey et al., 1996; Abbey et al., 2001; Copenhaver & Grauerholz, 1991; Spearman, 2006). Research has also demonstrated that the practice of binge drinking also increases risk of sexual assault victimization (Montgomery, 2007; Mouilso et al., 2012). One explanation for the phenomenon of alcohol involvement in sexual assault provided by Mouilso et al. (2012) is that the usage of alcohol increases the attacker's perception of an easier target for sexual assault. In summary, the literature continually demonstrates the important role that drug and alcohol usage plays in the occurrence of sexual assaults involving college students. This phenomenon is important in formulating any prevention methods aimed at remedying this epidemic.

Perhaps the most relevant area of sexual assault research related to this study lies in the topic of the location of sexual assaults. Similar to the research that has been performed on general crime statistics, literature was not identified that singularly was undertaken with the intent of identifying the locations of sexual assaults and examining their underlying implications. With this in mind, several pieces of literature did report findings about location of sexual assaults ancillary to their main foci. Copenhaver and Grauerholz (1991) documented that approximately half of all rapes occurred in a fraternity residence. In contrast, Fisher, Cullen, and Turner (2000) reported that only 10.3% of rapes occurred in a Greek Fraternal Organization's House. Mohler-Kuo et al. (2004) reported that students living on campus or in sorority houses were statistically more at risk for experiencing sexual assault than those living off campus. Moreover, the

research published by Fisher et al. (2000) presented that sexual assaults are more prevalent off campus than on campus. They found that around 60% of rapes that were perpetrated on campus happened in the injured party's residence and 31% occurred in living quarters other than the victims on campus, (Fisher et al., 2000).

In recognition of the epidemic proportion of sexual violence against female students, there has been a great deal of research in recent years focused upon methods of attacking this problem. The research on method of prevention is currently being generated at a rate so fast that any review of the current literature will most certainly be outdated as soon, or shortly after this study's completion. With this, as well as the fact that prevention of sexual assault research is only peripherally aligned with the core components of this study, only a brief review of a few significant conclusions has been presented. Several research studies have indicated that the education of male students about the legality of consent when their partners are intoxicated may be the best method of addressing this issue (Gottlieb, 2008; Krebs et al., 2009b). Other studies have suggested the use of web-based training programs targeted at the victims of previous assaults may be the most cost-effective method of preventing future victimization (Gilmore, 2015). The *2013 VAWA amendments* to the Clery Act clearly take a multifaceted approach mandating the offering of training as well as educational activities surrounding the topic. In summary, this area of prevention methods research will undoubtedly be flooded with academic scholarship in the coming years.

Literature on the Crimes of Drug and Alcohol Usage

Drug and alcohol usage by college students has been examined in a great number of research studies in the last forty years (Perkins, Meilman, Leichiter, Cashin, & Presley,

1999). Dowdall and Wechsler (2002) note that there is a complex issue in studying the relationship between alcohol and campus crime. One aspect of studying the subject of college student exposure to crime related to alcohol may be connected to the frequency of alcohol usage. Dowdall (2013) asserts that college students experience more risk because there is "greater use of alcohol and other drugs than among non-college youth in the broader society" (p. 186). This increased rate of usage results in alcohol and drug use being one of the most predominant crimes experienced on the campuses of institutions of higher education (Dowdall, 2013). This conclusion is supported by the research of Robinson and Roh (2013), which also reported that alcohol and drug violations were one of the most frequently encountered crimes.

In addition to drug and alcohol violations themselves, the characteristic of increased alcohol usage by college students as noted by Dowdall (2013) results in greater risk of experiencing other crimes. This phenomenon was demonstrated by Fisher et al. (1998) who found that recreational drug use along with increased amounts of partying were the greatest predictors of college student violent crime victimization. This is especially important when it comes to the crime of sexual assault. As has previously been noted, research studies have overwhelmingly shown that the usage of drug and alcohol by college students plays a major role in the occurrence of sexual assaults (Abbey et al., 1996; Abbey et al., 2001; Copenhaver & Grauerholz, 1991; Franklin, 2008; Hines et al., 2012; Krebs et al., 2009a; Krebs et al., 2009b; Mohler-Kuo et al., 2004; Montgomery, 2007; Spearman, 2006).

One distinguishing detail of college student alcohol usage is the characteristic of binge consumption. Dowdall (2013) notes that when considering binge drinking there is

"one estimate that alcohol is involved in two-thirds of college student suicides, in 90 percent of campus rapes, and 95 percent of violent crime on campus" (p. 187). Montgomery (2007) as well as Mouilso et al. (2012) found that binge drinking also increases the potential for sexual assault. In all cases, research indicates that the practice of binge drinking by college students increases their probability of experiencing crime.

In regard to frequency of alcohol arrests on the campuses of institution of higher education, Hoover (2005) reports that they increased for twelve years straight. In addition, Dowdall (2013) reported that liquor law violations increased from 108,846 in 1999 to 161,974 in 2003. Dowdall (2013) also noted that disciplinary actions rose in the period between 2008 and 2010. In all cases, the research indicates that there has been an uptick in alcohol and drug related crimes on campuses. This increase could be explained by either an increase in enforcement or by a true increase in usage. The research does not indicate, which of these the true case is.

This review of the literature notes that the usage of drugs and alcohol on a college campus creates an atmosphere that increases the potential exposure of students to crime. This risk is increased when students engage in the practice of binge drinking. The frequency of drug and alcohol related crimes have also been increasing. Without a doubt, this area of research will be the focus of many studies in the future, and much effort will be focused upon generating research to address and combat this issue.

Literature Related to Program Evaluation

Program evaluation is widely considered one of the pillars of the field of public administration (Shafritz, Russell, & Borick, 2013). According to Rossi et al. (2004), evaluation research is a "social science activity directed at collecting, analyzing,

interpreting, and communicating information about the workings and effectiveness of social programs" (p. 2). Jones (1975) notes that "evaluation is a management tool for determining the efficacy of official actions of all kinds, presumably so that these actions can be improved" (p. 738). It is with this idea of measuring effectiveness that this research has been conducted. As has been shown in this chapter, there is a need to evaluate aspects of the Clery Act to provide policy makers research, which could potentially be utilized when the Act is amended.

Although utilized throughout history in various manners, program evaluation flourished following the federal policies implemented in the late 1960's (Morehouse, 1972). In agreement with Morehouse (1972), Rossi et al. (2004) confirm that the field of evaluation research became an area of research unto itself in the early portion of the 1970's. From these beginnings, the area of evaluation research has become of such importance that Andersen and Hjortskov (2016) remarked that "we live in what has been called an era of performance management" (p. 647).

An important characteristic of evaluation research that should be recognized is that by its very nature it is controversial. Due to the fact that it tries to quantify the worth of programs, the results of evaluation can be very contentious. Weis (1993) recognized this aspect and noted "evaluation is a rational enterprise that takes place in a political context. Political considerations intrude in three major ways, and the evaluator who fails to recognize their presence is in for a series of shocks and frustrations" (p. 94). Since organizations and individuals have vested interests in policies, evaluations research must be undertaken to provide an objective evaluation of the program, which can be readily defended.

In order to classify different types of evaluation, many attempts have been made to create an appropriate basis for categorization. One of the most prominent classifications was first termed by Scriven (1967). Scriven (1967) asserts that evaluations can be broken into two broad categories based upon the types of feedback provided to the stakeholders. Scriven (1967) termed these two categories formative and summative. Rossi et al. (2004) have defined formative evaluations as "evaluative activities undertaken to furnish information that will guide program improvement" (p. 426). In contrast a summative evaluation is an evaluation that is "undertaken to render a summary judgement on certain critical aspects of the program's performance, for instance to determine if specific goals and objectives were met" (Rossi et al., 2004, p. 435). Of these two typologies, Scriven (1967) placed the most importance on the summative evaluations since they would allow decision makers to terminate programs that were not effective. Based upon the Scriven typology, this research evaluation will be a formative evaluation, since it will only look at certain aspects of the Clery Act to provide information that can be used to improve the standard.

Building upon Scriven's concepts, Lincoln and Guba (1985) interjected the concept of merit and worth into the formative and summative dichotomy. In their analysis, Lincoln and Guba (1985) surmise that merit is "a kind of intrinsic, context-free value," and worth is "an extrinsic, context-determined value" (p. 11). Lincoln and Guba (1985) propose that the formative and summative categories proposed by Scriven be cross pollinated with their own concepts of merit and worth to create the four categories of: 1) formative merit; 2) summative merit; 3) formative worth; 4) summative worth. Utilizing the Lincoln and Guba (1985) definitions, this evaluation has been performed

utilizing a summative merit. Lincoln and Guba (1985) define a summative merit evaluation as an evaluation "performed in order to certify or warrant its merit against some set of standards, after the evaluand has been developed into its putatively final form" (p. 12). This evaluation has tried to assess the merit of inclusion of campuses without on campus housing into the same regulatory requirements as those institutions with on campus housing.

In addition to Lincoln and Guba, Chen (1996) also expanded upon Scriven's formative and summative dichotomy. Chen (1996) states that evaluations must be viewed with two different dimensions, which are "program stages and evaluation functions" (p. 9). The program stages are divided by Chen (1996) into two sub categories, which are the process and outcome, and the evaluation dimension is broken into the sub functions of improvement and assessment. Chen (1996) combines these two dimensions and their components to identify four evaluation typologies. These typologies are constructive process evaluations, conclusive process evaluations, constructive outcome evaluations, and conclusive outcome evaluations (Chen, 2015). According to Chen (2015), a "constructive process evaluation provides information about the relative strengths/weaknesses of the program's structure or implementation processes, with the purpose of program improvement" (p. 10). In contrast, a conclusive process evaluation is one that assesses the qualities of how the program was implemented (Chen, 2015). Chen (2015) further expounds that a constructive outcome evaluation examines how different aspects of a program may impact the final results of the program, whereas he posits a conclusive program outcome evaluation will provide a comprehensive assessment of the value of a program. Chen (2015) also notes that there are also hybrid

evaluations, which contain multiple elements of these typologies. Using the Chen typologies, this research best fitted the constructive process evaluation because it has provided information about the strengths and weaknesses of the Clery Act with the intent of helping to improve the Act.

A critical concept identified throughout the field of evaluation is that of stakeholders (Rossi et al., 2004; Scriven, 1967; Vedung, 2017). Rossi et al. (2004) define stakeholders as "individuals, groups, or organizations having a significant interest in how well a program functions, for instance, those with decision-making authority over the program, funders, and sponsors, administrators and personnel, and clients or intended beneficiaries" (p. 435). These stakeholders include either the people or groups that will be using the evaluation and that will be affected by the outcomes of the evaluation. Researchers have continually identified that one of the most important stakeholders is the evaluation sponsor or organizer (Rossi et al., 2004; Vedung, 2017). Vedung (2017) places such value on the organizer that he has created a nomenclature of evaluation models based upon the organizer. In the Vedung (2017) nomenclature, models are broken into the three subcategories of: 1) effectiveness models; 2) economic models; 3) professional models. Both the effectiveness and economic models judge the results of the program, but the economic model also incorporates the cost of the intervention into its assessment (Vedung, 2017).

The largest group of evaluation models noted in the Vedung nomenclature are the effectiveness models. These effectiveness models are broken into the five subcategories of: 1) goal model; 2) results model; 3) system component model; 4) client concerns model; 5) stakeholder concern model (Vedung, 2017). The model most applicable to this

research is that of the stakeholder concern model. Vedung (2017) states that "the organizing principle of the stakeholder model is the concerns and issues of the people who have an interest in or are affected by the intervention" (p. 69). This research looks at the two stakeholders of: 1) institutions with on campus housing; 2) institutions without on campus housing.

The lack of research on the Clery Act noted by Gregory and Janosik (2013) highlights the need for focused evaluation research to be performed on this policy. This research has attempted to use evaluation research principles to observe and quantify the differences or lack thereof between crime rates reported for institutions with on campus housing and those without. The findings have provided evaluation research, which could be used by policy makers.

Gaps in the Academic Literature

According to Gregory and Janosik (2013), "prior to the first decade of the twenty-first century, there was little formal study regarding the legislation's impact" (p. 9). Most of the research has focused on the effectiveness of the Act in informing constituents about crime, and its impact on college staff and practices. The research has predominantly been the analysis of the same topic utilizing the same survey tools to yield similar answers. Very few studies have focused upon the specific parameters that can function in improving the policy. For example, this literature review found five studies focused on student lack of knowledge of the Clery Act with predominantly the same findings, but this review did not find any literature related to pilot projects to improve student awareness of the Act and their successes or failures. In simplest terms, the literature has been very successful in identifying the overall failures of the Act, but it has

not focused upon the means to improve the Act by providing policymakers with research upon which to base their policies.

Literature related to the topic of this research, in general, focused upon the number of crimes occurring based upon students living on campus and the location of those crimes on college campuses. Predominantly, researchers found that the number of students living on campus increases the level of crime reported by institutions (Barnes, 2009; Lewis et al., 1997). Research also indicated that on campus living accommodations are typically a trouble spot for criminal activity (McGrath et al., 2014; Nobles et al., 2012; Robinson & Roh, 2013).

Although on campus housing has been repeatedly identified as an issue, there was very little literature focused upon hypothesis testing of the prevalence of crime associated with on campus housing. The most significant pieces of literature related to this research were published by Ravalin (2014) and Reed (2015). Although the focus of both studies was not centered on the topic conducted by this research, they produced ancillary findings that are important to this study. Ravalin (2014) conducted an analysis of community colleges in the state of California, and she found that there were no statistical property crime differences between the institutions with and without on campus housing (p. 101). The study conducted by Reed (2015) focused upon the impact of the Clery Act on the crime rate. To accomplish this analysis, she divided the crime data into two periods, one before Clery, and one after Clery. She concluded that statistically the impacted difference of the Clery Act was the same for institutions with on campus housing and those without (Reed, 2015). While these pieces of literature might indicate that there may not be a statistical difference between institutions with and without on

campus housing, it should be noted that the Reed (2015) study analyzed the impact of changes to the Clery Act on crime statistics being reported. Additionally, the Ravalin (2014) study only analyzed the differences of community colleges in one state, and that the proportion of institutions with and without residence halls was about one-tenth of institutions that had residence halls. With this in mind, a nationwide study of this phenomenon was in great need.

Summary of Literature Review

Even though the Clery Act has been in existence over a quarter of a century, very little study of the Act was published until the early 2000s (Gregory & Janosik, 2013). Much of the academic publications have focused upon the effectiveness of the Act in communicating with stakeholders about the Act and their influence upon the behaviors of those stakeholders. Overwhelmingly, the research has consistently documented the shortcomings of the Act (Aliabadi, 2007; Briggs, 2014; Bush, 2011; Janosik, 2001; Janosik, 2004; Janosik & Gehring, 2003; Poole, 2014).

Another major focus that was commonly found in the research was the analysis of sexual assault against college students. This area has received a great deal of media attention in recent years, which has resulted in new legislation and new enforcement programs initiated by the Department of Education. It is expected that literature on this topic will continue to be published at accelerated rates in the coming years.

The general analysis of crime statistics occurring on the campuses of institutions of higher education were also a major source of literature commonly found. Routinely, the research has reported that the majority of college student victimization occurs off campus (Baum & Klaus, 2005; Hart, 2013; Sellers & Bromley, 1996; Sigler & Koehler,

1993). The research also indicates the most prevalent crimes are property crimes (Bromley, 1999; Fazari, 2003; Lewis et al., 1997; Meisner, 2005; Robinson & Roh, 2013), and the most common violent crimes are simple or aggravated assault (Baum & Klaus, 2005; Hart, 2013). Disturbingly, another common theme of the crime statistical analysis literature is that the rate of crime experienced by college students is grossly under-reported (Brinkley, 2005; Fisher et al., 2002; Guffey, 2013; Hart, 2013; Hart & Colavito, 2011; Robinson & Roh, 2013).

In an area of crime statistics directly related to this research, studies have consistently demonstrated that crime on campus occurs where students live and congregate (McGrath et al. 2014; Nobles et al., 2012; Robinson & Roh, 2013). The number of students living on campus results in an increase in the crime rates experienced by those campuses (Barnes, 2009; Lewis et al., 1997). Even though these results are consistently reported, only one study (Ravalin, 2014) was found, which has analyzed the differences in crime rates between institutions with and without on campus living. This piece of literature focused solely on one group of institutions in only one state, and it produced results that were ancillary to the central thesis of the study. The findings of this study were that there was no statistical difference between institutions with and without on campus housing (Ravalin, 2014, p. 101). These findings seem completely counterintuitive to the rest of the findings presented consistently throughout the academic body of knowledge on this topic. With this in mind, research of a cross sectional nature of all types of institutions covered under the Clery Act from a nationwide study were in need to determine if there was a true difference between institutions with and without on campus living.

Chapter III

METHODOLOGY

Overview

The analysis of the statistical differences between institutions with on campus housing and those without is a multifaceted question. With this in mind, this research has only focused on analyzing for a statistical difference in the reported crime between these two groups of institutions. To accomplish this analysis, quantitative methods have been utilized to examine the data reported by institutions of higher education to the Department of Education. This cross-sectional study has analyzed the mean crime rates reported by institutions nationwide in an attempt to determine if there was indeed a statistical difference in crime rates experienced by institutions with and without on campus housing.

Research Questions and Hypotheses

This research is undertaken with the intent of examining the impact of on campus housing on the crime rates reported by institutions of higher education. Keeping in mind that approximately only about one-third of institutions covered by the Clery Act have on campus housing, the information ascertained from this project could be very valuable for policymakers in the future when formulating plans to amend the Clery Act. With this in mind, the following six research questions have been utilized.

1) Is there a statistically significant difference in the overall Clery Crime Rates for institutions with on campus housing and those without on campus housing?
2) For each Clery Crime category, is there a statistical difference between crime rates experienced by institutions with on campus housing and those without on campus housing?
3) For Clery Crime, is there a predictive relationship between the number of crimes occurring in on campus housing as compared to the number of crimes for the rest of the campus for institutions with on campus housing?
4) For *Violence Against Women Act* crimes, is there a statistically significant difference in overall Clery Crime Rates for institutions with on campus housing and those without on campus housing?
5) For alcohol and drug related arrests and disciplinary referrals, is there a statistically significant difference in overall Clery Crime Rates for institutions with on campus housing and those without on campus housing?
6) Is there a statistical difference in the reported hate crime rate for institutions with on campus housing and those without on campus housing?

In order to examine these research questions, this researcher has developed the following hypotheses.

Research Hypothesis 1 – Institutions with on campus housing will report greater crime rates than those without on campus housing for total Clery criminal offenses.

Null Hypothesis 1 – There will be no statistical difference between the crime rates of institutions with and without on campus housing for total Clery Criminal offenses.

Research Hypothesis 2– Institutions with on campus housing will report greater crime rates than those without on campus housing for:

- Criminal homicide
- Sexual assault
- Robbery
- Aggravated assault
- Burglary
- Motor vehicle theft
- Arson

Null Hypothesis 2 – There will be no statistical difference between the crime rates of institutions with and without on campus housing for each category of Clery Criminal offenses.

Research Hypothesis 3 – There is a statistically significant correlation between the number of crimes occurring in on campus residences and the number of crimes occurring on the campuses of institutions as a whole.

Null Hypothesis 3 – There is no statistically significant correlation between the number of crimes occurring in on campus residences and the number of crimes occurring on the campuses as a whole.

Research Hypothesis 4 – Institutions with on campus housing will report greater crime rates than those without on campus housing for total VAWA offenses.

Null Hypothesis 4 – There will be no statistical difference between the crime rates of institutions with and without on campus housing for total VAWA offenses.

Research Hypothesis 5 – Institutions with on campus housing will report greater rates than those without on campus housing for total alcohol and drug crimes and disciplinary referrals.

Null Hypothesis 5 – There will be no statistical difference between the rates of institutions with and without on campus housing for total alcohol and drug crimes and disciplinary referrals.

Research Hypothesis 6 – Institutions with on campus housing will report greater crime rates than those without on campus housing for total Hate Crimes.

Null Hypothesis 6 – There will be no statistical difference between the crime rates of institutions with and without on campus housing for total Hate Crimes.

This research has utilized the statistical analysis tools described in this chapter to evaluate each of these hypotheses.

Research Scope

In her research, Ravalin (2014) found that there was no statistical difference between the crime rates reported by community colleges with and without on campus housing in the State of California for the calendar year 2011. Although this study included a large sample size (n = 113), it should be noted that this sample was only the experience in one geographic area of the country in one particular year. Another significant factor in the study was that it only focused upon community colleges. This study has differentiated itself from the study by Ravalin (2014) by expanding its scope to include all levels of institution covered by the Clery Act. The research design has also

included institutions throughout the United States so that the issue of geographic area can be accounted for in the findings. Finally, this study has utilized data collected over the ten reporting years (2006 to 2015) to establish mean rates for institutions rather than utilizing data from a single year.

Another parameter that has been applied to the scope of this research is that it has focused only on the portion defined as the on campus Clery Geography. This research has not focused on the public property or non campus portion of Clery Geography. For the purposes of this study, the research was aimed at characterizing the crime experienced by students strictly on their campus.

A final condition applied to the scope of this research project has been that it only included the statistics described for the main campus of each institution. As has previously been noted, institutions in many cases, must report Clery data for multiple campuses. This criterion has been applied to this research because the main campus represents the majority of students enrolled at an institution.

Data Sources

Secondary data was utilized to conduct this analysis. This data was gathered from Campus Safety and Security Data Analysis Cutting Tool (https://ope.ed.gov/campussafety/#/). This tool is operated by the Department of Education's Office of Postsecondary Education (U. S. Department of Education, n. d.). The information in this database has been reported to the Department of Education by the individual institutions of higher education as is mandated under the Clery Act. The data in this system goes back to the calendar year 2001. This data is open to public usage and

is readily available because it is intended to be used by students and their families in making decisions about what institution they choose to attend.

It should be noted that the data to be utilized for this study is self-reported by the individual institutions of higher education to the Department of Education under the Clery Act. Remler and Ryzin (2015) note that self-reported data may sometimes be questioned because "what people do is not the same as what they say they do" (p. 108). The same has been argued about institutions, especially when the results affect the brand reputation of an organization. A recent anecdotal example of this can be found in the case of Pennsylvania State University involving Jerry Sandusky and child molestation. Yung (2015) makes this argument in his study of institutions reporting of sexual assaults. Recognizing this potential for under reporting, the Department of Education provides negative consequences for under reporting. The Department has the ability to assess civil fines as much as $54,789 per deficiency (U.S. Department of Education, 2017). This resulted in Pennsylvania State University receiving a record Clery Act fine of 2.4 million dollars related to the Sandusky case (New, 2016). Due to this enforcement mechanism, institutions have ample motivation to ensure that the data that they report is accurate.

Another issue with the crime statistics to be utilized in this study is that they only include crimes reported to the institution. If students do not report crimes to campus security authorities, then the crime statistics do not accurately reflect the actual crime rates for institutions. As has been noted in the literature review, underreporting of crimes by college students is a common phenomenon. Although this underreporting is important for knowing the crime rates, if the under reporting is consistent as has been suggested by the research (Brinkley, 2005; Fisher et al., 2002; Hart, 2013; Hart &

Colavito, 2011; Robinson & Roh, 2013), then it is not expected that underreporting has affected the outcome of this study.

Variables

In conducting this research, a variety of variables were collected. Each variable selected was aimed at providing more robust information for policymakers and improving generalizability. The following subsection describes these variables that were collected to perform the analyses of the hypotheses.

Total Enrollment

The total enrollment for the institutions studied in this analysis has been collected from the Campus Safety and Security Data Analysis Cutting Tool. These values are not reported as part of the Clery Act, but instead they are migrated into the Campus Safety and Security Data Analysis Cutting Tool from data reported by each institution through the Integrated Postsecondary Education Data System (IPEDS), which is maintained by the Department of Education. For each institution, only the fall enrollment has been reported in the Campus Safety and Security Data Analysis Cutting Tool. Thus, the Fall enrollment was utilized to characterize the size of the institution. The total enrollment number was also required to calculate the crime rates for each institution.

Criminal Offenses

Although the concept of criminal offenses includes a wide variety of crimes, the Clery Act only identifies seven categories of offenses to be considered reportable under the Act. These offenses are: 1) criminal homicide; 2) sexual assault; 3) robbery; 4) aggravated assault; 5) burglary; 6) motor vehicle theft; 7) arson. Under the Clery Act, these offenses are characterized based on the Federal Bureau of Investigation's (FBI)

Uniform Crime Reporting (UCR) program (U.S. Department of Education, 2016). It should be noted that the Clery Act mandates that cases with multiple offenses are only classified using the most serious offense, which is otherwise known as the Hierarchy Rule (U.S. Department of Education, 2016). The definition and a brief discussion of each type of offense has been provide in the succeeding sections.

Criminal Homicide. Criminal homicide is further broken down into the two subgroups of: 1) murder and non-negligent manslaughter; 2) manslaughter by negligence. According to *The Handbook for Campus Safety and Security Reporting,* "murder and non-negligent manslaughter is defined as the willful (non-negligent) killing of one human being by another" (U. S. Department of Education, 2016). In contrast, manslaughter by negligence is defined by the U.S. Department of Education (2016) as "the killing of another person through gross negligence" (p. 3-4). For the purposes of this study, criminal homicide was the statistic analyzed. This was accomplished by combining both murder and non-negligent manslaughter with manslaughter by negligence to report one rate for criminal homicide. This was performed instead of analyzing each subcategory independently.

Sexual Assault. Sexual assault is defined by The Handbook for Campus Safety and Security Reporting as "any sexual act directed against another person, without consent of the victim, including instances where the victim is incapable of giving consent" (U. S. Department of Education, 2016, p. 3-6). Similar to criminal homicide, sexual assault has been broken into subcategories. These subcategories are: 1) rape; 2) fondling; 3) incest; 4) statutory rape. Rape is defined under the Department of Education (2016) as:

> The penetration, no matter how slight, of the vagina or anus, with any body part or object, or oral penetration by a sex organ of another person, without the consent of the victim. This offense includes the rape of both males and females. (p. 3-6)

According to the Department of Education (2016), fondling is defined as:

> The touching of the private body parts of another person for the purpose of sexual gratification, without the consent of the victim, including instances where the victim is incapable of giving consent because of his/her age or because of his/her temporary or permanent mental incapacity. (p. 3-6)

Incest is defined by the Department of Education (2016) as "sexual intercourse between persons who are related to each other within the degrees wherein marriage is prohibited by law" (p. 3-6). Finally, statutory rape is defined by the Department of Education (2016) as "sexual intercourse with a person who is under the statutory age of consent" (p. 3-7).

For the purposes of this study, all classifications of sexual assault were aggregated into one statistic for sexual assault.

Robbery. The crime of robbery is also a Clery Crime under the Act. The Department of Education (2016) defines robbery as:

> The taking or attempting to take anything of value from the care, custody, or control of a person or persons by force or threat of force or violence and/or by putting the victim in fear. (p. 3-9)

Aggravated Assault. The crime of aggravated assault is also compiled in the Clery Crimes for assault. It is defined by the Department of Education as:

> An unlawful attack by one person upon another for the purpose of inflicting severe or aggravated bodily injury. This type of assault usually is accompanied by the use of a weapon or by means likely to produce death or great bodily harm. (p. 3-10)

Burglary. The crime of burglary is the first of three property crime statistics included for collection under the Clery Act. The Department of Education (2016) defines burglary as "the unlawful entry of a structure to commit a felony or a theft" (p. 3-13). For the purposes of this study, burglary rates were evaluated as reported by the institutions.

Motor Vehicle Theft. The crime of motor vehicle theft is the second property crime statistic collected under the Clery Act. Under the Act, it is defined as "the theft or attempted theft of a motor vehicle" (U. S. Department of Education, 2016, p. 3-19).

Arson. Arson is the final property crime recorded under the Clery Act. The Act defines it as "any willful or malicious burning or attempt to burn, with or without intent to defraud, a dwelling house, public building, motor vehicle or aircraft, personal property of another, etc." (U. S. Department of Education, 2016, p. 3-21).

Hate Crimes

The second broad category of crime statistics that must be reported under the Clery Act are those that would be considered a hate crime. The collection of these statistics date back to original objective of the Act, which included addressing racial violence. Under the Clery Act, hate crimes are defined as "a criminal offense that manifests evidence that the victim was intentionally selected because of the perpetrator's bias against the victim" (ED, 2016, p. 3-25). These crimes include all of the previously listed Clery criminal offenses as well as crimes of: 1) larceny-theft; 2) simple assault;

3) intimidation; 4) destruction, damage, or vandalism of property. The Clery Act classifies a crime as a hate crime if is motivated by any of eight defined categories of bias. These categories are: 1) race; 2) religion; 3) sexual orientation; 4) gender; 5) gender identity; 6) ethnicity; 7) national origin; 8) disability. It should be noted that for hate crimes, the Clery Act does not require the use of the Hierarchy Rule (U. S. Department of Education, 2016). All crimes arising out of any one incident was counted in the hate crime statistics. This study has aggregated all hate crimes reported by each institution under the Clery Act, and it has treated the hate crime rate as one statistic regardless of reason of bias or type of offense.

VAWA Offenses

The third category of offenses that were reported and were evaluated in this study are those defined under the *Violence Against Women Act (VAWA)* of 2013. With these amendments, the Clery Act mandated that institutions begin collecting and reporting statistics on the crimes of: 1) dating violence; 2) domestic violence; 3) stalking. These crimes were added to the Clery Act and have only been reported to the Department of Education since calendar year 2014. With this in mind, it should be noted that the analysis for VAWA offenses only included the statistics reported for calendar years 2014 and 2015. This study aggregated the crimes of dating violence, domestic violence, and stalking into one category of crime that were reported as VAWA offenses.

Alcohol and Drug Arrests or Disciplinary Referrals

The final category of offenses tracked under the Clery Act are those of arrests and disciplinary referrals for violations of weapons, drug abuse, and liquor laws. Recognizing the impact of alcohol and drugs on other crimes experienced by college

students, this research focused upon only drug and alcohol arrests and disciplinary actions. Although important, weapons violations were not examined in this research because there is a wide variety of weapons laws across the country. In many cases, what is a weapons law violation in the State of New York may not be a weapons law violation in the State of Texas. This varying nature of weapons laws and lack of specificity in the Clery statute may lead to an over estimation in some locations and an under estimation in other locations. This would result in unreliable data, which could not truly be contrasted.

To examine the number of drug and alcohol related arrests and disciplinary referrals, the number of arrests for alcohol and drug violations were totaled. Then, the number of disciplinary referrals for alcohol and drug violations were summed. These two numbers were then combined to produce one statistic that was referred to as drug and alcohol arrests or referrals.

Crime Rate Calculation

The calculation and usage of a crime rate was of utmost importance in this study. This was due to institutions in the United States consisting of different student enrollments. One cannot contrast the volume of crimes from a university with 50,000 students with a technical school with 500 students and expect a direct comparison of safety at each institution. Through the usage of crime rates, this disparity in enrollment can be overcome to allow institutions to be compared by the number of crimes occurring per enrolled number of students. The United States Federal Bureau of Investigation utilizes a calculation method to allow for comparison of cities in the United States. According to the United States Federal Bureau of Investigation (n.d.), crime rates are defined "as the number of offenses per 100,000 population" (p. 1). While very applicable

for cities, which in many cases exceed 100,000 people, this calculation could yield results that may not be as translatable when considering that the largest universities in the United States only approach about 60,000 students. Instead of using the crime rate formula utilized by the FBI, the United States Department of Education recommends calculating crimes per 1000 students. With this in mind, crime rates were calculated using the formula included as Equation 1.

$$crime\ rate = \frac{\#\ Crimes\ Reported}{Total\ Enrollment} \times 1000 \quad (1)$$

Sampling Methods

For this analysis, the proper sampling protocols were critical to ensuring its success in answering the research questions. When determining the number of samples, this study has ensured the appropriate level of significance as well as the appropriate level of power. This section of the chapter has been dedicated to detailing the sampling program design that was applied to this research study.

Sample Size

To ensure the validity of this study, an appropriate sample size was selected in a manner that ensured statistically significant results as well as ensuring that the study yielded enough power. Pagano and Gauvreau (2000, p. 248) provided a method of determining an appropriate sample size, which is presented as Equation 2.

$$n = \left[\frac{(z_{\propto} + z_{\beta})(\sigma)}{(\mu_1 - \mu_0)}\right]^2 \quad (2)$$

$$n = sample\ size$$
$$z_{\alpha} = the\ value\ that\ cuts\ of\ an\ area\ of\ \alpha\ in\ the\ upper\ tail\ of\ the\ standard\ normal\ distribution$$
$$z_{\beta} = the\ generic\ value\ of\ z\ that\ corresponds\ to\ a\ probability\ of\ \beta$$
$$\mu_1 = the\ mean\ of\ group\ 1$$
$$\mu_0 = the\ mean\ of\ group\ 2$$
$$\sigma = standard\ deviation$$

To utilize this method, data generated by a previous pilot study conducted by this researcher has been utilized. This research was focused upon the differences between Clery Criminal Offense crime rates reported by 4-year public universities and 2-year public universities in the state of Tennessee (T. S. Hallmark, personal communication November 21, 2016). The significance being that in the state of Tennessee all public 4-year institutions have on campus housing and no 2-year institutions have on campus housing. The mean (μ_1 = 2.79 crimes/1000 students) was the reported mean crime rate reported by the 4-year institutions in this study (T. S. Hallmark, personal communication November 21, 2016). The mean (μ_0 = 0.317 crimes/1000 students) was reported for the 2-year institutions (T. S. Hallmark, personal communication November 21, 2016). Finally, a standard deviation was calculated for the Clery criminal offense crime rates of all institutions of higher education reporting data in calendar year 2015. The standard deviation of the crime rates for these institutions was calculated (σ = 13.02). For the purposes of this study, a one-sided z_{α} value was selected since all research indicates that the residences with on campus housing report greater crime rates than those without on campus housing. The α-error level was selected at 5% for the purposes of this study yielding a z_{α} value of 1.65. In regard to power, this study has selected a power of 95%, which yields a z_{β} value of 1.6449. Utilizing these values in Equation 2, a total sample

size of 301 samples was calculated. Based upon this, a minimum of 301 institutions with on campus housing were included, and a minimum of 301 institutions without on campus housing were included in this study.

Sample Selection

Another important criterion for this study design is that it included samples from each state of the United States to ensure that it is representative of the nationwide experience of crime rates. In theory, a random sampling method could be utilized, but it could result in some states not having representation in this study. With this in mind, a stratified sampling method was utilized. Remler and Ryzin (2015) note that with a stratified sampling plan, "a random sample is drawn separately from each group" (p. 168). This method ensured representation for each state in this study.

The first step in employing a stratified sampling protocol is creating the strata to organize the groups of institutions. The strata for this study was the states of the United States. Each of the fifty states represented their own strata. In some cases, institutions may have extended campuses in a different state. These branch campuses were not included in the study per the scope of the research.

Following the creation and grouping of institutions based upon strata, the next step of this research design was to determine how to ensure the appropriate number of samples were selected from each stratum. To ensure the representativeness of this sampling strategy, an appropriate number was selected from each stratum to ensure adequate representation by that strata in relation to the overall population as a whole. It was decided that for the purposes of this study, this number of samples would be selected based on the percentage of students enrolled in higher education in each state. The

enrollment data was collected from the National Center for Education Statistics, and the most recent data reported (Fall 2014) was utilized in calculating the percentage of students from the United States represented by the enrollment in each state. A summary of the enrollment numbers, the percentage of students, and the number of samples to be collected from each stratum has been presented as Table 7. If the results for number of samples required from each state were not a whole number, the sample number required from that strata were always rounded up. This resulted in a sample size greater than the minimum 301, which was determined to be the number required by the sample size calculation. To ensure proper strata proportions, the sample size of 328 was utilized instead of the minimum calculation of 301. This means that 328 samples were collected for institutions with on campus housing, and 328 samples were collected for institutions without on campus housing.

Table 7. *Summary of Strata and Number of Samples Required from Each Strata.*

Strata	Fall Enrollment 2014	Percentage of Total Enrolled Students in the United States	# of Samples from Strata
Alabama	305,028	1.5%	5
Alaska	34,331	0.2%	1
Arizona	674,746	3.3%	11
Arkansas	169,571	0.8%	3
California	2,696,415	13.4%	41
Colorado	353,827	1.8%	6
Connecticut	201,928	1.0%	4
Delaware	60,368	0.3%	1
District of Columbia	90,053	0.4%	2
Florida	1,111,018	5.5%	17
Georgia	531,004	2.6%	8
Hawaii	73,505	0.4%	2
Idaho	118,953	0.6%	2
Illinois	824,980	4.1%	13
Indiana	436,327	2.2%	7

Table 7. *Summary of Strata and Number of Samples Required from Each Strata (Continued).*

Strata	Fall Enrollment 2014	Percentage of Total Enrolled Students in the United States	# of Samples from Strata
Iowa	282,482	1.4%	5
Kansas	226,401	1.1%	4
Kentucky	264,197	1.3%	4
Louisiana	245,938	1.2%	4
Maine	72,246	0.4%	2
Maryland	365,597	1.8%	6
Massachusetts	510,912	2.5%	8
Michigan	619,438	3.1%	10
Minnesota	433,854	2.1%	7
Mississippi	170,728	0.8%	3
Missouri	419,900	2.1%	7
Montana	51,942	0.3%	1
Nebraska	135,825	0.7%	3
Nevada	119,205	0.6%	2
New Hampshire	106,984	0.5%	2
New Jersey	436,208	2.2%	7
New Mexico	146,246	0.7%	3
New York	1,299,055	6.4%	20
North Carolina	570,045	2.8%	9
North Dakota	54,048	0.3%	1
Ohio	680,238	3.4%	11
Oklahoma	215,349	1.1%	4
Oregon	245,547	1.2%	4
Pennsylvania	750,651	3.7%	12
Rhode Island	83,499	0.4%	2
South Carolina	254,629	1.3%	4
South Dakota	53,963	0.3%	1
Tennessee	326,575	1.6%	5
Texas	1,555,462	7.7%	24
Utah	274,926	1.4%	5
Vermont	43,983	0.2%	1
Virginia	577,908	2.9%	9
Washington	365,193	1.8%	6
West Virginia	157,052	0.8%	3
Wisconsin	358,894	1.8%	6
Wyoming	35,461	0.2%	1
Total =	20,192,635	100%	328

Note: Data presented for student enrollment by state fall 2014 was adapted from National Center for Education Statistics (n.d.).

The institutions selected to represent each stratum were chosen utilizing a random sampling methodology. The list of institutions for each stratum were listed alphabetically on a Microsoft® Excel® spreadsheet, and a random number generator function was utilized to place a number next to each institution. The random numbers were ranked, and the institutions that corresponded to the top ranked random numbers were selected for inclusion in this study.

Important in this sample selection criteria were that all institutions reporting data in calendar year 2015 were included in this random sampling pool. Although institutions may only be reporting for one year, they were still included in this sampling pool since exclusion may under-represent the true makeup of institutions in the United States. Additionally, it should be noted that institutions reporting on campus housing in the United States in calendar year 2015 were included in the on campus housing sampling group, and institutions without on campus housing in calendar year 2015 were included in the non campus housing group. This is significant because in some extreme cases, institutions without on campus housing may have offered on campus housing during portions of the ten-year period examined.

Analytic Procedures

Descriptive Analysis

The study has utilized descriptive statistical techniques to characterize the sample populations. Measures of mean and median crime rates were calculated for each identified stratum as well as the groups of institutions representing colleges with on campus residence halls and those without on campus residence halls. In addition, percentages of crimes associated with student housing as related to the entire institution

were presented. An analysis of the institution enrollment was reported, to examine if the enrollment distribution in this study is similar to the enrollment distribution reported by the Department of Education for the United States.

Inferential Analysis

This study employed several statistical analysis methods. Hypothesis testing for Research Hypotheses 1, 2, 4, 5, and 6 was conducted utilizing z-Tests and Analysis of Variance (ANOVA). Research Hypothesis 3 was evaluated utilizing simple regression analysis. A description of each of these techniques that were utilized is included in the following subsections.

z-Tests. According to Bluman (2008), a z-Test allows researchers to determine the statistical significance between the means of two sample groups. This test should be utilized when $n \geq 30$ and the population standard deviation (σ) is known. When a sample size is greater than or equal to 30, the sample standard deviation(s) may be utilized (Bluman, 2008). Since the sample size is 328, the z-Test was utilized to test the hypothesis for Research Hypothesis 1, 2, 4, 5, and 6 instead of a t-test. A one-tailed test was used in these tests since each Research Hypothesis states that the crime rates investigated by each hypothesis were greater for the institutions with on campus housing than those without on campus housing. For this analysis, the level of significance utilized was 5% chance of rejecting an accurate null hypothesis or $\alpha = 0.05$. These statistical analyses were conducted utilizing Microsoft® Excel®. According to Pagano and Gauvreau (2000), "the distinguishing characteristic of paired samples is that for each observation in the first group, there is a corresponding observation in the second group" (p. 260). In this study, this was not the case, so a paired test was not conducted for this

analysis.

Analysis of Variance (ANOVA). According to Pyrczak (2014), ANOVA procedures can be used to test the variances between two or more means (p. 127). Similar to the z-Test, ANOVA allowed for the examination of the statistical significance in the differences of the means between the institutions with on campus housing and those without. Since the data was only classified in one way and not two, a one-way ANOVA was utilized for this analysis. This method was employed in testing Research Hypotheses 1, 2, 4, 5, and 6. All ANOVA tests were performed using IBM® SPSS® GradPack 25 for Windows®. The output of these tests produced an F-test with an F-value that was reported as well as a probability level (p- value). For a test to be significant in this study, a p-value must be less than 0.05. This meant that the study would be 95% confident that there was not a rejection of the null hypothesis when it was actually true.

Simple Regression. Unlike the other Research Hypotheses proffered in this analysis, Research Hypothesis 3 focused upon a correlation between the number of crimes occurring in the student housing of an institution and the crimes occurring on the grounds of that same institution. Pyrczak (2014) notes that "correlation refers to the extent to which two variables are related across a group of participants" (p. 57). This Research Hypothesis 3 of correlation utilized two variables, which are the number of crimes in campus residences and the number of crimes for the rest of campus. Since only two variables were utilized, simple regression is the statistical method that was implemented for this analysis. It is important to note that simple regression cannot be used as evidence of causation but can only be used for prediction (Remler & Ryzin,

2015). Noting that the hypothesis infers that the number of crimes occurring in campus residences have an impact on the number of crimes occurring on the rest of the campus, the independent variable in this analysis was the number of crimes reported in the on campus housing. Conversely, the number of crimes occurring on the rest of the campus were treated as the dependent variable. For this simple regression, a Pearson product-moment correlation coefficient or Pearson-r value was calculated. Additionally, a coefficient of determination was also calculated to analyze this relationship as well. To aid in examining the correlation between these two groups of data, a scattergram was produced to graphically illustrate this relationship.

Study Limitations

Several limitations can be found in this study. As was noted in the data sources section, the data utilized was self-reported data. As Remler and Ryzin (2015) note, this data can be manipulated by the institution reporting the data. As has been presented anecdotally through the Pennsylvania State University and Jerry Sandusky case, many times institutions have cause to creatively avoid reporting crime. Research by Yung (2015) indicates that this is especially the case when it comes to sexual assault crimes. Even recognizing these limitations, institutions have reason to ensure appropriate reporting due to civil penalties that may be levied by the Department of Education. Consequently, this data was the best measure, that was available in regard to prevalence of Clery Act crimes on college campuses.

Another limitation of this study was that the data collected was only the crime that was reported. As research has repeatedly shown, college students are less likely to report crimes than their counterparts in the general public (Brinkley, 2005; Fisher et al., 2002;

Guffey, 2013; Hart, 2013; Hart & Colavito, 2011; Robinson & Roh, 2013). This under-reporting could most certainly affect the quality of the crime reports. Although this is most certainly a limitation, it would be a weakness for any research relying on student reported crime data.

A final limitation identified for this study was that it does not have the ability to answer why a difference existed between the two groups of institutions. This is primarily related to the research design, which cannot provide answers to why the difference existed between the two groups. To analyze these factors, additional data would be required, and further analysis would be warranted.

Institutional Review Board (IRB)

Due to the scope and data sources proposed, this research was exempt by the IRB. This research falls under a Category four exemption, which is defined by the Valdosta State University (2016) IRB as:

> research involving the collection or study of existing data, documents, records, pathological specimens, or diagnostic specimens, if these sources are publicly available or if the information is recorded by the investigator in such a manner that subjects cannot be identified, directly or through identifiers linked to the subjects. p. 3

Since the scope of this research falls within this definition, the researcher submitted an IRB exemption request. A copy of the IRB exemption approval has been included in Appendix A.

Summary

This study has been conducted with a few simple ideas in mind. First, institutions of higher education with on campus housing would experience higher crime rates than those institutions without on campus housing. This researcher has proffered that this would be universal across the different crimes requiring reporting under the Clery Act. The second idea is that institutions with on campus housing would see a correlation between the amount of crime reported in the on campus housing and that crime reported for the rest of the campus. With these research ideas in mind, hypotheses were developed, which were aimed at testing these thoughts.

After developing these ideas, this research then focused on determining the source of the data. Ultimately, the researcher utilized data collected by the Department of Education under the Clery Act for this study. This data was self-reported by each institution to the Department of Education on an annual basis. Furthermore, the data was open to the public for review, which made it easily retrievable from the Department of Education's website Campus Safety and Security Data Analysis Cutting Tool (https://ope.ed.gov/campussafety/#/).

In order to ensure a sample size large enough to guarantee a desired level of significance and power, a method published by Pagano and Gauvreau (2000, p. 248) was utilized. This sample size was selected with a desired significance of 95% and a power of 95% as well. After determination of sample size, a sample selection method was chosen. The researcher performed stratified sampling to ensure representation by each state in the United States. To ensure appropriate representation, the study calculated the desired sample size from each stratum based upon student enrollment percentage in each

state. Finally, in the area of sample selection, this research performed random sampling in each stratum to determine institutions for inclusion.

Following the development of these hypotheses and determination of sample size, statistical methods were identified to test each of these hypotheses. A z-Tests and ANOVA protocols were utilized to test Research Hypotheses 1, 2, 4, 5, and 6. In order to test Research Hypothesis 3, a simple regression method was employed to evaluate the correlation between the number of crimes reported in student housing and the number of crimes reported for the rest of the campus.

This research was designed to provide answers to each of the research questions. The research design was developed to provide a statistical basis for the acceptance or rejection of each of the research hypotheses. As with any research, limitations were identified due to the research design. Even considering these limitations, it was felt that this research utilized the best data available to answer the research questions posed by this study.

Chapter IV

RESULTS

This chapter provides an in-depth discussion of the findings of this research study. The results of this research are intended to provide information, which could be considered in making future policy modifications to the Jeanne Clery Act. The results have been presented in subsections, which focus on the results of the descriptive statistical analysis as well as subsections dedicated to each of the research hypotheses. Finally, a subsection dedicated to summarizing these findings has been given at the end of this chapter.

Characteristics of Institutions Included in This Study

Descriptive statistical analysis methods were utilized in this study to characterize the attributes of the institutions being included in this study. One conclusion drawn from this analysis is that both the mean and median enrollments for the institutions selected were greater for the group of institutions with on campus housing. Another notable finding was that the public institutions in this study reported both median and mean enrollments greater than the private institutions. It was also found that the mean enrollment, median enrollment, the mean crime rate, and median crime rates were greater for non-profit institutions than their for-profit counterparts. A summary of the characteristic results for the study have been included as Table 8. A complete list of institutions selected for inclusion in this study have been provided in Appendix B of this dissertation.

Table 8. *Characteristics of Institutions Sampled in This Study*

		On campus Housing Group		No Housing Group	
Institutional Characteristic	Measure	Mean	Median	Mean	Median
All Institutions	Enrollment	7,413	3,603	4,858	990
All Institutions	Crime Rate	4.3	2.2	3.2	1.1
Private Inst.	Enrollment	3,644	1,755	1064	179
Private Inst.	Crime Rate	5.8	2.8	2.2	0
Public Inst.	Enrollment	12,171	7,679	2,577	211
Public Inst.	Crime Rate	2.4	1.7	1.6	0.2
For Profit Inst.	Enrollment	4,490	1,175	1,222	172
For Profit Inst.	Crime Rate	3.5	2.1	1.5	0
Non-Profit Inst.	Enrollment	7,544	3,691	4,149	848
Non-Profit Inst.	Crime Rate	4.32	2.20	3.1	0.3

The sampling methodology employed in this study was a stratified random sample with the institutions being broken into the strata of the state in which they reside. Then, a random sample was collected from both the group of institutions with on campus housing and the group of institutions without on campus housing. This methodology did not account for other attributes of institutional characteristics such as profit category, public versus private, and the number of years for which an institution awards credentials. To examine the breakdown of the institutions included in this sample set, a comparison between the institutions included in this study and the population reporting data to the Department of Education was performed. This analysis of the sample population revealed that the random sampling methodology provided a sample set with characteristics very similar to the true population. The detailed comparison between the whole population and the sample set has been displayed as Table 9.

Table 9. *Sample Versus Population Reporting to the Department of Education*

			On campus Housing Group		No Housing Group	
Years	Profit Status	Public Private	# Sample	# Population	# Sample	# Population
4-yr	Non	Public	113 (34%)	585 (27%)	133 (3%)	3 (1%)
4-yr	Non	Private	166 (51%)	1214 (56%)	29 (9%)	382 (9%)
4-yr	For	Private	13 (4%)	50 (2%)	29 (9%)	418 (10%)
2-yr or less	Non	Public	32 (10%)	265 (12%)	74 (23%)	983 (23%)
2-yr or less	Non	Private	3 (1%)	33 (2%)	18 (5%)	199 (5%)
2-yr or less	For	Private	1 (0.3%)	27 (1%)	175 (53%)	2207 (51%)

Note: Data presented adapted from U.S. Department of Education (n.d.)

Similar to the institution characteristics, this random sampling methodology did not account for differences in the sizes of institution. To evaluate the makeup of the sample set based on institution enrollment size, an analysis was conducted to compare the sample set characteristics with the population makeup. Institutions were broken into the size categories by the eleven enrollment groups provided by the Department of Education in the Clery Data Cutting Tool. The distribution of the institutions selected for this sample set were then compared to the distribution found in the population. The results indicated that the random sampling provided a sample population that is consistent with the overall population. A summary of this analysis has been presented as Table 10.

Table 10. *Distribution of Institution by Enrollment Size*

	On campus Housing Group		No Housing Group	
Enrollment	# Sample	# Population	# Sample	# Population
30,000 or greater	14 (4%)	71 (3%)	4 (1%)	25 (1%)
20,000 to 29,999	27 (8%)	88 (4%)	2 (1%)	39 (1%)
15,000 to 19,999	8 (2%)	65 (3%)	3 (1%)	52 (1%)
10,000 to 14,999	28 (9%)	118 (5%)	7 (2%)	96 (2%)
5,000 to 9,999	50 (15%)	315 (14%)	13 (4%)	197 (4%)
3,000 to 4,999	50 (15%)	285 (13%)	11 (3%)	155 (3%)
2,000 to 2,999	36 (11%)	298 (14%)	7 (2%)	562 (12%)
1,500 to 1,999	25 (8%)	163 (7%)	4 (1%)	100 (2%)
1,000 to 1,499	21 (6%)	226 (10%)	17 (5%)	164 (3%)
500 to 999	32 (10%)	201 (9%)	34 (10%)	367 (8%)
<500	37 (11%)	344 (16%)	226 (69%)	2,983 (62.9%)

Note: Data presented adapted from ED (n.d.)

Research Hypothesis 1

The first research hypothesis stated that institutions with on campus housing will report greater crime rates than those without on campus housing for total Clery criminal offenses. Two separate statistical methods were utilized to perform testing of this research hypothesis. The first method employed was a one-way analysis of variance (ANOVA). The second method utilized was a z-Test. The results of these analyses will be further discussed below.

According to Pyrczak (2014, p. 127), the ANOVA method "can be used to test the difference between two means", and the one-way ANOVA method is used when only one method of classification is utilized to group the participants. In testing research hypothesis 1, the participants were grouped by the presence of on campus residences only. Thus, a one-way ANOVA is the most appropriate statistical analysis tool to utilize for testing of this hypothesis. This one-way ANOVA was conducted utilizing IBM SPSS 25th edition software package. The finding of this one-way ANOVA was that there was a significant difference between the crime rates for institutions with on campus

housing and the group of institutions without housing at the $p < 0.05$ level. This resulted in the rejection of the null hypothesis and acceptance of the research hypothesis. The results of this analysis have been displayed in Table 11.

Table 11. *ANOVA of Crime Rates*

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*
Between Groups	784.622	1	784.622	4.422	0.036
Within Groups	115692.23	652	177.442		
Total	116476.848	653			

Following upon this one-way ANOVA, a z-Test was conducted for crime rates between the two groups of institutions with on campus housing and those without. Bluman (2008, p. 401) states that "the z-Test is used to test for the mean of a large sample". This test was conducted utilizing Microsoft® Excel 2016 with the data analysis add-on packet. This z-Test finding concurred with the results found by the one-way ANOVA. The z-Test result reported a significant difference and a p-value less than 0.05. The detailed results of this z-Test have been reported in Table 12.

Table 12. *z-Test of Crime Rates Between Campuses With and Without Housing*

	m	s	n
Institutions With Housing	38.85	20.20	234
Institutions Without Housing	272.86	68.71	14

p=0.0474
Z-critical = 1.6449

Both statistical tests confirm that the overall crime rate was greater for the group of institutions with on campus housing than the institutions without on campus housing. Based upon these statistical results, it has been determined that it is appropriate to accept the Research Hypothesis 1 and to reject the Null Hypothesis 1. There is a statistical

difference between the overall crime rates of the group of institutions with on campus housing and those without.

Research Hypothesis 2

Research Hypothesis two stated that institutions with on campus housing will report greater crime rates than those without on campus housing for: 1) criminal homicide; 2) sexual assault; 3) robbery; 4) aggravated assault; 5) burglary; 6) motor vehicle theft; 7) arson. To perform hypothesis testing of each of these subcomponents of research hypothesis two, individual one-way ANOVA and z-Test were performed between the two groups. As with Research Hypothesis 1, SPSS 25th Edition was utilized to conduct the one-way ANOVA and Microsoft Excel 2016 was utilized to conduct the z-Test.

For criminal homicide, the one-way ANOVA and the z-Test produced the conclusion of accepting the Research Hypothesis of a difference between homicide rates for institutions with on campus housing and those institutions without on campus housing. The one-way ANOVA and the z-Test both produced a p-value that was less than 0.05. A summary of the one-way ANOVA analysis for criminal homicide rate has been provided as Table 13. A summary of the z-Test has been displayed as Table 14.

Table 13. *ANOVA of Criminal Homicide Rates*

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*
Between Groups	0.000	1	0.000	9.301	0.002
Within Groups	0.007	654	0.000		
Total	0.007	655			

Table 14. *z-Test of Criminal Homicide Rates*

	m	s	n
Institutions With Housing	0.000835	0.0046	328
Institutions Without Housing	0.000051	0.00066	328

P = 0.0011
Z-critical = 1.6449

For sexual assault, the procedure of conducting a one-way ANOVA and z-Test was repeated to determine if a difference existed between the group of institutions with on campus housing and the group of institutions without housing. These analyses resulted in the acceptance of the Research Hypothesis. Both the one-way ANOVA and the z-Test reported p-values of less than 0.05. The results for the one-way ANOVA for the sex crimes has been displayed in Table 15, and the results for the z-Test have been reported in Table 16.

Table 15. *ANOVA of Sex Crime Rates*

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*
Between Groups	21.422	1	21.422	26.531	0.000
Within Groups	528.069	654	0.807		
Total	549.491	655			

Table 16. *z-Test of Sex Crime Rates*

	m	s	n
Institutions With Housing	0.436	0.836	328
Institutions Without Housing	0.700	0.957	328

p = 0.000
Z-critical = 1.6449

To examine for a difference between robbery rates on institutions with and without on campus housing, a one-way ANOVA and a z-Test were utilized as well. These analyses resulted in the rejection of the Research Hypothesis and acceptance of the Null Hypothesis of no difference between the groups. The results of these analyses have been presented as Table 17 for the one-way ANOVA and Table 18 for the z-Test.

Table 17. *ANOVA of Robbery Rates*

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*
Between Groups	0.716	1	0.716	0.057	0.811
Within Groups	8156.366	654	12.472		
Total	8157.081	655			

Table 18. *z-Test of Robbery Rates*

	m	s	n
Institutions With Housing	0.371	0.836	328
Institutions Without Housing	0.305	1.740	328

p = 0.228
Z-critical = 1.6449

Aggravated assault crime rates were also analyzed to determine if there was a significant difference between the group of institutions with on campus housing and the group without on campus housing. These analyses were also conducted utilizing the one-way ANOVA and z-Test. The analyses resulted in the acceptance of the Research

Hypothesis at a statistically significant level with p-values less than 0.05. The results of the one-way ANOVA have been provided in Table 19, and the results for the z-Test have been presented as Table 20.

Table 19. *ANOVA of Aggravated Assaults*

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*
Between Groups	3.427	1	3.427	4.878	0.028
Within Groups	459.494	654	.703		
Total	462.921	655			

Table 20. *z-Test of Aggravated Assaults*

	m	s	n
Institutions With Housing	0.287	0.987	328
Institutions Without Housing	0.142	0.656	328

p = 0.0136
Z-critical = 1.6449

The next component of Clery Act crimes analyzed were burglaries. As with the other crimes, one-way ANOVA and a z-Test were utilized to test this component of the Research Hypothesis. The one-way ANOVA and the z-Test both reported a significant difference between the burglary rates experienced on the group of institutions with on campus housing and the group without housing. Both of these tests presented p-values less than 0.05 resulting in the acceptance of this component of the Research Hypothesis. The results for the one-way ANOVA have been presented as Table 21, and the results for the z-Test have been presented as Table 22.

Table 21. *ANOVA of Burglary*

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*
Between Groups	417.294	1	417.294	6.214	0.013
Within Groups	43919.589	654	67.155		
Total	44336.884	655			

Table 22. *z-Test of Burglary*

	m	s	n
Institutions With Housing	2.781	9.802	328
Institutions Without Housing	1.186	6.183	328

p = 0.006
Z-critical = 1.6449

The crime rates for motor vehicle thefts were also hypothesis tested utilizing one-way ANOVA and z-Test. The two analyses methods both yielded the same conclusion of rejecting the Research Hypothesis of there being a difference between the motor vehicle theft rates on the campuses of the institutions with housing as opposed to institutions without housing. This component of the research hypothesis was rejected due to the p-value for both analyses being greater than 0.05. The analysis results for the one-way ANOVA test has been included as Table 23, and the results for the z-Test has been included as Table 24.

Table 23. *ANOVA of Motor Vehicle Theft*

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*
Between Groups	13.794	1	13.794	2.169	0.141
Within Groups	4159.583	654	6.360		
Total	4173.378	655			

Table 24. *z-Test of Motor Vehicle Theft Rates*

	m	s	n
Institutions With Housing	0.656	3.075	328
Institutions Without Housing	0.366	1.807	328

p = 0.0704
Z-critical = 1.6449

The final portion of Research Hypothesis 2 that was analyzed, pertained to there being a difference between the arson rate experienced on the campuses of institutions that have housing and those institutions without housing. As with the other components of

this hypothesis, both a one-way ANOVA and a z-Test were conducted. These tests produced results that indicated that there was a significant difference between the arson rates on the campuses of institutions with on campus housing and those institutions without on campus housing. The one-way ANOVA and the z-Test both presented results that yielded p-values less than 0.05. Based on these p-values, the hypothesis of a difference in arson rates between institutions with on campus housing and without on campus housing has been accepted. The results for these analyses have been presented in Table 25 and Table 26.

Table 25. *ANOVA of Arson Rates*

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*
Between Groups	0.466	1	0.466	46.961	0.000
Within Groups	6.497	654	0.010		
Total	6.963	655			

Table 26. *z-Test of Arson Rates*

	m	s	n
Institutions With Housing	0.055	0.140	328
Institutions Without Housing	0.002	0.016	328

p = 0.000
Z-critical = 1.6449

Due to the complexity of Research Hypothesis 2, it cannot completely be accepted or completely rejected. The components the hypothesis including criminal homicide, aggravated assault, sex crimes, burglary, and arson could all be accepted by both the one-way ANOVA as well as the z-Test. In contrast, robbery and motor vehicle theft were rejected by both analysis methods. An explanation of the lack of difference for robbery could be that the crimes of robbery requires an individual to be present when the crime is committed. Thus, it is not dependent upon housing for it to be able to occur.

The absence of difference between groups of institutions for motor vehicle theft maybe explained by the fact that individuals not living on campus are more likely to have to drive to campus, which creates an opportunity for their motor vehicle to be stolen on the campus. Further discussion of the potential reasons for the rejection of the components of the Research Hypothesis involving robbery and motor vehicle theft have been explored in the chapter summary. In all cases, the data indicates that it would be more important for institutions without on campus housing to look at specific crimes rather than looking at all crimes.

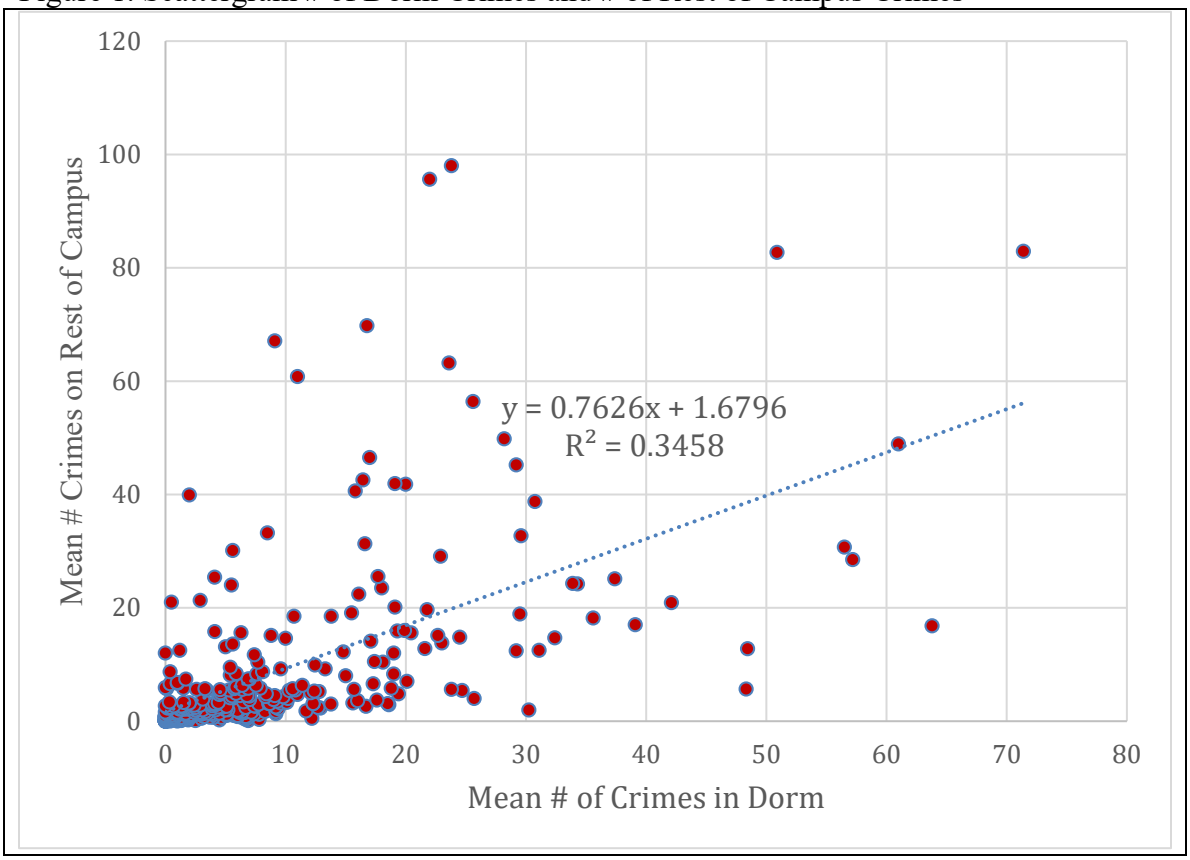
Research Hypothesis 3

The third Research Hypothesis analyzed in this study stated that there is a statistically significant correlation between the number of crimes occurring in on campus residences and the number of crimes occurring on the rest of the campus of those institutions. This hypothesis was generated after consideration of previous research studies that found increasing the number of students living on campus results in greater amounts of crime (Barnes, 2009; Lewis et al, 1997). With this phenomenon in mind, it was surmised that as crime goes up in the residence halls then crime on the rest of campus will go up as well. This hypothesis was tested utilizing simple regression methodology. This simple regression was conducted utilizing IBM SPSS 25th edition software package.

The hypothesis testing of Research Hypothesis 3 resulted in its acceptance. The analysis revealed that there is a linear relationship at the $p < 0.05$ level. This relationship is also a positive in nature meaning that as the number of crimes goes up in the on campus housing, the number of crimes will go up on the rest of the campus. The

Pearson-r value was 0.588 and the correlation coefficient (r^2) value was 0.346. According to Remler and Ryzin (2015), a Pearson-r value greater than 0.50 is considered to demonstrate a large amount of correlation (p. 262). A scattergram of the relationship between the number of incidents occurring in on campus housing and the number of incidents occurring on the rest of an institution's campus has been presented as Figure 1. In this scattergram, the number of on campus housing incidents were placed on the X-axis since it was theorized that the crimes occurring on the rest of the campus would be dependent upon the number of crimes occurring in the on campus living areas. Correspondingly, the number of crimes occurring on the rest of the campus were placed on the Y-axis.

Figure 1. Scattergram # of Dorm Crimes and # of Rest of Campus Crimes



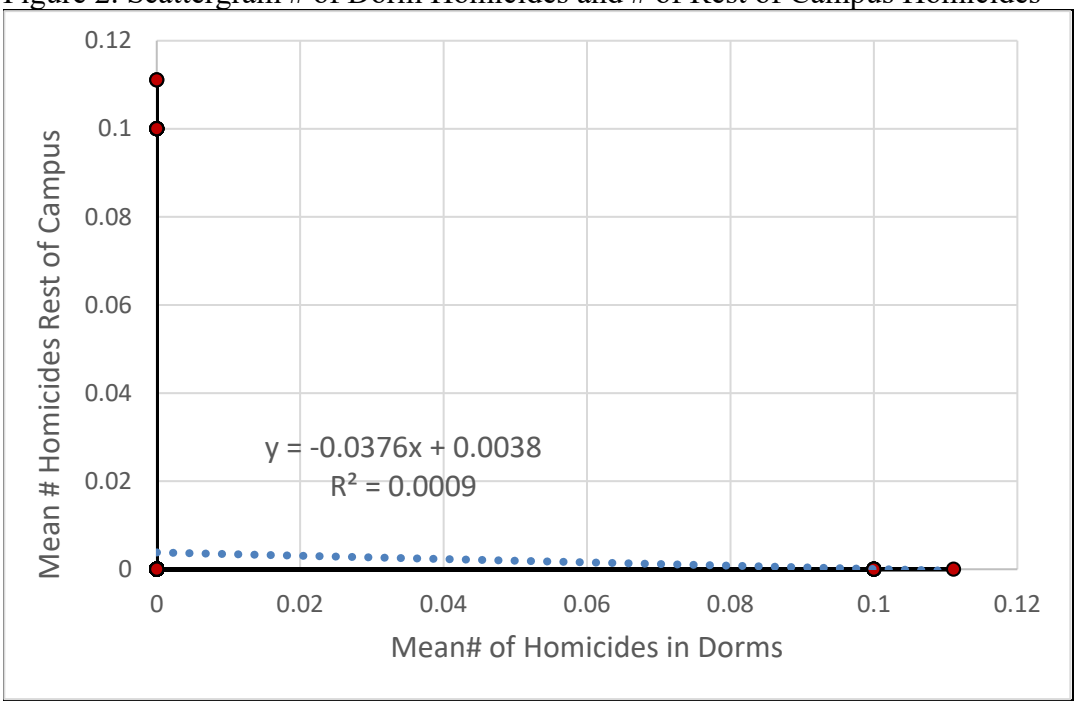
To further dive down into the analysis of the relationship between crimes occurring in on campus housing and crimes occurring on the rest of the campus, each of the core Clery reportable crimes were analyzed separately. Regression analysis was repeated for the Clery crimes of: 1) criminal homicide; 2) sexual assault; 3) robbery; 4) aggravated assault; 5) burglary; 6) motor vehicle theft; 7) arson. A summary of the analysis has been included as Table 27.

Table 27. *Regression Analysis Between Dorms and Rest of Campus for Crimes Types*

	Pearson-r	r^2
Criminal Homicide	0.031	0.001
Sexual Assault	0.525	0.276
Robbery	0.501	0.251
Aggravated Assault	0.445	0.198
Burglary	0.487	0.237
Motor Vehicle Theft	0.079	0.006
Arson	0.369	0.136

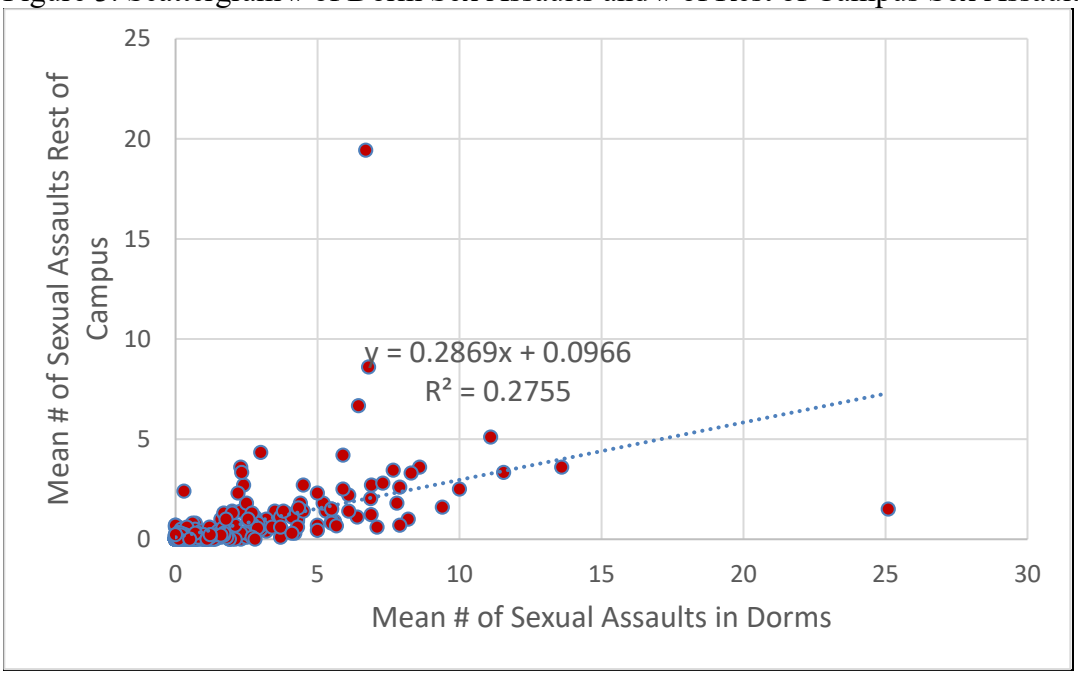
It was expected that the mean number of criminal homicides occurring in the dorms as compared to the rest of the campus would also show a correlation since Hypothesis 2 demonstrated that there was a difference between institution groups with on campus housing and those without on campus housing. In reality, this analysis showed virtually no correlation for criminal homicides. To examine this incongruity, the individual data was analyzed, and it appeared that this lack of correlation was due to the relatively low occurrence of homicide on college campuses. The mode number of homicides reported by institutions was 0, which it was felt skews this relationship. Figure 2 graphically presents the relationship between the mean number of homicides in dorms and the mean number of homicides on the rest of the campus.

Figure 2. Scattergram # of Dorm Homicides and # of Rest of Campus Homicides



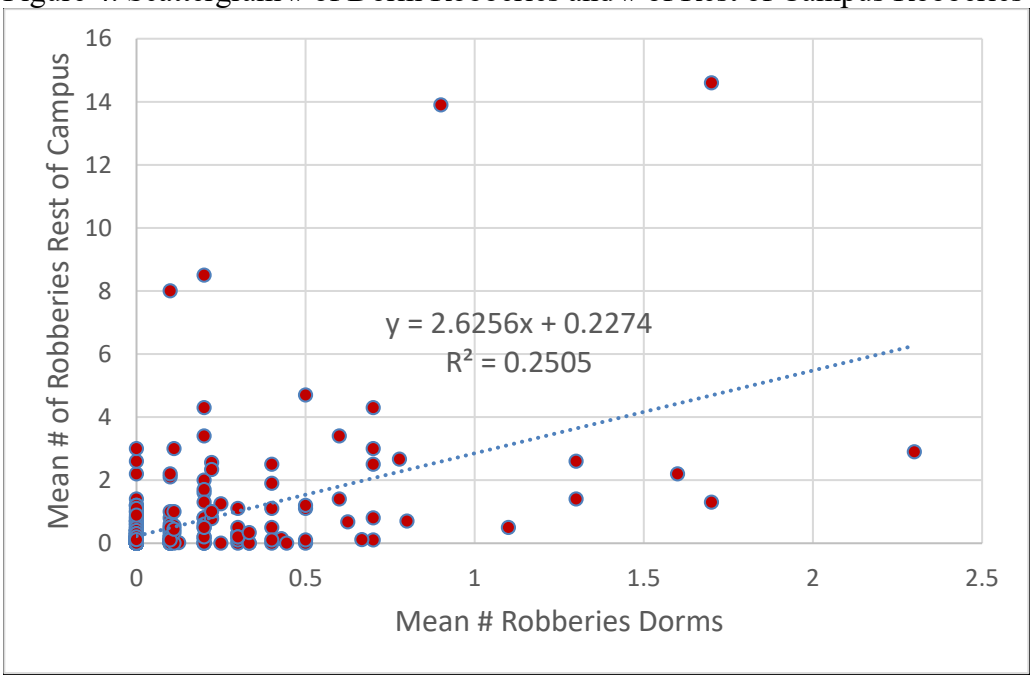
A scattergram has been provided as Figure 3 to demonstrate the relationship between the number of sexual assaults occurring in dorms and the number of sexual assaults occurring on the rest of the campus. This scattergram demonstrates a positive relationship between the number of sexual assaults reported in dorm and the number of sexual assaults occurring on the rest of the campus. A Pearson-r value of 0.525 was calculated for this relationship, which indicates that there is a large amount of correlation between these two sets of data.

Figure 3. Scattergram # of Dorm Sex Assaults and # of Rest of Campus Sex Assaults



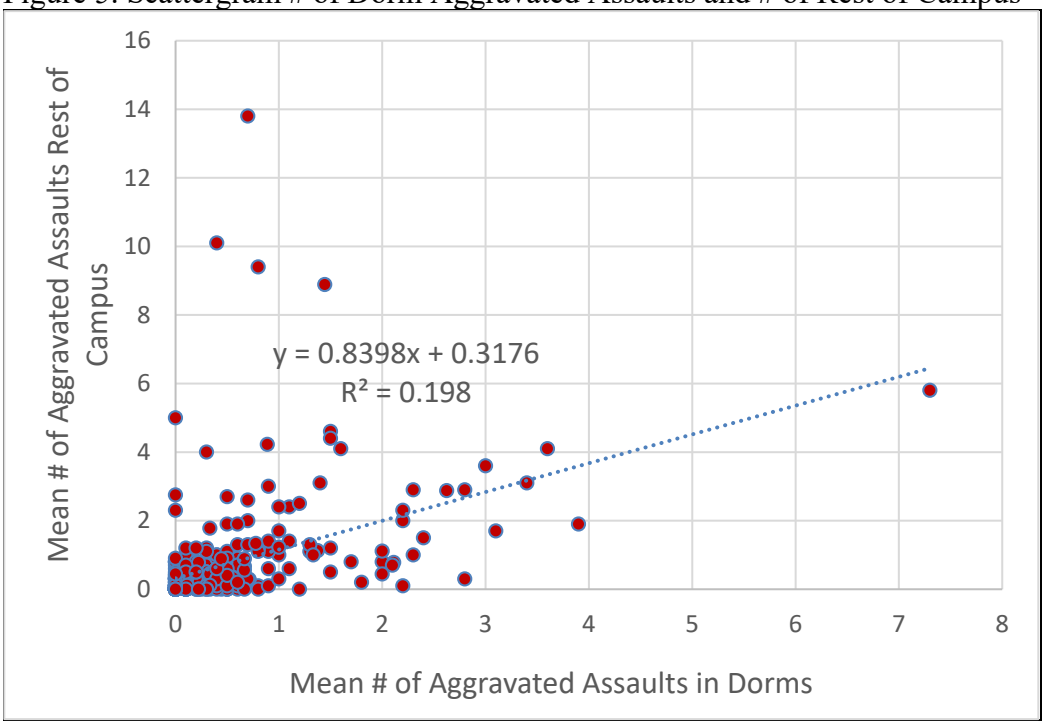
Another scattergram was created to examine the relationship between the number of robberies occurring in the dormitories and the number of robberies occurring on the rest of the campus. This scattergram has been presented as Figure 4. Although it has a weaker relationship than sexual assaults, the scattergram demonstrates that there is a positive correlation between the number of robberies occurring in the residence halls and the number of robberies occurring on the rest of the campus. The Pearson-r value for this relationship was 0.501, which indicates a strong correlation.

Figure 4. Scattergram # of Dorm Robberies and # of Rest of Campus Robberies



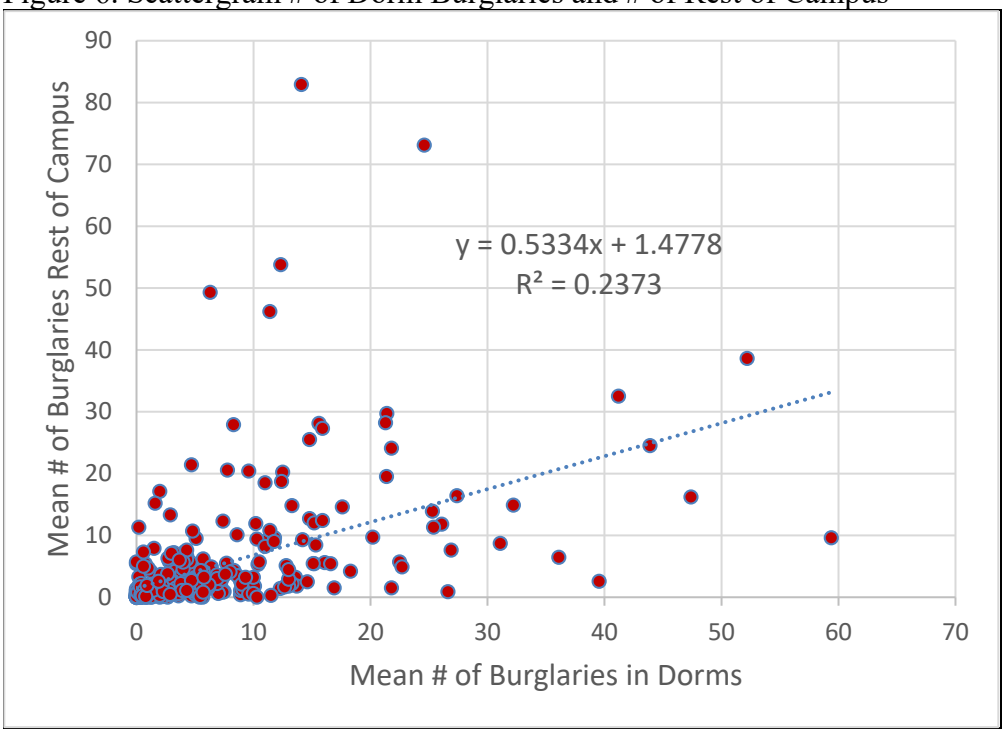
Aggravated assaults occurring in on campus residence halls and the number of aggravated assaults occurring on the rest of the institution's campus was also analyzed with a scattergram. This scattergram analysis has been presented as Figure 5. The scattergram demonstrates a positive relationship between the number of aggravated assaults occurring in the on campus residences and the number of aggravated assaults occurring on the rest of campus. The Pearson-r value for this relationship was 0.445, which indicates a correlation between the two factors.

Figure 5. Scattergram # of Dorm Aggravated Assaults and # of Rest of Campus



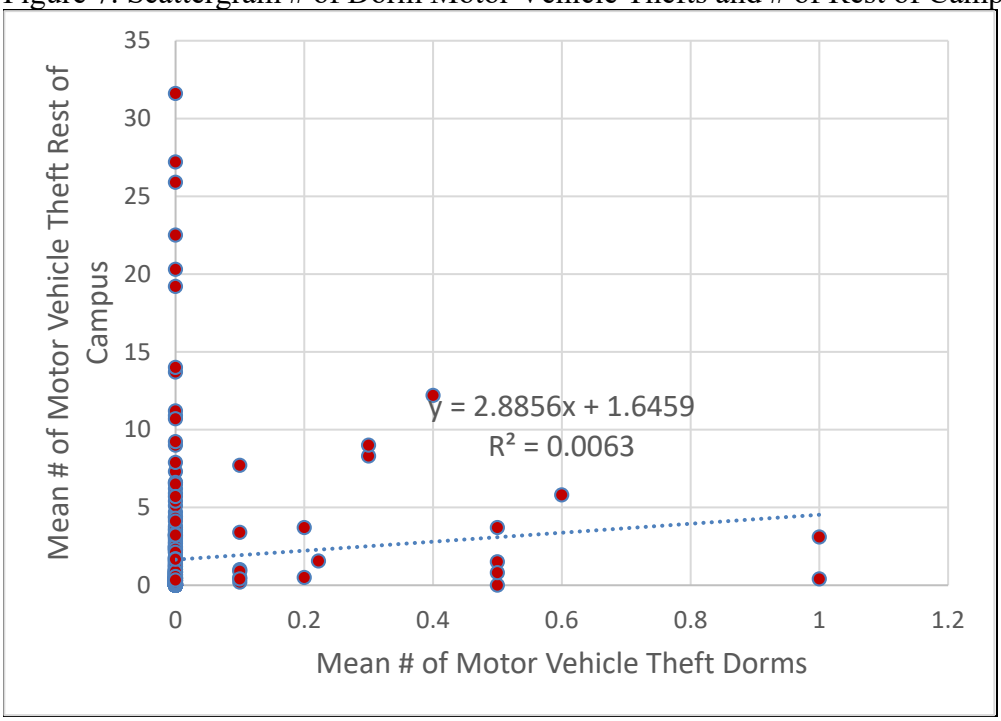
The number of burglaries occurring in on campus housing was compared with the number of burglaries occurring on the rest of the campus using a scattergram, which is presented as Figure 6. This scattergram also displays that the number of burglaries occurring in the on campus housing and the number of burglaries occurring on the rest of the campus demonstrated a positive relationship. The Pearson-r value of 0.487 indicates that there is between a moderate and strong correlation between these two factors.

Figure 6. Scattergram # of Dorm Burglaries and # of Rest of Campus



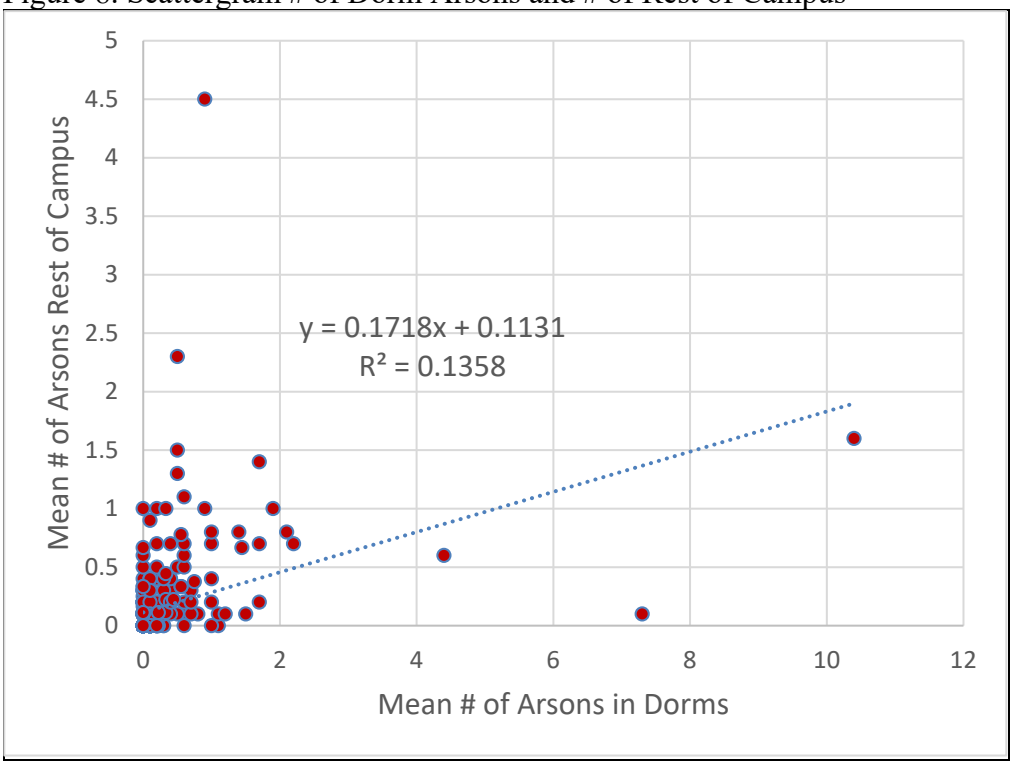
A scattergram was also generated to graphically examine the relationship between the number of motor vehicle thefts associated with on campus housing and the number of motor vehicle thefts experienced on the rest of the campus. This scattergram has been presented as Figure 7. In analyzing this scattergram, it was found that there was almost no correlation between the number of motor vehicle thefts occurring around on campus housing and the number of motor vehicle thefts occurring on the rest of the campus. This is most likely due to one of two reasons. First, motor vehicles could not be placed in most on campus residences, so one would not expect to see any motor vehicle thefts being reported in the on campus housing. Second, many institutions with on campus housing are making pushes to prevent students from bringing motor vehicles on campus.

Figure 7. Scattergram # of Dorm Motor Vehicle Thefts and # of Rest of Campus



The number of arsons occurring in on campus housing was contrasted with the number of arsons occurring on the rest of the campus using the scattergram presented as Figure 8. This scattergram displays that there is a positive relationship between the number of arsons occurring in the on campus housing and the number occurring on the rest of the campus. The analysis generated a Pearson-r value of 0.369, which indicates that there is a correlation between these two groups.

Figure 8. Scattergram # of Dorm Arsons and # of Rest of Campus



Research Hypothesis 4

The fourth Research Hypothesis in this study stated that institutions with on campus housing will report greater crime rates than those without on campus housing for total VAWA offenses. VAWA or the *Violence Against Women Reauthorization Act of 2013* mandates the collection of crime reports for the crimes of: 1) stalking; 2) domestic violence; 3) dating violence. Reporting of this data became mandatory in calendar year 2014, and the data analyzed for this study has encompassed 2014 thru 2015. Due to the limited amount of data, these three crimes were aggregated into one VAWA crime statistic for analysis.

In order to test this hypothesis, the statistical methods of one-way ANOVA and z-Test were utilized. The one-way ANOVA and the z-Test both produced significant results with the p-value being less than 0.05. This resulted in the acceptance of this

research hypothesis and rejection of the null hypothesis. The results for the one-way ANOVA have been presented in Table 28. The results of the z-Test have been presented in Table 29.

Table 28. *ANOVA of VAWA Crime Rates*

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*
Between Groups	246.015	1	246.015	8.936	0.003
Within Groups	18004.659	654	27.530		
Total	18250.673	655			

Table 29. *z-Test of Arson Rates*

	m	s	n
Institutions With Housing	1.39	7.36	328
Institutions Without Housing	0.16	0.93	328

p = 0.001
Z-critical = 1.6449

Research Hypothesis 5

The next research hypothesis analyzed in this study stated that institutions with on campus housing will report greater rates than those without on campus housing for total alcohol and drug crimes and disciplinary referrals. To analyze this hypothesis, the number of reported alcohol and drug crimes were aggregated and then combined with the total number of alcohol and drug related disciplinary referrals. This rate was then compared between the institutional groups. This research hypothesis was tested utilizing the one-way ANOVA and the z-Test. These tests both reported a statistical difference between the drug and alcohol crimes and discipline rates for institutions with on campus housing and those without on campus housing. The one-way ANOVA and the z-Test both produced p-values less than 0.05. This resulted in the acceptance of the Research Hypothesis of a greater incident rate for institutions with on campus housing than those

without housing. The results of the one-way ANOVA and the z-Test have been displayed in Table 30 and Table 31 respectively.

Table 30. *One-Way ANOVA of Drug and Alcohol Related Arrests and Discipline*

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*
Between Groups	79312.5	1	79312.5	29.4	0.000
Within Groups	1763892.0	654	2697.1		
Total	1843204.5	655			

Table 31. *z-Test of Drug and Alcohol Related Arrests and Discipline*

	m	s	n
Institutions With Housing	25.6	2274.2	328
Institutions Without Housing	3.6	3120.0	328

p = 0.000
Z-critical = 1.6449

Research Hypothesis 6

Research Hypothesis 6 was the last hypothesis analyzed in this study. It stated that institutions with on campus housing will report greater crime rates than those without on campus housing for total Hate Crimes. To analyze this hypothesis, all Clery reportable hate crimes were aggregated into one hate crime statistic. This statistic was then hypothesis tested utilizing a one-way ANOVA and a z-Test. Both of these statistical tests reported that there were no differences between the two groups of institutions for hate crimes. The p-values reported for both tests were greater than the set level of 0.05. The results for the one-way ANOVA have been included as Table 32, and the results for the z-Test have been included as Table 33.

Table 32. *One-Way ANOVA of Hate Crimes*

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*
Between Groups	0.002	1	0.002	0.005	0.944
Within Groups	233.223	654	0.357		
Total	233.224	655			

Table 33. *z-Test of Hate Crimes*

	m	s	n
Institutions With Housing	0.0786	0.178	328
Institutions Without Housing	0.0818	0.826	328

p = 0.472
Z-critical = 1.6449

Two potential explanations for this lack of difference between the institution groups were identified. First, the frequency of hate crimes observed on the campuses of these institutions were very low in frequency, which presents itself in a lack of difference. Second, the U. S. Federal Bureau of Investigation (2016) reported that hate crimes occurred at residences 27.3% of the time (p.1). This low frequency of hate crimes occurring in the home setting could explain why on campus housing does not create a difference between campuses with on campus housing and institutions without on campus housing.

Summary

The hypothesis testing for this research has overwhelmingly established that there is a difference between the crime rates experienced by institutions with on campus housing and institutions without on campus housing. This research contradicts Ravalin (2014), which found that there was no difference between the two institution groups. One explanation from this difference is that Ravalin (2014) only examined one year of data in one state. Another limiting factor of the Ravalin (2014) study is that only

approximately 10% of the institutions in the study had on campus housing. In contrast, this dissertation research has selected the same number of institutions with on campus housing and the same number without.

This study found that there was a significant difference between the crime rates in the two-institutional groups. The probable explanation of this difference is that "roughly 80 percent of campus crimes are committed by a student upon another student" (20 USC § 1092, 1990). Since the majority of students experience crime on campus at the hands of other students, one could surmise that the longer an individual spends on campus will increase the number of others that might commit crime against them. This will result in a greater opportunity for experiencing crime. In simplest terms, students spending more time on campus will have the opportunity to experience greater crime, and inversely campuses will experience greater crime rates as the time of students on campus increases.

Another potential explanation for this difference may relate to the fact that the majority of both violent and property crimes occur in a home setting. According to the Bureau of Justice Statistics (2016), almost 43% of violent crime and almost 53% of property crime occurs in either the victim's home, near the victim's home, or at a friend or neighbors' home. Considering this data, an institution without on campus housing could anticipate less crime than those with on campus housing.

One exception to the statistical difference between the institution groups can be found in robbery rate. A possible reason for there being no difference is due to the fact that robbery is a crime that less frequently occurs in a housing setting. The U.S. Federal Bureau of Investigation (n.d.) reports that only 17.3% of robberies occur in the victim's home. This is a much lower percentage crime when compared to a crime such as

homicide. Fowler, Jack, Lyons, Betz, and Petrosky (2018) reports that almost 70% of homicides occur in a house or apartment. This difference in the general location of where types of crimes occur could explain this exception. In addition, this may be compounded by the fact that students are potentially utilizing electronic payment methods more frequently than cash. This lack of students utilizing cash may result in robbery being a less productive crime for perpetrators.

A second component of the crime rate that showed no statistical difference between the groups of institutions was motor vehicle theft rates. One potential explanation for this lack of difference could be that institutions with on campus housing may have fewer motor vehicles on campus. Many institutions are now moving to prevent students from bringing cars on campus (Kowarski, 2018, para. 4). When comparing institutions with on campus housing to the so-called commuter schools that require students to drive to campus on a daily basis, the potential opportunity for motor vehicle theft created by students parking on campus 24 hours per day may be offset by the number of students not bringing their cars on campus.

Another important finding from this research is that there is a statistically significant relationship between the number of crimes occurring in the on campus residences and the number of crimes occurring on the rest of the campuses. The analysis revealed that there was a significant correlation between these two variables, but the number of crimes occurring in the on campus residences could not completely predict the number of crimes occurring on the rest of the campus given the r^2 value of only 0.346. This may indicate that other variables may be important in contributing to the crime rates on campus.

The final research hypothesis rejected was that there was a statistical difference between the numbers of hate crimes reported on institutions with on campus housing versus those institutions without housing. To explain this lack of difference, the Federal Bureau of Investigation (2016) data was reviewed, and it was discovered that hate crimes do not have one major location of occurrence. The U.S. Federal Bureau of Investigation (2016) reported that hate crimes occurred at residences 27.3% of the time. This is much less when compared to the frequency of non-hate related crimes occurring at residences. The Bureau of Justice Statistics (2016) reported that 43% of violent crimes and 53% of property crimes occurred in or near a residence. This lower percentage of crimes occurring in residence could negate the effect of having housing on campus. This fact may be compounded with the relatively low reported occurrence of hate crimes on the college campuses examined in this study. In either case, the data revealed no major difference in the frequency of hate crimes occurring on campuses of the two groups of institutions examined in this study.

This research has provided that there is a difference between the two groups of institutions as was hypothesized by this study. Although there is a significant difference in the overall crime rates, specific crime rates for robbery, motor vehicle, and hate crimes produced no difference between the groups of institutions. This data indicates that these crimes may be important to look at for all institution categories, but there would be no data driven reason for requiring institutions without on campus housing to continue to report data for other crime categories.

Chapter V

CONCLUSION

This chapter of this research will conclude this study. It has provided an overview of the study including the key findings yielded by this analysis. A summary of the limitations of the study has also been detailed in this section. This chapter has described the potential implications of this research on the field. Finally, this chapter concludes with a section dedicated to recommendations for future research.

Study Overview

This study was undertaken with the idea that crime rates would be different for institutions with on campus housing than those institutions without on campus housing. This idea is important since only about one-third of institutions of higher education have on campus housing, but all of these institutions are required to comply with roughly the same regulatory requirements. These regulatory requirements have been in the past cited as burdensome by the GAO (Emrey-Arras, 2013). With this regulatory burden in mind, this research began by questioning if there was a valid reason for treating institutions with on campus housing the same as institutions without on campus housing. This led to the formulation of six research hypotheses, which were as follows.

Research Hypothesis 1 – Institutions with on campus housing will report greater crime rates than those without on campus housing for total Clery criminal offenses.

Research Hypothesis 2 – Institutions with on campus housing will report greater crime rates than those without on campus housing for:

- Criminal homicide
- Sexual assault
- Robbery
- Aggravated assault
- Burglary
- Motor vehicle theft
- Arson

Research Hypothesis 3 – There is a statistically significant correlation between the number of crimes occurring in on campus residences and the number of crimes occurring on the campuses of institutions as a whole.

Research Hypothesis 4 – Institutions with on campus housing will report greater crime rates than those without on campus housing for total VAWA offenses.

Research Hypothesis 5 – Institutions with on campus housing will report greater rates than those without on campus housing for total alcohol and drug crimes and disciplinary referrals.

Research Hypothesis 6 – Institutions with on campus housing will report greater crime rates than those without on campus housing for total Hate Crimes.

Following the formulation of these research hypotheses, a sampling plan was designed to analyze each hypothesis. This sampling plan included breaking down the nation into strata, and then randomly sampling a number of institutions proportionate with the student enrollment from each stratum. Following this sampling, each of these

hypotheses were tested using statistical methods. This hypothesis testing resulting in the full acceptance of Research Hypotheses 1, 3, 4, and 5. In regard to Research Hypothesis 2, the portion of that hypothesis for a difference in crime rates between institutions could be accepted for the crimes of criminal homicide, sexual assault, aggravated assault, burglary, and arson. The component of Null Hypothesis 2 was accepted for the crimes of robbery and motor vehicle theft. Finally, Null Hypothesis 6 was accepted indicating that there were no differences in the rate of hate crimes between institutional groups.

To attempt to explain the lack of difference between institutional groups for the crimes of robbery and motor vehicle theft, a few potential explanations have been proffered. For robberies, it has been suggested by this researcher that the reason for the lack of difference lies in the fact that only 17.3% of robberies occur in the home according to the U.S. Federal Bureau of Investigation (n.d., p. 2). This low percentage of robberies occurring in homes would negate the difference between institutions with on campus housing and institutions without. The decreasing prevalence of students utilizing cash may also contribute to this lack of difference as well.

In regard to motor vehicles, a couple of explanations have been suggested. First, it has been suggested that very few on campus housing facilities possess facilities that allow vehicles to be parked indoors. This could result in very few motor vehicle thefts being associated with on campus housing facilities. Another alternate explanation could be that more and more institutions with on campus housing have begun limiting on campus parking. In contrast with the students on campus housing, individuals attending institutions without on campus housing would overwhelmingly be reliant on an automobile for transportation to and from the school. This variance in institutional

characteristics may explain some of this lack of difference. An interesting follow-up to this research would be to examine if the institutions with on campus housing have higher motor vehicle thefts associated with their Clery public property area than those institutions without housing. This could identify if the institutions with on campus housing are forcing their student's motor vehicles to be parked off campus.

A final important finding of this research was that there was a correlation between the number of crimes occurring in the on campus housing and the number of crimes occurring on the campus as a whole. This finding supports the previous research of Robinson and Roh (2013) that concluded that on campus housing is a contributor to the amount of crime on campus. Although individual components of the overall crime rate did not demonstrate a great deal of correlation, several individual components demonstrated a large amount of correlation. One could interpret this finding as confirming the difference found between institutional groups in Research Hypothesis 1, 4, and 5.

In summation, this research has identified that there is a difference in crime rates between the institutional group with on campus housing and the institutional group without on campus housing. Even though several individual crime categories did not demonstrate a difference, this overall crime rate would provide a rationale for providing different requirement levels between these two institutional groups. Recognition of this difference could allow for relief of some administrative burden to certain institution groups in future revisions of the regulation.

Limitations

This study was undertaken with several limitations. The first limitation is that it did not include all institutions in its analysis. Although this study utilized representative samples, it did not survey the entire population. Stratified sampling along with random sampling was conducted to address these issues. To examine this issue, the researcher conducted an analysis to compare the sample set to the population. This evaluation revealed that this method provided a sample set that was very similar in makeup to the overall population.

Another limitation that was identified for this study is that it looked only at on campus crimes. It did not pay attention to two other Clery Geographic components of public property and non campus locations. For crimes such as motor vehicle theft and robbery, this could provide crucial information to determine if there may be a difference in these crime rates between institutional groups.

A third limitation was that this research only looked at the main campus of these institutions. It did not include satellite locations in the analysis. This approach was chosen because it was theorized that the primary campus with the largest student body would be the main driver of crime for institutions. This assumption was supported by the research of Barnes (2009) and Lewis et al. (1997) that found the greater number of students living on campus resulted in greater crime rates on that campus.

Another limitation of this study was that some institutions with greater resources may put more emphasis on reporting of the crimes. This greater emphasis would result in greater numbers of crimes reported. This would potentially skew the results to look

negative on institutions that actually do a good job of reporting their crime rates appropriately.

Yet an additional limitation of this research was that it did not attempt to answer why there was a difference in crime rates between the institutional groups. The study design allowed the researcher to identify that there is a difference between the two groups. To identify the underlying cause of the difference, further examination of this disparity is necessary. Although this research has proffered several explanations, future studies should be performed to validate these explanations.

The phenomenon of college students under reporting crime is another limitation of this study. Past research has repeatedly identified this trend in college students (Brinkley, 2005; Fisher et al., 2002; Guffey, 2013; Hart, 2013; Hart & Colavito, 2011; Robinson & Roh, 2013). Under-reporting of crime is most certainly a limitation of this research, but it would be a limitation of all other research conducted utilizing student reported crime data.

A final limitation of this research was that it relied upon self-reported data. This is a limitation since, as Remler and Ryzin (2015) stated, "what people do is not the same as what they say they do" (p. 108). Although this limitation does affect the research, institutions have an incentive to report data accurately since Clery Act fines are currently set at $54,789 per violation. It is believed that this has prevented inaccurately reported data from being introduced into this study.

Implications

With the recent policymaking initiatives for regulatory simplification such as President Trump's Executive Order 13777 on Regulatory Reform, there is a current

recognition of a need for widespread policy simplification. Coupling this with the introduction of the *Campus Accountability and Safety Act* into the Senate in April of 2017, there is a strong preference for regulatory reform to the Clery Act. Recognizing this potential, there is a need for research focused on the realities of the Clery Act. This research has attempted to focus upon this topic to provide information that could be utilized for future revisions to the Act.

The rationale behind this research was that students moving to campuses with on campus housing would be more likely to be concerned about crime rates for their institution during the selection process. This is based on the assumption that individuals who are selecting an institution without on campus housing are choosing an institution based upon location or program offering. If students are choosing a campus solely on the basis of their current living proximity to it, then many of the mandates found under the Clery Act become costly expenses that are not wanted by the potential students. This cost is ultimately borne by the students in the form of tuition, which has been increasing at incredible paces in the past twenty years.

Considering these assumptions, it was theorized that individuals that desire to attend institutions without on campus housing do not put as high a priority on campus safety programs as those intent on living on campus. With this idea in mind, this research focused upon examining if crime rates were the same for the two institutional groups of institutions with on campus housing and institutions without. The findings indicate that the crime rates are significantly lower for institutions without on campus housing except for a few specific crime categories. This difference could provide a reason for providing a lifting of regulatory burden for over 4500 institutions in the United States. The

lessening of this regulatory burden would result in potential savings to students who are currently paying for programs in which they are not interested.

Recommendations for Future Research

This research has answered all six of the original research questions, but it has provided for even more questions, which need to be answered. One such topic would be to examine why the crime rates for robbery, motor vehicle theft, and hate crimes are not different between the institutional groups.

Another topic for future research would include examining the reasons why there is a difference between these two institutional groups. Although this research established that on campus housing is a driver of crime on campus, the correlation was not strong enough to demonstrate causation. This indicates other factors also play a role in driving the crime rate. An evaluation to determine what other factors may play a role in this difference would be an important area for future research.

Examining the crime rates at an institution's other campuses would be another area needing research. This study neglected all satellite campuses with the assumption that the main campus would be the primary location with on campus housing as well as the location with the most crime. Additional research is required to verify that this assumption is correct.

This research did not examine the differences in crimes rates by institutional size. Although the random sampling provided a sample set that closely mimics the population as a whole, this research did not attempt to analyze crime rate differences between institutional categories by enrollment size. Future research should analyze if a difference exists between institutions based upon enrollment.

Future research should also be focused upon crime rates experienced by the different portions of Clery Geography. As was listed in the limitation section, only on campus Clery Geography was examined in this research. It would be important to analyze both the public property and the non campus property aspects of Clery Geography.

Summary

This research has answered all of the original research questions posed. It accepted the majority of the research hypotheses. Only portions of Research Hypothesis 2 and all of Research Hypothesis 6 were rejected. Research Hypothesis 2 analyzed for differences between the specific crime rates for the groups of institutions with on campus housing and the group of institutions without on campus housing. The analysis found that all of the crime rates were different between the groups except for motor vehicle thefts and robberies, which it was theorized are more likely not to be dependent upon housing to occur.

Research Hypothesis 6 found that there was no difference in the hate crime rate experienced on the campuses of the group of institutions with on campus housing and the group of institutions without. It was theorized that this is due to the lower frequency of hate crimes occurring as opposed to other crime rates. This area was recommended for further research to understand the differences.

The research hypotheses accepted found that there was a difference in overall crime rate between the two institutional groups. This study found that the portions of crime rate focused on homicide, burglary, aggravated assault, sexual assaults, and arson were also different between the institutional groups. It was also found that there was a

correlation between the number of crimes occurring in the campus housing and the number of crimes occurring on the rest of the campus. The analysis also yielded that there was a difference in the VAWA crime rates between institutional groups. Finally, it was found that there was a difference in the alcohol and drug arrests and disciplinary rates for institutions with on campus housing and the group of institutions without housing.

The findings of this research support creating different requirements for institutions with on campus housing and those institutions without. With the ever-increasing cost of higher education, it is important to analyze burdensome regulations to determine their consequences. This research provides information that could in the future be utilized to reform this Act. Although the answers are conclusive, it is important to continue research on this topic to determine how future modifications can be made to provide the outcomes desired, balanced with the benefits that it provides.

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APPENDIX A:

Institutional Review Board Approval (or Exemption)

Institutional Review Board (IRB)
For the Protection of Human Research Participants
PROTOCOL EXEMPTION REPORT

PROTOCOL NUMBER:	**03623-2018**	**INVESTIGATOR:**	**Timothy S. Hallmark**
		SUPERVISING FACULTY:	**Dr. R. K. Prine**
PROJECT TITLE:	***A Comparison of Crime Rates Experienced on the Campuses of Higher Education Institutions with On-Campus Housing and Those Institutions without On-Campus Housing.***		

INSTITUTIONAL REVIEW BOARD DETERMINATION:

This research protocol is **Exempt** from Institutional Review Board (IRB) oversight under Exemption category **4**. You may begin your study immediately. If the nature of the research project changes such that exemption criteria may no longer apply, please consult with the IRB Administrator (irb@valdosta.edu) before continuing your research.

ADDITIONAL COMMENTS:

☒ ***If this box is checked, please submit any documents you revise to the IRB Administrator at irb@valdosta.edu to ensure an updated record of your exemption.***

APPENDIX B:

Institutions Included in This Sample Set

Sample Institutions With On campus Housing

Sample No.	Institution	State
1	University of Alaska Fairbanks	AK
1	Troy University	AL
2	Heritage Christian University	AL
3	Spring Hill College	AL
4	Miles College	AL
5	The University of Alabama	AL
1	Arkansas State University-Beebe	AR
3	Southern Arkansas University Main Campus	AR
2	University of Arkansas	AR
4	Arizona State University-Polytechnic	AZ
9	Arizona State University-Tempe	AZ
6	Benedictine University	AZ
10	Arizona Western College	AZ
7	Fuller Theological Seminary in California	AZ
1	Grand Canyon University	AZ
2	Cochise County Community College District	AZ
5	Dine College	AZ
11	Prescott College	AZ
8	The Art Institute of Phoenix	AZ
3	Eastern Arizona College	AZ
35	American Musical and Dramatic Academy	CA
31	Argosy University-The Art Institute of California-Hollywood	CA
33	California Baptist University	CA
25	California College of the Arts	CA
9	California Institute of Technology	CA
41	California Lutheran University	CA
5	California Polytechnic State University-San Luis Obispo	CA
30	California State University-East Bay	CA
26	California State University-Sacramento	CA
29	Claremont Graduate University	CA
34	Cogswell College	CA
16	Columbia College	CA
23	Concordia University-Irvine	CA
22	Hebrew Union College-Jewish Institute of Religion	CA
2	John Paul the Great Catholic University	CA
15	La Sierra University	CA
36	Lassen Community College	CA
21	Life Pacific College	CA
24	Loma Linda University	CA
40	Modesto Junior College	CA
7	Mount Saint Mary's University	CA
27	Musicians Institute	CA

Sample Institutions With On campus Housing

Sample No.	Institution	State
32	Newschool of Architecture and Design	CA
20	Occidental College	CA
17	Pacific Lutheran Theological Seminary	CA
38	Pacific School of Religion	CA
10	Pacific Union College	CA
11	Pitzer College	CA
39	Reedley College	CA
18	San Francisco Theological Seminary	CA
6	Scripps College	CA
1	The Master's College and Seminary	CA
13	University of California-Berkeley	CA
3	University of California-Irvine	CA
28	University of California-Merced	CA
4	University of California-San Diego	CA
37	University of California-San Francisco	CA
8	University of La Verne	CA
14	University of San Diego	CA
19	University of the Pacific	CA
12	Yeshiva Ohr Elchonon Chabad West Coast Talmudical Seminary	CA
3	Adams State University	CO
6	Colorado Heights University	CO
2	Trinidad State Junior College	CO
4	University of Denver	CO
5	University of Northern Colorado	CO
1	Western State Colorado University	CO
1	Eastern Connecticut State University	CT
2	Holy Apostles College and Seminary	CT
4	Post University	CT
3	Southern Connecticut State University	CT
2	Georgetown University	DC
1	Howard University	DC
1	Delaware State University	DE
2	Ave Maria University	FL
13	Aviator College of Aeronautical Science and Technology	FL
7	Brenau University	FL
16	College of Central Florida	FL
17	Embry-Riddle Aeronautical University-Daytona Beach	FL
10	Hillsborough Community College	FL
9	Hobe Sound Bible College	FL
5	Indian River State College	FL
8	Lynn University	FL
3	New College of Florida	FL
4	Northwest Florida State College	FL

Sample Institutions With On campus Housing

Sample No.	Institution	State
1	Rollins College	FL
12	Springfield College	FL
15	Trinity College of Florida	FL
14	University of Florida	FL
11	University of North Florida	FL
6	University of South Florida-St Petersburg	FL
3	Georgia Southwestern State University	GA
8	Gordon State College	GA
4	Life University	GA
6	Oglethorpe University	GA
1	South University-Savannah	GA
5	Toccoa Falls College	GA
2	University of Georgia	GA
7	Young Harris College	GA
2	Pacific Rim Christian University	HI
1	University of Hawaii at Manoa	HI
5	Hawkeye Community College	IA
1	Iowa State University	IA
2	Marshalltown Community College	IA
3	Northwest Iowa Community College	IA
4	Waldorf College	IA
2	Boise Bible College	ID
1	University of Idaho	ID
6	Augustana College	IL
12	Blackburn College	IL
1	Catholic Theological Union at Chicago	IL
11	DePaul University	IL
5	Elmhurst College	IL
3	Illinois College	IL
7	Lincoln Christian University	IL
10	Midwestern University-Downers Grove	IL
13	Rosalind Franklin University of Medicine and Science	IL
8	Rush University	IL
9	Shimer College	IL
4	University of Illinois at Chicago	IL
2	University of Saint Mary of the Lake	IL
2	Ball State University	IN
3	Indiana University-Purdue University-Indianapolis	IN
4	Saint Josephs College	IN
1	Saint Mary-of-the-Woods College	IN
7	The Art Institute of Indianapolis	IN
5	University of Notre Dame	IN
6	University of Saint Francis-Fort Wayne	IN

Sample Institutions With On campus Housing

Sample No.	Institution	State
2	Coffeyville Community College	KS
4	Hesston College	KS
1	Northwest Kansas Technical College	KS
3	University of Kansas	KS
2	Kentucky Wesleyan College	KY
4	Spalding University	KY
3	Sullivan University	KY
1	University of Louisville	KY
3	Loyola University New Orleans	LA
4	Northwestern State University of Louisiana	LA
2	University of New Orleans	LA
1	Xavier University of Louisiana	LA
7	Anna Maria College	MA
3	Bentley University	MA
1	College of the Holy Cross	MA
8	Fisher College	MA
2	Harvard University	MA
5	Northeastern University	MA
6	Regis College	MA
4	Wheaton College	MA
6	Allegany College of Maryland	MD
1	Bowie State University	MD
3	Capitol Technology University	MD
5	Coppin State University	MD
2	Mount St Mary's University	MD
4	St Mary's College of Maryland	MD
1	University of Maine	ME
2	University of Maine at Machias	ME
2	Eastern Michigan University	MI
4	Ferris State University	MI
5	Grace Bible College	MI
10	Grand Valley State University	MI
6	Kuyper College	MI
1	Northern Michigan University	MI
3	Northwestern Michigan College	MI
9	Saginaw Valley State University	MI
8	Spring Arbor University	MI
7	Wayne State University	MI
4	Alexandria Technical & Community College	MN
2	Augsburg College	MN
5	Minnesota State Community and Technical College	MN
3	Minnesota State University Moorhead	MN
1	Saint Mary's University of Minnesota	MN

Sample Institutions With On campus Housing

Sample No.	Institution	State
6	University of Minnesota-Twin Cities	MN
7	University of Northwestern-St Paul	MN
6	Calvary Bible College and Theological Seminary	MO
1	Concordia Seminary	MO
4	Culver-Stockton College	MO
2	Eden Theological Seminary	MO
3	Missouri Southern State University	MO
5	Ozark Christian College	MO
7	Park University	MO
2	Mississippi Delta Community College	MS
3	Tougaloo College	MS
1	William Carey University	MS
1	Montana State University	MT
5	Campbell University	NC
6	Duke University	NC
3	Gordon-Conwell Theological Seminary	NC
8	Greensboro College	NC
7	Louisburg College	NC
9	North Carolina Central University	NC
4	Pfeiffer University	NC
1	Salem College	NC
2	Shaw University	NC
1	University of Jamestown	ND
3	Clarkson College	NE
1	Creighton University	NE
2	Southeast Community College Area	NE
2	NHTI-Concord's Community College	NH
1	University of New Hampshire-Main Campus	NH
1	Felician University	NJ
5	Monmouth University	NJ
6	Montclair State University	NJ
4	New Jersey City University	NJ
7	Rabbi Jacob Joseph School	NJ
3	Rutgers University-New Brunswick	NJ
2	Yeshiva Toras Chaim	NJ
1	New Mexico Junior College	NM
3	New Mexico Military Institute	NM
2	University of the Southwest	NM
1	University of Nevada-Las Vegas	NV
2	University of Nevada-Reno	NV
12	Adelphi University	NY
4	Adirondack Community College	NY
7	Canisius College	NY

Sample Institutions With On campus Housing

Sample No.	Institution	State
19	Colgate University	NY
17	College of Staten Island CUNY	NY
6	Fordham University	NY
3	Hilbert College	NY
5	Hult International Business School	NY
11	Keuka College	NY
9	Mount Saint Mary College	NY
2	Nazareth College	NY
16	New York Institute of Technology	NY
13	Pomeroy College of Nursing at Crouse Hospital	NY
18	Roberts Wesleyan College	NY
1	State University of New York at New Paltz	NY
10	SUNY College of Agriculture and Technology at Cobleskill	NY
20	The New School	NY
14	Tompkins Cortland Community College	NY
8	Wells College	NY
15	Yeshiva of Far Rockaway Derech Ayson Rabbinical Seminary	NY
11	Cedarville University	OH
3	Defiance College	OH
5	Hocking College	OH
10	Northeast Ohio Medical University	OH
2	Pontifical College Josephinum	OH
4	Rabbinical College Telshe	OH
7	The University of Findlay	OH
8	University of Dayton	OH
6	University of Mount Union	OH
9	University of Toledo	OH
3	East Central University	OK
2	Northeastern State University	OK
4	Oklahoma State University Institute of Technology	OK
1	University of Oklahoma-Norman Campus	OK
4	University of Portland	OR
1	Walla Walla University	OR
2	Warner Pacific College	OR
3	Western Oregon University	OR
1	Dickinson College	PA
5	Edinboro University of Pennsylvania	PA
12	La Roche College	PA
11	Pennsylvania College of Art and Design	PA
9	Pennsylvania State University-Penn State Altoona	PA
10	Pittsburgh Theological Seminary	PA
8	Saint Charles Borromeo Seminary-Overbrook	PA
6	Saint Vincent College	PA

Sample Institutions With On campus Housing

Sample No.	Institution	State
4	Shippensburg University of Pennsylvania	PA
7	Summit University of Pennsylvania	PA
2	University of Pittsburgh-Bradford	PA
3	Washington & Jefferson College	PA
1	Brown University	RI
2	Salve Regina University	RI
3	Coastal Carolina University	SC
4	Greenville Technical College	SC
1	Morris College	SC
2	University of South Carolina-Beaufort	SC
1	University of South Dakota	SD
1	Fisk University	TN
3	Pentecostal Theological Seminary	TN
5	The University of Tennessee-Martin	TN
4	Union University	TN
2	Vanderbilt University	TN
7	Central Texas College	TX
8	Grayson College	TX
18	Houston Baptist University	TX
17	Huston-Tillotson University	TX
3	Jacksonville College-Main Campus	TX
4	Kilgore College	TX
2	Lubbock Christian University	TX
13	Odessa College	TX
23	Paris Junior College	TX
10	Saint Edward's University	TX
12	Southern Methodist University	TX
24	Abilene Christian University	TX
15	Sul Ross State University	TX
21	Tarleton State University	TX
20	Texarkana College	TX
14	Texas A & M University-Commerce	TX
11	Texas A & M University-Texarkana	TX
19	Texas College	TX
9	Texas State University	TX
16	The University of Texas at Arlington	TX
22	The University of Texas Health Science Center at Houston	TX
1	Trinity Valley Community College	TX
5	Vernon College	TX
6	Wharton County Junior College	TX
3	Brigham Young University-Provo	UT
2	Snow College	UT
5	University of Utah	UT

Sample Institutions With On campus Housing

Sample No.	Institution	State
1	Utah State University	UT
4	Westminster College	UT
5	Averett University	VA
1	College of William and Mary	VA
4	Ferrum College	VA
3	Hollins University	VA
9	James Madison University	VA
8	Old Dominion University	VA
6	Sweet Briar College	VA
2	The Art Institute of Washington	VA
7	Virginia State University	VA
1	University of Vermont	VT
3	Green River Community College	WA
6	Northeastern University	WA
4	Old Dominion University	WA
1	The Evergreen State College	WA
2	Whitworth University	WA
5	Yakima Valley Community College	WA
5	Lakeland College	WI
4	Saint Norbert College	WI
3	University of Wisconsin-Green Bay	WI
6	University of Wisconsin-Oshkosh	WI
1	University of Wisconsin-Whitewater	WI
2	Wisconsin Lutheran College	WI
3	University of Charleston	WV
1	Marshall University	WV
2	West Virginia University	WV
1	Casper College	WY

Sample Institutions Without On campus Housing

Sample No.	Institution	State
1	Alaska Career College	AK
1	Northwest-Shoals Community College	AL
2	New Beginning College of Cosmetology	AL
3	University of Phoenix-Alabama	AL
4	Athens State University	AL
5	Paul Mitchell the School-Birmingham	AL
1	Academy of Professional Cosmetology	AR
3	Northwest Technical Institute	AR
2	Velvatex College of Beauty Culture	AR
7	Carrington College-Mesa	AZ
11	Carrington College-Tucson	AZ
1	East Valley Institute of Technology	AZ
4	Empire Beauty School-Chandler	AZ
9	Fortis College-Phoenix	AZ
10	Hair Academy of Safford	AZ
6	Le Cordon Bleu College of Culinary Arts-Scottsdale	AZ
3	Pima Medical Institute-Mesa	AZ
8	Southwest University of Visual Arts-Tucson	AZ
2	The Art Institute of Tucson	AZ
5	University of Phoenix-Arizona	AZ
17	Advanced College	CA
36	Allan Hancock College	CA
5	American Career College-Anaheim	CA
10	American College of Healthcare	CA
13	Argosy University-The Art Institute of California-Los Angeles	CA
15	ATI College-Norwalk	CA
8	Blake Austin College	CA
35	California Career Institute	CA
40	California College San Diego	CA
28	Carrington College-Stockton	CA
18	Charles A Jones Career and Education Center	CA
26	Clovis Adult Education	CA
22	College of Alameda	CA
12	College of the Desert	CA
38	Community Christian College	CA
29	Design's School of Cosmetology	CA
1	High Tech High Graduate School of Education	CA
2	Humphreys College-Stockton and Modesto Campuses	CA
20	InterCoast Colleges-Fairfield	CA
30	InterCoast Colleges-Roseville	CA
9	International School of Beauty Inc	CA
24	Los Angeles City College	CA
25	Los Angeles ORT College-Van Nuys Campus	CA

Sample Institutions Without On campus Housing

Sample No.	Institution	State
33	Lu Ross Academy	CA
4	Marian Health Careers Center-Van Nuys Campus	CA
14	Mendocino College	CA
34	MiraCosta College	CA
21	Mt San Antonio College	CA
11	MTI Business College Inc	CA
27	North Adrian's College of Beauty Inc	CA
37	Northern California Institute of Cosmetology Inc	CA
19	San Bernardino Valley College	CA
3	San Jose City College	CA
41	Santa Monica College	CA
23	Stanbridge College	CA
6	Touro University California	CA
31	UEI College-Riverside	CA
32	United Education Institute-El Monte	CA
39	United Education Institute-Encino	CA
7	Western University of Health Sciences	CA
16	Xavier College School of Nursing	CA
2	CollegeAmerica-Denver	CO
1	Everest College-Thornton	CO
3	Paul Mitchell the School-Denver	CO
5	Pima Medical Institute-Aurora	CO
4	Utah College of Massage Therapy-Aurora	CO
6	Utah College of Massage Therapy-Westminster	CO
4	Connecticut Center for Massage Therapy-Groton	CT
3	Howell Cheney THS/CT Aero Tech School	CT
2	Norwich Technical High School/Adult Licensed Practical Nurse Program	CT
1	Ricci's Academy of Cosmetology	CT
1	Career Technical Institute	DC
2	University of the Potomac-Washington DC Campus	DC
1	Margaret H Rollins School of Nursing at Beebe Medical Center	DE
15	Advance Science Institute	FL
17	Adventist University of Health Sciences	FL
11	Burnett International College	FL
8	Concorde Career Institute-Jacksonville	FL
9	D A Dorsey Technical College	FL
2	Florida Academy of Health & Beauty	FL
5	Florida Institute of Recording Sound and Technology	FL
16	Florida International Training Institute	FL
1	George T Baker Aviation Technical College	FL
12	InterAmerican Technical Institute	FL
4	Loraines Academy & Spa	FL
6	Nouvelle Institute	FL

Sample Institutions Without On campus Housing

Sample No.	Institution	State
13	Paul Mitchell the School-Fort Myers	FL
14	SABER College	FL
3	Southeastern College-Jacksonville	FL
7	Southeastern College-West Palm Beach	FL
10	Tom P Haney Technical Center	FL
3	Atlanta Technical College	GA
5	Atlanta's John Marshall Law School	GA
7	Chattahoochee Technical College	GA
4	Empire Beauty School-Augusta	GA
1	Empire Beauty School-Morrow	GA
6	Miller-Motte Technical College-Columbus	GA
2	United Education Institute-Morrow	GA
8	Woodruff Medical Training and Testing	GA
1	Kapiolani Community College	HI
2	World Medicine Institute	HI
4	Capri College-Dubuque	IA
3	Hamilton Technical College	IA
5	Iowa School of Beauty-Sioux City	IA
2	Kaplan University-Cedar Falls Campus	IA
1	Kaplan University-Des Moines Campus	IA
1	Aveda Institute-Twin Falls	ID
2	College of Western Idaho	ID
1	Blessing Hospital School of Medical Laboratory Technology	IL
4	Cannella School of Hair Design-Villa Park	IL
12	Educators of Beauty College of Cosmetology-Sterling	IL
6	Harrington College of Design	IL
10	Illinois Media School-Chicago Campus	IL
13	Kankakee Community College	IL
7	Lewis and Clark Community College	IL
8	Meadville Lombard Theological School	IL
11	Sauk Valley Community College	IL
2	Southeastern Illinois College	IL
3	The Illinois Institute of Art-Chicago	IL
5	Tricoci University of Beauty Culture-Danville	IL
9	University of Spa & Cosmetology Arts	IL
3	Aveda Fredric's Institute-Indianapolis	IN
6	Brown Mackie College-Merrillville	IN
4	Ivy Tech Community College	IN
7	Martin University	IN
5	National American University-Indianapolis	IN
2	Ross Medical Education Center-Fort Wayne	IN
1	Success Schools	IN
2	Bellus Academy	KS

Sample Institutions Without On campus Housing

Sample No.	Institution	State
1	Bryan University	KS
4	Eric Fisher Academy	KS
3	WellSpring School of Allied Health-Lawrence	KS
1	Appalachian Beauty School	KY
2	Ashland Community and Technical College	KY
3	Empire Beauty School-Florence	KY
4	Ross Medical Education Center-Owensboro	KY
4	Blue Cliff College-Houma	LA
3	Demmons School of Beauty	LA
1	Denham Springs Beauty School	LA
2	Pineville Beauty School	LA
7	Conway School of Landscape Design	MA
8	Greater Lowell Technical School	MA
3	Jupiter Beauty Academy	MA
1	Longy School of Music of Bard College	MA
6	National Aviation Academy of New England	MA
5	New England School of Acupuncture	MA
2	Shawsheen Valley Regional Vocational Technical School	MA
4	The Salter School-Malden Campus	MA
2	Cecil College	MD
1	Fortis College-Landover	MD
3	Harford Community College	MD
6	Maple Springs Baptist Bible College and Seminary	MD
4	Maryland Beauty Academy	MD
5	University of Phoenix-Maryland	MD
1	Empire Beauty School-Maine	ME
2	Kennebec Valley Community College	ME
10	Career Quest Learning Centers-Lansing	MI
4	Dorsey Business Schools-Dearborn	MI
6	Empire Beauty School-Michigan	MI
1	Kirtland Community College	MI
7	Michigan Barber School Inc	MI
9	Michigan College of Beauty-Monroe	MI
2	Michigan College of Beauty-Troy	MI
3	Ross Medical Education Center-Taylor	MI
5	Taylortown School of Beauty Inc	MI
8	The Art Institute of Michigan	MI
2	Academy College	MN
1	American Indian OIC Inc	MN
6	Cosmetology Careers Unlimited College of Hair Skin and Nails	MN
7	Dunwoody College of Technology	MN
5	Minneapolis Business College	MN
4	Minnesota School of Cosmetology-Plymouth Campus	MN

Sample Institutions Without On campus Housing

Sample No.	Institution	State
3	Sanford-Brown College-Mendota Heights	MN
5	American Trade School	MO
3	Barnes-Jewish College Goldfarb School of Nursing	MO
6	Bryan University	MO
1	Independence College of Cosmetology	MO
2	South Central Career Center	MO
4	St Charles Community College	MO
7	The Salon Professional Academy-St Charles	MO
1	Academy of Hair Design-Jackson	MS
3	KC's School of Hair Design	MS
2	Traxlers School of Hair	MS
1	Bold Beauty Academy	MT
8	Brunswick Community College	NC
1	Cabarrus College of Health Sciences	NC
9	CET-Durham	NC
4	Daoist Traditions College of Chinese Medical Arts	NC
3	Davidson County Community College	NC
7	DeVry University-North Carolina	NC
5	Pamlico Community College	NC
2	South Piedmont Community College	NC
6	Virginia College-Greensboro	NC
1	Lynnes Welding Training	ND
1	Joseph's College Cosmetology	NE
3	Nebraska Indian Community College	NE
2	The Creative Center	NE
1	Continental Academie of Hair Design-Hudson	NH
2	River Valley Community College	NH
7	Adult and Continuing Education-BCTS	NJ
2	Empire Beauty School-Union	NJ
6	Harris School of Business-Linwood Campus	NJ
3	Jersey College	NJ
4	Mercer County Community College	NJ
5	Roman Academy of Beauty Culture	NJ
1	Total Image Beauty Academy	NJ
3	Clovis Community College	NM
2	New Mexico State University-Carlsbad	NM
1	University of New Mexico-Taos Campus	NM
1	Carrington College-Las Vegas	NV
2	DeVry University-Nevada	NV
6	Bank Street College of Education	NY
13	Boricua College	NY
2	Bryant & Stratton College-Southtowns	NY
16	Charles Stuart School of Diamond Setting	NY

Sample Institutions Without On campus Housing

Sample No.	Institution	State
9	Circle in the Square Theater School	NY
7	Continental School of Beauty Culture-Buffalo	NY
5	Continental School of Beauty Culture-Rochester	NY
1	CUNY LaGuardia Community College	NY
8	Eastern Suffolk BOCES	NY
20	Empire Beauty School-Rochester	NY
3	Erie 1 BOCES	NY
17	Hudson Valley Community College	NY
14	Monroe 2 Orleans BOCES-Center for Workforce Development	NY
12	New York College of Health Professions	NY
19	Otsego Area BOCES-Practical Nursing Program	NY
18	Samaritan Hospital School of Nursing	NY
15	Trocaire College	NY
4	Ulster County Community College	NY
10	Villa Maria College	NY
11	Yeshiva and Kollel Harbotzas Torah	NY
11	Akron Institute of Herzing University	OH
10	Akron School of Practical Nursing	OH
4	Brown Mackie College-Akron	OH
9	Bryant & Stratton College-Akron	OH
5	Columbus State Community College	OH
3	Fortis College-Columbus	OH
6	Lorain County Community College	OH
8	National Institute of Massotherapy	OH
2	Ohio State School of Cosmetology-Canal Winchester	OH
1	Paul Mitchell the School-Columbus	OH
3	Claremore Beauty College	OK
1	Heritage College-Oklahoma City	OK
2	Northwest Technology Center-Alva	OK
4	Paul Mitchell The School Tulsa	OK
4	Abdill Career College Inc	OR
1	Institute of Technology Inc	OR
3	Linn-Benton Community College	OR
2	Sumner College	OR
7	Bidwell Training Center Inc	PA
11	Career Technology Center of Lackawanna County	PA
1	Career Training Academy-Monroeville	PA
4	Geisinger-Lewistown Hospital School of Nursing	PA
3	Luzerne County Community College	PA
6	Pennsylvania Institute of Technology	PA
10	Pennsylvania State University-Penn State Wilkes-Barre	PA
9	Pittsburgh Institute of Aeronautics	PA
2	Roxborough Memorial Hospital School of Nursing	PA

Sample Institutions Without On campus Housing

Sample No.	Institution	State
8	The Commonwealth Medical College	PA
12	Wilkes-Barre Area Career and Technical Center Practical Nursing	PA
5	YTI Career Institute-York	PA
2	Empire Beauty School-Warwick	RI
1	Roger Williams University School of Law	RI
2	Kenneth Shuler School of Cosmetology and Nails-Columbia	SC
3	Midlands Technical College	SC
1	Southeastern Institute-Charleston	SC
4	University of Phoenix-South Carolina	SC
1	Avera Sacred Heart Hospital	SD
2	Elite College of Cosmetology	TN
5	Genesis Career College-Cookeville	TN
1	Miller-Motte Technical College-Chattanooga	TN
4	New Concepts School of Cosmetology	TN
3	SAE Institute of Technology-Nashville	TN
14	Academy of Hair Design-Lufkin	TX
24	Avenue Five Institute	TX
11	Baptist Health System School of Health Professions	TX
7	Bella Cosmetology College	TX
13	Central Texas Beauty College-Temple	TX
4	Champion Beauty College	TX
18	Concorde Career College-San Antonio	TX
17	El Centro College	TX
12	Everest College-Dallas	TX
1	Excel Learning Center-San Antonio	TX
16	Fortis College-Houston	TX
20	MyComputerCareer.com-Raleigh	TX
22	National American University-Georgetown	TX
19	National American University-Mesquite	TX
6	Ogle School Hair Skin Nails-Hurst	TX
8	Southern Careers Institute-Pharr	TX
10	Southern Careers Institute-San Antonio	TX
15	Southern Texas Careers Academy	TX
3	SW School of Business and Technical Careers	TX
2	Tarrant County College District	TX
9	Texas Health School	TX
23	Tint School of Makeup and Cosmetology-Grand Prairie	TX
5	Trend Barber College	TX
21	University of Cosmetology Arts & Sciences-La Joya	TX
4	American Beauty Academy	UT
1	Evans Hairstyling College-St George	UT
3	Healing Mountain Massage School	UT
2	Provo College	UT

Sample Institutions Without On campus Housing

Sample No.	Institution	State
5	Uintah Basin Applied Technology College	UT
8	Centura College-Chesapeake	VA
6	Empire Beauty School-Midlothian	VA
9	Rudy & Kelly Academy-A Paul Mitchell Partner School	VA
2	Sentara College of Health Sciences	VA
7	Sylvain Melloul International Hair Academy	VA
5	Tomorrow's Image Barber Academy of Virginia	VA
1	University of Phoenix-Virginia	VA
4	Virginia College-Richmond	VA
3	Virginia Tech Carilion School of Medicine	VA
1	Community College of Vermont	VT
3	Academy of Interactive Entertainment	WA
1	Aveda Institute Portland-Vancouver Campus	WA
4	Faith Evangelical College & Seminary	WA
5	Pacific Northwest University of Health Sciences	WA
2	Sunnyside Beauty Academy	WA
6	Walla Walla Community College	WA
6	Academy of Cosmetology	WI
1	Advanced Welding Institute	WI
5	Globe University-Appleton	WI
2	Madison Area Technical College	WI
4	Nicolet Area Technical College	WI
3	The Salon Professional Academy-Onalaska	WI
1	B M Spurr School of Practical Nursing	WV
2	Monongalia County Technical Education Center	WV
3	Opportunities Industrialization Center	WV
1	IBMC College	WY