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University Police Legitimacy and Fear of Crime: An Exploration of Student Perceptions

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UNIVERSITY POLICE LEGITIMACY AND FEAR OF CRIME: AN EXPLORATION OF STUDENT PERCEPTIONS

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This study examines the relationship between student perceptions of university police and fear of crime through the utilization of a rational choice perspective. Over the last three decades, a plethora of research has explored fear of crime and factors related to its occurrence. However, a thorough review of the literature revealed a limited amount of studies that have examined the impact that fear of crime has on college students. Moreover, no studies were uncovered that utilize rational choice theory to examine whether student perceptions of university police influence their fear. This study attempts to address this shortcoming and therefore add to the fear of crime literature.

For purposes of data collection, a survey methodology and two probability sampling techniques were utilized. Sections of various general education and elective liberal studies courses were randomly selected and students within these courses were given a survey to complete. Survey questions examined several factors that can impact fear, and these factors were guided by past fear of crime research. Responses were coded and entered into a statistical software program for analysis. The results revealed empirical support for several fear of crime correlates, including gender, living arrangement, race, perceived risk of victimization and police visibility. Policy implications and suggestions for future research are discussed to conclude the study.

DEDICATION

I dedicate this dissertation to my son, Cameron Troy Crowl. May this project serve as proof that you can do anything you want in life as long as you put the time and effort into it. Set your sights high, and shoot for the stars. I love you, son!

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This research project serves as the culmination of my ten years of experience in higher education. There are numerous individuals who I would like to thank for their continued support, love, guidance, and encouragement over the years. To name a few:

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I also would like to extend my heartfelt appreciation to the rest of my family, both immediate and extended. Space limitations preclude me from being able to mention, by name, every person in my family and the appreciation that I have for them. This, however, does not mitigate the level of love and gratitude that I have for every single one of you. From my grandparents and cousins to my aunts and uncles, I would not be where I'm currently at in life without all of you. I can only hope that I made you all proud!

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I am also thankful for the love of my grandfathers, Darrell Smith and Neal Crowl, who have gone home to be with the Lord. You both will be forever missed.

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CHAPTER 1: INTRODUCTION

Fear of crime has been at the forefront of frequent conversation and concern for several decades. In particular, many scholars have gone so far to suggest that fear of crime is more serious of a social problem than crime itself (Weis & Milakovich, 1975; Rader, Cossman, & Allison, 2009; Lane & Fisher, 2009). This contention is justifiable, given the impact that fear of crime could have on the lives, perceptions, and behavioral tendencies of many individuals. For this fearful population, modifications in attitudes, behaviors, and social activities may occur. Fearful individuals may feel more vulnerable to personal victimization or even avoid engaging in certain behaviors or lifestyles. Relations with, and perceptions of, authority figures (such as the police) could also become strained or adversely affected among this fearful population.

Although crime has long sparked concern for many in society, fear of crime research was rather scarce prior to the 1970s (Furstenberg, 1971; Ferraro, 1996). Since then, an extensive amount of research on fear of crime and its correlates has been conducted. More recently, there has been a renewed interest in crime and victimization, especially on college and university campuses. This focus has been spurred, in part, by several high-profile criminal acts that have occurred at a number of schools around the nation (Wilcox, Jordan, & Pritchard 2007; Fisher, 1995). Though some college students may feel safe and secure while on campus, others may be more fearful of their own victimization given certain contexts or factors.

Crime and unlawful behavior occur noticeably less on college campuses than in the outside world (Wada, Patten, & Candela, 2010). Notwithstanding, concern for the safety and well-being of students has been voiced over the years by many parents,

concerned members of the general public, and students themselves. This cause for concern is understandable, as research suggests that approximately one-third of all college students will find themselves the victim of crime at some point during their college years (Fisher, 1995). Moreover, data from the National Crime Victimization Survey revealed that from 1995 to 2005 approximately 4.6 million college students were victimized by violent crimes (Hart, 2007). It is possible that these victimization incidences can cause many students to develop unfavorable attitudes and perceptions toward authorities, such as university police. Such incidences can also adversely impact perceptions of risk and fear of crime levels among students.

Utilizing routine activities and lifestyle exposure theory as a framework, this study examines the relationship between perceptions of the police and fear of crime levels among college students. Fear of crime has been extensively studied over the past three decades through the use of various research designs and statistical analysis techniques. A notable amount of this research has examined the impact of fear of crime within the context of a community-wide population. While these studies have made quality contributions to the fear of crime literature, much more is still needed to uncover why some students are more fearful of crime and victimization as compared to others.

Research examining fear of crime levels among college students has been slightly more limited in nature. A number of studies (see Fisher, 1995; Fisher, Daigle, Cullen, & Turner, 2003; Rader et al., 2009; Tomsich, 2011) have assessed fear of crime through the use of a sample composed of college students. Noticeably fewer studies (Griffith et al., 2004; Mbuba, 2010) have explored the relationship between students and university police. A thorough review of the literature revealed no study to date that has utilized a

rational choice framework to specifically examine the extent to which student perceptions of the police (campus and local) influence their fear of crime. This study, through its analysis of survey data obtained from a random sample of college students, addresses these shortcomings; thus expanding the literature on fear of crime.

Chapter II examines past research studies that have helped to provide a conceptual framework for the proposed study. Key individual characteristics pertaining to fear of crime are discussed and university police-student relations are considered in detail. The chapter concludes with a discussion of the theoretical perspectives of routine activities and lifestyle exposure and how both theories help to guide this study.

Chapter III presents the research methodology utilized for the present study. The sampling strategy and research design are discussed. The research questions and hypotheses are then examined along with the key variables included in the analysis. Next, the design and implementation of the survey is presented and discussed in detail. Human subject protections are then considered along with the concepts of reliability and validity. An analysis plan and summary are included to conclude the chapter.

Chapter IV presents the results of the study. Descriptive statistics and frequencies are presented first to examine the data in summary form. The results from the bivariate analyses are then reported and subsequently examined. Next, the primary assumptions of multivariate linear regression are discussed, followed by the results obtained from the regression analyses. Particular attention is focused on examining each research question and hypothesis in detail. Chapter V discusses the findings of this study in further detail. Strengths and limitations of the study are mentioned along with implications for policy. Suggestions for future research are then offered, and final conclusions are drawn.

CHAPTER II: LITERATURE REVIEW

Fear of crime is a prevalent social problem that can play a significant role in the lives of many individuals. While several studies have examined fear of crime and its correlates, the exact prevalence of this construct remains unknown. The literature suggests that fear of crime is a multidimensional concept that varies according to frequency, duration, and intensity (Wilcox et al., 2007). There is also a lack of consensus among scholars concerning how to conceptually define and subsequently measure fear of crime (Rountree & Land, 1996). It has been conceptualized in a number of different ways throughout the literature and several indicators have been utilized in an effort to measure it. For instance, Mesch (2000) assumed fear of crime as "a negative emotional reaction to crime or signs associated with crime" (p. 47). Additionally, fear of crime was defined by Ferraro and LaGrange (1987) as "the negative emotional reaction generated by crime or symbols associated with crime and is conceptually distinct from either judgments (risks) or concerns (values) about crime" (p. 73).

A substantial amount of research has indicated that a relationship exists between fear of crime and a number of factors. These factors include individual characteristics, such as gender (Haynie, 1998; Ferraro, 1996), age (Braungart, Braungart, & Hoyer, 1980; Warr, 1984), race/ethnicity (Parker, 1988; Chiricos, Hogan, & Gertz, 1997), and lifestyle choices (Cobbina, Miller, & Brunson, 2008; Rader et al., 2009). Victimization-related factors, such as perceived risk (Mesch, 2000) and past victimization (Skogan & Maxfield, 1981; Skogan, 1987) have also been found to influence fear of crime levels. Other research has indicated that perceptions of community policing activities (Williams & Pate, 1987; Scheider et al., 2003), increased police presence (Zhao, Schnedier, &

Thurman, 2002), and increased police visibility (Torres & Vogel, 2001) are additional key factors related to fear of crime.

Individual Characteristics

Fear of crime levels can vary among individuals and may depend on a number of individual characteristics, attitudes, or lifestyle factors. While anyone can be fearful of crime, it is commonly suggested in the literature that the highest fear of crime levels typically reside in women, people who are more advanced in age, nonwhites, and those who engage in lifestyles that can put one at greater risk and exposure to victimization.

Gender

Since the early 1970s, a vast amount of research has found that gender is the most salient and consistent predictor of fear of crime (Rader et al., 2009; Cobbina, Miller, & Brunson, 2008; Haynie, 1998; Lane & Fisher, 2009). It is frequently depicted in the fear of crime literature that women in general have higher fear of crime levels than their male counterparts, but they are less likely to be the victim of all types of crime except sexual assault/rape (Wilcox et al., 2007; Ferraro, 1996; Skogan, 1987). This reality has reinforced the existence of a gendered paradox between fear of crime and actual victimization. One explanation to this phenomenon relates to the heightened susceptibility of women to crime, particularly sexual assault. According to the John Howard Society of Alberta (1999), women are approximately ten times more likely to be sexually assaulted than males. This, in turn, tends to heighten women's fear for all other types of crime. An additional explanation to the gendered paradox of fear of crime relates to the social construction of fear for women. Here, some women are taught to fear crime

and victimization, regardless of their perceived vulnerability (John Howard Society of Alberta, 1999).

More recently, some research has attempted to explain the gendered gap in fear of crime. Most of this research, however, has been narrow in focus, primarily with attention directed towards the female side of the fear equation (Reid & Conrad, 2004). Nonetheless, a limited number of researchers have explicated the gendered difference in fear of crime in terms of perceived risk of victimization and vulnerability (i.e. Fisher, Sloan, & Wilkins, 1995; Haynie, 1998). That is, women's higher levels of fear of crime can be attributed to their increased levels of risk perception as well as their vulnerability to crime and victimization.

Still, other researchers have suggested that women's heightened fear of victimization is shadowed by their perception that any criminal act could lead to sexual assault/rape. Dobbs, Waid, and Shelley (2009) examined the influence of fear of rape on the overall fear of male and female college students. Utilizing survey data obtained from three geographically diverse college campuses, the authors found support for the proposition that fear of rape shadows fear of all other types of crimes. While results indicated that women reported significantly higher fear of crime levels, once fear of rape was included as a control, it was found that the gendered gap in fear of crime lessened.

As it relates to fear of crime on college campuses, research suggests that female college students are generally more fearful of their own victimization than male students. Fisher, Sloan, and Wilkins (1995) found that female college students, regardless of time of day, revealed much higher levels of fear of victimization than male students. Similarly, Fisher and Sloan (2003) examined fear of crime levels among a national representative

sample of 3,472 male and female undergraduate and graduate students at 12 randomly selected public universities. The results of the study suggested that female students had significantly higher levels of fear of victimization than their male student counterparts. This finding was particularly evident as it concerned fear of sexual assault and rape. It was also found that both male and female students were significantly more fearful of personal victimization at nighttime than during the day.

Tomsich, Gover, and Jennings (2011) examined gender differences in victimization experiences, perceived risk of victimization, fear of crime, safety, and constrained behavioral practices among a convenience sample of male and female undergraduate students. Data were obtained from an online survey completed by a total of 997 students enrolled at an urban university. Results were then analyzed and compared to the findings of the Jennings, Gover, and Pudrzynska (2007) study, which examined fear of crime among a convenience sample of students attending a traditional university. Results suggested that gender was a significant factor as it relates to fear of crime, risk perception, constrained behavior, and perceptions of campus safety. That is, women were more likely than men to be fearful of crime, have a higher perceived risk of crime, use constrained behaviors, and view their campus as unsafe. No support was found for the relationship between gender and victimization experience.

Age

It is often maintained that individuals who are more advanced in age are typically more fearful of personal victimization than their more youthful counterparts (Braungart et al., 1980; Warr, 1984; Stafford & Galle, 1984; Tewksbury & Mustaine, 2003). This observation, however, is largely inconsistent with official records, which frequently

report that younger individuals are more frequently victimized than those who are more advanced in age (Reid & Konrad, 2004; Joseph, 1997). Accordingly, an apparent age-related paradox exists in fear of crime. An often-noted explanation for this inconsistency is that older people often perceive themselves as more vulnerable to victimization, and thus, they often restrict their lifestyles to avoid being victimized (John Howard Society of Alberta, 1999). This heightened perception of susceptibility leads to greater fear of crime levels among the elderly. As a result of self-imposed behavioral restrictions, older individuals are victimized less often than adolescents.

Although many studies find support for an age-fear relationship, some recent research asserts that the relationship between both constructs is inconclusive and much more complex than what most people consider. For instance, some research has found that older individuals actually exhibit greater fear of crime levels than their youthful counterparts (Chadee & Ditton, 2003). Still, other studies have found little to no support for the relationship between age and fear of crime (Dammert & Malone, 2003).

The age-fear relationship is further complicated by the fact that some researchers argue that the impact of age on fear of crime levels is mediated by a variety of other constructs. For example, Joseph (1997) found that the relationship between age and fear of crime was largely mediated by a number of factors, including gender, socioeconomic status, and place of residency (urban vs. suburban). Further, May, Vartanian, and Virgo (2002) suggested that perceived risk of victimization plays a key role as a mediating construct in the relationship between age and fear. They asserted that if younger individuals perceive the likelihood of victimization to be high, it is highly feasible that they may be more fearful of crime and victimization than older adults.

Race/Ethnicity

Many studies have found support for the contention that nonwhites are more fearful of crime than whites. Parker (1988) examined the direct effect of race and other social characteristics on fear of crime. The social factors included age, sex, marital status, education, residence, and living arrangement. Data were obtained from a random sample of 2,830 eligible residents of Mississippi who were age 15 and older. Of the eligible participants, responses usable for analysis were received from 402 black and 1,433 white individuals. The results of the study revealed that age was the strongest predictor of fear, followed by race and marital status, respectively. Those individuals who are less advanced in age, nonwhite, and not married conveyed the highest fear of crime levels. No support was found for the other social characteristics included in the model.

The reoccurring finding that blacks are typically more fearful of whites can be attributed, in part, to the ecological proximity to neighborhood crime and incivilities of many ethnically diverse individuals (Skogan & Maxfield, 1981; Reid & Konrad, 2004). Stated alternatively, heightened levels of fear of crime among the nonwhite population can be attributed to living conditions within ethnically diverse, disadvantaged neighborhoods. Typically, fear of crime is augmented in neighborhoods that are often subjugated with violence, ethnic heterogeneity, environmental incivilities, and residential instability. These disadvantaged neighborhoods often lack the necessary resources to strengthen social ties and mechanisms within the community that are essential to help curtail crime and disorder (Cobbina et al., 2008).

Numerous studies have extended the race-fear debate by examining the influence of racial neighborhood context on fear and risk of crime. Chiricos and colleagues (1997)

examined the relationship between racial composition of place and fear of crime. More specifically, the authors were concerned with exploring the assumption that fear of crime will increase as the percentage of blacks in a neighborhood increases. It was found that racial composition was a significant factor in influencing fear among whites but not blacks. Pickett, Chiricos, Golden, and Gertz (2012) utilized public opinion data from two adult samples to further examine the perceived relationship between racial composition and fear of crime. Results of the study illustrated further support for the notion that racial composition is positively related to perceptions of risk and fear by whites.

Lifestyle

The lifestyle choices and behavioral tendencies of college students can be conducive to risk of victimization, which in turn could impact fear of crime levels. The theoretical perspectives of lifestyle exposure and routine activities can be utilized to help explain why some college students are victimized and possibly more fearful of their own victimization while others are not. Devised by Cohen and Felson (1979), routine activities theory suggests that for a victimization event to occur, a motivated offender, suitable target, and lack of a capable guardian must exist. When these elements converge in time and space, incidences of victimization become more likely. Moreover, lifestyle theory asserts that an individual's lifestyle and behavioral choices are vital as it relates to possible exposure and risk of victimization. These lifestyles can heighten or reduce victimization and are regularly characterized by the routine activities and behavioral choices of individuals.

Research suggests that many individuals (including students) who fear being victimized may constrain or restrict their lifestyles, which in turn, can heighten perceived

risk of victimization and fear of crime levels (Rader et al., 2009; Ferraro, 1996). Such individuals may also engage in avoidance behaviors in an effort to enhance personal safety and minimize their risk of victimization. These self-imposed behavioral constraints may lead to periods of isolation away from others. It is suggested in the literature that women use constrained behaviors and modifications more than men in response to their own personal fears of crime and risks of victimization (Rader et al., 2009). These constrained behaviors often serve a formal social control function over the lifestyles of women who engage in such practices.

Several studies have empirically examined the relationship between fear of crime and constrained behaviors among individuals. Results of these studies are mixed. Radar et al. (2009) examined constrained behavior practices and behavioral responses to fear of crime among a sample of male and female college students. The researchers collected victimization survey data from a sample of undergraduate and graduate students at a southern public university. Data was taken from a total of 1,340 student respondents. The findings suggested that female students were more likely than their male student counterparts to engage in several different categories of constrained behavior, including lifestyle modifications, defensive precautions, convenience precautions, and reliance on others. The findings also revealed that there were behavioral differences in the manner in which males and females responded to incidences of crime.

While some studies have found support for the notion that use of constrained behaviors can significantly impact fear of crime, others have revealed that either no link exists or that the relationship is contrary to what many would consider. Taylor and colleagues (1986) hypothesized that a significant relationship would exist between

constrained behaviors and fear of crime. Contrary to expectations, results of the study revealed evidence of no such link. Ferraro (1995) also explored the relationship between both constructs and found that constrained behavior actually increases fear of crime. This relationship was found to be unidirectional.

Victimization Factors

A large body of previous research has examined the relationship between several victimization-related factors and fear of crime. These factors include prior incidences of victimization and perceived risk of being victimized. It is widely suggested that these victimization factors may be vital sources as it relates to variation in fear of crime levels (Mesch, 2000; Skogan, 1987). It is to these areas I now turn.

Prior Victimization

The element of fear is often the most enduring emotional element or negative consequence of victimization. This is primarily due to the long-lasting effects that fear imposes on those individuals who have been victimized (Scheider, Rowell, & Bezdikian, 2003). Several prior studies have addressed the relationship between fear of crime and past experiences with victimization. These studies have provided mixed results at best. While some studies find a relationship between prior victimization and fear of crime (Russo & Roccato, 2010; Johnson & Kercher, 2009; Skogan, 1987), others suggest that little to no link exists (McGarrell, Giacomazzi, & Thurman, 1997). Still, other studies have revealed that the relationship between both constructs is provisionally-based (Chiricos et al., 1997) or contingent on the type of crime in question (Dull & Wint, 1997).

Several studies have revealed that a significant relationship exists between past victimization and fear of crime. Skogan (1987) examined the influence of past victimization on fear of crime in addition to whether the influence of crime was related to other aspects of particular subgroups, such as social isolation and vulnerability of those who have been victimized at one point in time. The sample included 1,738 residents chosen from a total of seven different neighborhoods in Newark, New Jersey and Houston, Texas. Skogan found a positive relationship between experiences with crime and people's attitudes (i.e. feelings of worry and concern for crime) and daily lifestyle choices. It was also found that people who experienced criminal victimization thought that more crime existed around them, were generally more fearful of crime, and engaged in more self-protective measures.

More recently, Johnson and Kercher (2009) authored multiple reports that explored the victimization of college students and factors related to its occurrence. In the first report, Johnson and Kercher (2009a) examined various facets of personal victimization experiences among college students. Data were collected from a sample of undergraduate students (n = 3,894) from seven public universities in Texas. The authors examined several variables of interest, which included past personal victimization experiences, lifestyle factors (i.e. living arrangement, time spent partying per week, safety precautions), participation in criminal acts, fear of victimization, and demographic information. An analysis of the data revealed several interesting findings. In particular, it was found that students who were personally victimized in the past were more likely to fear subsequent victimization than students who were never victimized. Results also revealed that students who spent more time avoiding certain activities due to safety

concerns were more likely to have been personally victimized than students who spent less time avoiding such activities. The latter finding was contrary to what was predicted.

In a follow-up report, Johnson and Kercher (2009b) examined property crime victimization experiences among students. The authors utilized the same data and sample of respondents that they used for their first report. To reiterate, a sample of students from seven universities in Texas was obtained for data collection purposes. Students were asked to complete an online survey that contained various questions about their past victimization experiences. For this report, the authors examined specific measures of property crime victimization and factors that can increase or decrease its occurrence. Results of the study revealed that many of the factors (i.e. demographics, background differences, lifestyles) related to property crime victimization were similar to those that were associated with personal victimization experiences.

Russo and Roccato (2010) explored the impact of direct and indirect victimization on fear of crime. A secondary content analysis was conducted on longitudinal data collected in two different waves from residents of Italy. A total of 1,701 individuals participated in both waves of the survey and were subsequently included in the analysis. The authors utilized three sets of variables, which included sociodemographic constructs, direct and indirect victimization, and concrete and abstract fear. Results of the study revealed support for the notion that previous victimization heightens fear of crime. In particular, recent direct victimization was a strong indicator of both concrete and abstract fear of crime. Recent indirect victimization, however, was related to concrete, but not abstract, fear of crime.

While some studies have found a positive relationship between fear of crime and prior victimization, others have found little to no link. For instance, McGarrell and colleagues (1997) examined various facilitators (ie. victimization, vulnerability, demographic traits) and inhibitors (social control, social integration, community responsiveness) to fear of crime. These indicators were drawn from past research and were used to help examine how well they can account for variation in fear of crime levels. Results of the analysis suggested that the various inhibitors included in the model were all significant predictors of fear of crime. Prior victimization, however, was found to have little influence on individual fear of crime levels.

Other studies have revealed that a conditional relationship exists between past victimization and fear of crime. Chiricos and colleagues (1997) found that past victimization is a significant predictor of fear of crime, but this relationship is only evident for whites. Moreover, Rountree (1998) examined the linkage between fear and crime, with a specific focus on burglary and violent crime as well as the effects of both individual and neighborhood crime experiences. Utilizing a sample of 4,638 residents of 100 neighborhoods in Seattle, the study found that subsequent fear of violence and burglary is largely contingent upon type of prior victimization.

Perceived Risk of Victimization

It has been suggested in the literature that perceived risk of victimization is a necessary, but not sufficient, source or predictor of fear of crime (Robinson & Roh, 2001; Ferraro, 1996). Many studies over the past two decades have examined the relationship between perceived risk of victimization and fear of crime. Early fear of crime research, however, was often criticized for failing to differentiate between perceived risk of

victimization and fear of crime (Ferraro & LaGrange, 1987). Since then, a number of researchers have emphasized that a conceptual distinction does in fact exist between the two constructs. For instance, Rountree and Land (1996) compared perceived risk and fear of crime through the utilization of various individual- and contextual-level explanatory variables. Through the utilization of survey data, it was found that there were some similarities between fear of crime and perceived risk when the explanatory variables were examined. In large part, however, the results demonstrated further support for the notion that both concepts are conceptually and empirically distinct.

Making things more complicated in the fear of crime versus perceived risk debate is the reality that a general lack of consensus exists among scholars regarding how both concepts should be conceptually defined. For instance, Furstenberg (1971) asserted that fear of crime can be conceptualized as an emotional state that is characterized by concerns for safety, while what he called concern for crime can be defined as a cognitive state that pertains to anxiety generated from fear. Moreover, Mesch (2000) defined fear of crime as a "negative emotional reaction to crime or signs associated with crime (p. 47)", whereas he refers to perceived risk as "a general cognitive assessment of safety or danger of criminal victimization (p. 47)".

It has been suggested in the literature that perceptions of being victimized could impact fear of crime levels among individuals. For example, Mesch (2000) asserted that "the higher the cognitive evaluation or judgment that one is at a higher risk of victimization, the higher the fear of crime". Moreover, Garofalo (1979) examined the relationship between fear of crime and risk of criminal victimization. Using survey data collected from eight cities in the United States, he found that fear of crime was not a

routine outcome of the perceived risk of being victimized. Despite this, it was emphasized that a positive relationship did in fact exist between fear of crime and perceived risk of personal victimization.

Warr and Stafford (1983) explored the relationship between perceived risk and seriousness of victimization as well as fear of victimization. Data were obtained from a 1981 mail survey that contained questions regarding 16 different offenses. Results of the study suggested that fear of victimization was a function of both perceived risk and seriousness of victimization. It was maintained that perceived risk and seriousness are necessary conditions for fear. Stated alternatively, fear of crime is higher when both perceived risk and seriousness are high, while fear of crime is lower when either perceived risk or seriousness is low.

Police Relations and Fear of Crime

Relations between the community and police are essential. Community-police relationships that are built on trust and a sense of interconnectedness can lead to greater amounts of interaction and cooperation with the police. This type of relationship has the ability to increase satisfaction and perceptions of the police, which can in turn help decrease fear of crime (Roh & Oliver, 2005; Worrall, 2009). To the contrary, poor relations between the police and the community can be very problematic and lead to a sense of distrust and fear among citizens. This lends itself to the notion that police-community relations should be enriched as much as possible to improve the overall quality of life in a community (Roh & Oliver, 2005).

This importance of positive police-community relations has spurred some police departments over the years to move toward a community-oriented policing model. In fact,

community policing has become one of the most promoted and discussed policing strategies throughout the United States, especially since the 1960s (Hawdon, Ryan, & Griffin, 2003). This is regardless of the fact that there currently exists a general lack of consensus regarding what activities actually constitute community-oriented policing.

Despite this lack of definitional clarity, the literature often points to the fact that community policing relies on the assumption that law enforcement and the community must work collectively together to prevent the occurrence of crime and criminality (Worrall, 2009). A primary focus of this policing approach is to increase the quality and quantity of contacts between the police and the community. This is normally done in hopes that it will increase the perceived legitimacy of the police which, in turn, can increase police satisfaction and decrease crime and potentially fear of crime (Torres & Vogel, 2001; Hawdon et al., 2003). Community policing is also designed to enhance police visibility, identify crime-specific problems, improve the overall quality of life for citizens, and allow the police to be more responsive to the needs and concerns of citizens (Worrall, 2009).

Reducing Fear

Fear of crime reduction has not always been a traditional purpose or function of policing initiatives. In fact, many police departments assumed that either it was a relatively trivial issue or that they dealt with in an indirect sense by decreasing incidences of criminal victimization (Scheider et al., 2003). This focus, however, has gradually been altered through the years to the point that it has become a legitimate focus of many police departments. Past evidence has shown that fear of crime can have long-lasting negative consequences on the community (Lane & Fisher, 2009; Scheider et al., 2003). Fear of

crime, for example, can adversely affect an individual's social, psychological, and/or physical well-being. It can also lead to an atmosphere of social disorder and neighborhood disorganization, which can indirectly result in increased crime, antisocial behavior, and possibly further levels of fear (Scheider et al., 2003). This fear of crime can even arise outside of the exposure to actual crime itself (Williams & Pate, 1987). As such, reducing fear of crime has become an explicit goal of many police departments.

A variety of policing initiatives have been adopted to increase police-community relations and fear of crime reduction efforts. Some of these tactics include citizen awareness programs, increased police presence, and citizen patrols. Past research evidence regarding the benefits of these tactics has generally revealed positive results. Williams and Pate (1987) conducted a rigorous evaluation of three different community policing programs that were implemented in Newark, New Jersey. These programs were created to increase police crime prevention activities, improve police-community relations, and reduce physical signs often associated with fear of crime. To address these areas, a number of community-based approaches were undertaken, which included the distribution of newsletters to the community, the creation of a directed patrol task force, and the formation of a coordinated community policing program that involved a storefront police office. Utilizing both experimental and quasi-experimental research designs, the authors found that most of the community-oriented programs (with the exception of the newsletters) achieved desirable effects in terms of fear of crime reduction and increasing participant satisfaction with local law enforcement.

Other studies have examined community policing strategies and its relationship with police visibility and fear of crime. Torres and Vogel (2001) utilized a survey

methodology to examine the impact that police visibility had on fear of crime and perceptions towards the operations and ability of law enforcement. The authors administered both a pre-test and a post-test to a sample of minority immigrants (Latinos and Vietnamese residents) who lived within the area that received the community policing intervention. The findings revealed that both groups of immigrants reported lower fear of crime levels and favorable attitudes of the police from pre- to post- test.

Scheider and colleagues (2003) utilized secondary survey data to examine the relationship between perceptions of community policing activities, fear of crime, and satisfaction with law enforcement. Specifically, data were obtained from the 12 Cities Survey, in which telephone surveys were conducted with a random sample of 9,327 heads of households in 12 U.S. cities. It was found that there was a positive relationship between perceptions of community policing activities and satisfaction with the police. There was a lack of statistical significance, however, when fear of crime was included as a variable in the model.

Zhao and colleagues (2002) conducted a rigorous review of the policing literature to analyze studies that have examined the impact that police presence had on police satisfaction and fear of crime reduction. A total of 26 projects that utilized quasi-experimental research designs were examined and included in the analysis. Police presence was divided into three categories, which included targeted policing activities, proactive arrest projects, and integrated policing activities designed to enhance police-community interactions. Results of the review suggested that increased police presence has a strong influence on reducing fear of crime. The data also revealed that community policing strategies had the strongest impact on fear of crime reduction.

Still, other scholars have attempted to identify the intervening factors between perceptions of community-oriented policing strategies and fear of crime. Roh and Oliver (2005) utilized secondary survey data to further examine the causal linkage between community policing and fear of crime. Only personal data from the Criminal Victimization and Perception of Community Safety in 12 U.S. Cities survey were used. The results of the study revealed that the relationship between community policing strategies and fear of crime was largely mediated by a number of constructs, namely perceptions of neighborhood disorder and low quality of life.

Police as a Legitimate Authority

The importance of police-community relationships has been widely recognized in the literature. As mentioned previously, positive relations between the police and community can yield numerous benefits to both parties. For instance, it can produce a greater amount of favorable interactions between the police and community members. This type of relationship can also help facilitate a greater amount of public trust in, and satisfaction with, the police. Additionally, relationships that are built on support and interaction can enhance the police's ability to effectively preserve order and prevent crime. But why do people support the police? One primary reason, as advanced by Hinds and Murphy (2007), is that they view the police as a legitimate authority.

The manner in which the public perceives the legitimacy of police is imperative to the lifeblood of a police agency. Police legitimacy has been defined by Sunshine and Tyler (2003) as "a property of an authority or institution that leads people to feel that that authority or institution is entitled to be deferred to and obeyed (p. 514)." It is believed that when individuals perceive the police as a legitimate authority, they will be more

likely to support their endeavors and obey their requests (Tyler, 1990). In contrast, when people view the police as illegitimate, relations between both groups can become quite problematic, if not fragmented. A disconnect can also emerge between the police and the community – one that makes policing efforts toward order maintenance more difficult.

The literature indicates that police legitimacy can be characterized as containing both normative and instrumental features. The normative aspect is closely linked with the concept of procedural justice, given that it concerns itself with people's perceptions toward the fairness of the decision-making process undertaken by the police (Tyler & Fagan, 2008; Sunshine &Tyler, 2003). It is therefore assumed, based on the normative perspective, that individuals will more likely have an enhanced sense of police legitimacy as long as they are treated fairly by the police. This type of fair treatment can also breed increased citizen satisfaction with the police as authority figures. Moreover, the instrumental aspect is primarily concerned with police performance, risk, and distributive fairness (Sunshine & Tyler, 2003; Hinds & Murphy, 2007). In short, the police can improve their own legitimacy when they effectively control crime, enhance the risk of detection and sanctions for law violators, and distribute police services in a fair manner. Such undertakings can also help facilitate supportive police-community relations.

The literature is replete with studies that have examined the impact of police legitimacy on various behavioral and attitudinal measures. In a landmark study, Tyler (1990) examined police legitimacy and reasons why people voluntarily comply with the law. Utilizing a sample of Chicago residents, the author found that individuals' satisfaction with the police was largely dependent on the way the police treated them. More specifically, when individuals perceived that they were treated with fairness and

respect, they were more likely to be satisfied with the police and view them as a legitimate authority. These findings therefore suggest that procedural justice is a vital element that helps shape citizen perceptions of the police.

A number of more recent studies have also suggested that procedural justice is an important correlate of police legitimacy. For instance, Mazerolle and colleagues (2013) conducted a randomized field trial to examine the relationship between procedural justice policing and citizen perceptions of the police. Utilizing experimental conditions, the authors examined citizen experiences with police-initiated, procedurally sound traffic stops. Results revealed further support for the relationship between procedural justice and police legitimacy. In particular, it was found that citizen judgments of the police can be influenced by police use of procedural justice. Moreover, Tyler and Huo (2002) utilized a sample of 804 Chicago residents to examine some of the reasons why people willingly comply with police mandates and expectations. One of the most significant findings revealed that people who perceived the police as legitimate were more likely to routinely follow the law and accept police decisions as fair. It was also suggested that people's views of the police were guided by the way in which the latter treated the former, thereby suggesting that fair treatment of citizens can enhance police legitimacy.

Tyler and Fagan (2008) examined police legitimacy and its influence on public cooperation and experiences with the police. A longitudinal, panel study design was utilized to explore respondent perceptions both before and after their experiences with law enforcement. Two waves of residents from New York City were phone interviewed for data collection purposes. The first wave of interviews yielded 1,653 respondents, while the second wave generated 830 sample participants. Individuals who took part in

the second wave also participated in the first wave of interviews. Results illustrated that police legitimacy was linked to positive cooperation with the police. It was also found that procedural justice was positively related to the views that people held about the police. That is, when individuals have experiences with police officers who utilize fair procedures, they are more likely to view them as legitimate.

Crime and Fear on Campus

Crime and victimization can have a substantial impact on college and university campuses. This is even despite the fact that crime, in general, occurs less on college campuses than the outside community (Elmes & Roedl, 2012; Robinson & Roh, 2001; Henson & Stone, 1999). This is true for both property and violent crime incidences. Still, reported cases of campus crime have steadily increased through the years. The National Center for Victims of Crime (2012) indicated that reported incidences of campus crime increased from 88,000 cases in 2007 to approximately 93,000 cases in 2010. This represents an increase of nearly 5.5 percent of all cases reported to the police during the above-referenced time period.

Fear of crime on college and university campuses has gone through themes over the years that have been indicative of various high-profile events and crisis-related incidents. These events, while rare, often receive widespread media attention and tend to create the impression that campuses are dangerous places plagued by crime and deviant behavior (Fisher, 1995). For instance, in the 1980s, several high-profile violent crime incidences occurred on college campuses around the nation. These events helped to enhance fear of crime levels among many individuals and led some to challenge the perception that college campuses were safe environments that were immune from

criminal activity (Jennings et al., 2007). It was around this time that campus crime and concern for the safety of students increasingly became more salient issues to many researchers, school administrators, and legislatures.

There have also been a number of recent extreme violence-related incidences involving mass shootings on college campuses that have had an impact on fear of crime research and prevalence. In April 2007, Seung-Hui Cho killed 32 students and faculty, wounded numerous others, and killed himself in a deadly mass shooting on the campus of Virginia Tech (Virginia Tech Review Panel, 2007). The following year, Steven Kazmierczak shot and killed five students in another mass campus shooting at Northern Illinois University (Kaminski, Koons-Witt, Thompson, & Weiss, 2010). Although events such as these are isolated occurrences, they often receive a plethora of media attention and scrutiny. Such events also have an adverse far-ranging impact on the campus community, especially students, and the general public.

High-profile acts of campus violence, such as those referenced above, have spurred many colleges and universities to implement various initiatives and policies designed to improve campus security and overall quality of life for students (Kaminiski et al., 2010). These acts have also fueled numerous legislative responses and the enactment of several state and federal laws through the years. For instance, in an effort to enhance crime awareness and student safety, Congress passed the Crime Awareness and Campus Security Act of 1990. This act, which was officially renamed the Jeanne Clery Disclosure of Campus Security Policy and Campus Crime Statistics Act, requires colleges and universities to openly report statistics on the prevalence and occurrence of campus crime to the general public (Jennings et al., 2007). It has helped to facilitate a

greater awareness of crime on college and university campuses and has spurred the development of numerous crime prevention programs on campuses around the nation (Jennings et al., 2007). These programs are often designed to enhance student safety, which can sequentially decrease fear of crime and victimization.

University Police-Student Relations

Institutions of higher learning around the nation can serve as vulnerable targets for individuals who pursue criminal or deviant lifestyles (U.S. Department of Justice, 2004). Many of these institutions have experienced growing levels of student diversity, enrollment, and crime that have spurred movements toward more proactive policing policies and practices (Griffith, Hueston, Wilson, Moyers & Hart, 2004). Research suggests that this focus has prompted a vast majority of campus police departments to embrace and move toward a community-oriented policing approach (Elmes & Roedl, 2012; Rengert, Mattson, & Henderson, 2001; Griffith et al., 2004). Vital to this approach has been the development and continued maintenance of positive relations between the police and the campus community.

As part of a community-oriented policing model, a focused effort has gradually been placed on establishing and further enhancing positive police-student relationships on college and university campuses (Johnson, 1995). This type of working relationship between university police and students serves a number of vital functions. Perhaps most importantly, police-student relationships that are built on trust and honesty may increase student cooperation with the police, which, in turn, can help to increase perceptions and decrease fear of crime levels among students.

Despite the importance of university police-student relations, a limited amount of empirical studies have dedicated attention over the years to addressing the topic. Griffith and colleagues (2004) examined student perceptions of services provided by a campus police department at a mid-sized regional university. A total of 577 students participated in the study and were asked various survey questions relating to demographics, victimization, overall feeling of safety on campus, satisfaction with campus police, and contact with the police. Students were asked to rate the campus police on several dimensions through the utilization of a 5-point Likert scale. It was found that students rated the police most favorably in the areas of professional conduct and neatness of appearance, whereas the least favorable ratings were in the dimensions of problem solving, putting one at ease, and fairness. The authors suggested that almost all of the ratings were positive and students maintained favorable perceptions of the police.

Mbuba (2010) examined the attitudes of different groups of college students toward university police. These views were examined and compared across four domains, which included race, gender, past police encounter, and academic major (criminal justice major vs. noncriminal justice major). The author utilized a nonrandom convenience sample to select different academic departments at a Midwestern university. A random sample of courses from the selected departments was then utilized. Students in these courses were administered a survey containing 14 attitudinal-type questions. Results of the study revealed that the most important predictors of attitudes toward the police were race and gender, respectively. Minority students and males were more likely to view the police in an unfavorable manner than whites and females. Moreover, no statistical significance was found for past police encounter and major.

Other studies have explored the attitudes of college students toward police in general. Williams and Nofziger (2003) explored student perceptions of police in a college town. Survey data were collected from a random sample of college students (N= 89) and another sample of members of the public (N=212). This approach allowed comparisons to be made between groups. Several constructs were included in the model and subsequently analyzed. These variables included demographics, experiences with victimization, feelings of safety, contact with the police, and satisfaction with the police. The study found that students were more likely than community members to feel unsafe and view the police in an unfavorable manner. In particular, it was found that being in college led to decreased student confidence and trust in the police. This remained true regardless of police contact or the lack thereof. Moreover, it was revealed that women reported higher confidence levels in police despite feeling more unsafe than males.

Theoretical Framework

Various theoretical perspectives have been utilized in the past to provide a framework to research on fear of crime and its correlates. This proposed study is guided by rational theory and, more specifically, the perspectives of routine activities and lifestyle exposure theory. This section will examine the assumptions and basic tenets of each theory, while it will also explore relevant empirical research that has attempted to provide validation for each theory. Attention will be given to discussing how each theory can not only be used to help understand crime but also fear of crime and victimization.

Routine Activities Theory

It has been noted in the literature that criminological theories cannot be fully understood outside of the historical context of the time period that they were developed

(Kubrin, Stucky & Krohn, 2009). Routine activities theory, in addition to lifestyle exposure theory, gained prominence throughout the 1970s and 1980s. This was a period characterized by conservative thought and politics. Around this time, the criminal justice system was punitively-oriented and people in general were relatively intolerant of crime and deviance. The nation decided that enhanced severity of punishment would help to solve the crime crisis, and as such, more prisons were gradually constructed and a war on crime was declared nationwide (Kubrin et al., 2009).

Advanced prominently by Cohen and Felson (1979), routine activities theory posits that crime and victimization can be understood through routine activities and lifestyles, particularly those that occur outside of the home. This theoretical perspective isn't concerned with examining why individuals are naturally inclined to commit crime (Kubrin et al., 2009). Instead, it focuses its attention on the organization of activities in time and space that allow individuals to translate criminal inclinations into action. It also suggests that there is a noteworthy amount of variation in exposure to victimization that varies as a byproduct of lifestyle choices (Mesch, 2000).

Cohen and Felson (1979) noted that for victimization to occur, three things must come together in time and space. These elements include a motivated offender, a suitable target, and a lack of capable guardian. When these three elements come together via routine activities, the likelihood of victimization heightens. According to Tewksbury and Mustaine (2003), "routine activities determine the amount of exposure people have to potential offenders, how valuable or vulnerable they or their property is as a target, and whether or how well guarded they and their property are" (p. 303). This development of routine activities is critical in that it provides a theoretical framework as to why some

individuals are victimized and possibly more fearful of crime while others are not. It will also serve as a guiding theoretical perspective for this study.

Lifestyle Exposure Theory

Similar to routine activities theory, lifestyle exposure theory gained prominence in the 1970s as a theory of victimization. Developed by Hindelang, Gottfredson, and Garofalo (1978), lifestyle exposure theory asserts that an individual's lifestyle and behavioral choices are critical as it concerns exposure and risk of victimization. These lifestyles or patterned activities, once constructed, can heighten or reduce victimization rates and are characterized in large part by the routine activities and behavioral propensities of individuals (Williams & McShane, 2010).

Lifestyle exposure theory maintains that certain lifestyles or activities can expose individuals to greater risks of victimization than other lifestyles (Hindelang et al., 1978). It is also possible that lifestyle choices may influence fear of crime. For instance, when individuals interact with, and are exposed to, offenders and places that are conducive to crime, there is a heightened probability for victimization to occur. This may impact an individual's fear of crime, especially if victimization does occur. In contrast, when people refrain from engaging in routine activities that are risky in nature, the likelihood of victimization is often lessened. This is despite the fact that an individual's level of fear of crime may actually increase by them making the conscious decision to avoid certain lifestyles (Williams & McShane, 2010).

It should be noted that lifestyle exposure theory was originally designed to explain differential victimization rates rather than fear of crime itself. However, it has been utilized in recent research to help explain fear of crime and victimization (Rountree

& Land, 1996; Mesch, 2000). This study too will utilize lifestyle exposure theory, along with routine activities theory, as a guide in an effort to better understand not just crime but also fear of crime and its relationship with the perceptions that students have of university police. The following section will examine research that has provided support for lifestyle exposure and routine activities theory.

Empirical Research

A number of researchers have looked at how victimization risks and fear of crime are affected by the lifestyles and routine activities of individuals. Rountree and Land (1996) examined possible distinctions between perceived risk and burglary-specific fear of crime. Perceived risk was conceptualized by the authors as a more general cognitive fear, whereas fear of crime was viewed as an emotionally-based, burglary-specific fear. Data were obtained from a victimization survey administered to 5,302 individuals clustered within 300 neighborhoods and 100 census tracts. Various aggregate- and individual-level (including routine activity) predictors of perceived risk and burglary-specific fear were included for analysis. Individual-level independent variables included sociodemographic attributes, routine activity aspects, and previous experience with burglary. Aggregate-level predictors included constructs that related to neighborhood disorder or disorganization (ie ethnic heterogeneity, neighborhood incivilities).

Rountree and Land (1996) found that there were key distinctions between perceived risk and fear of crime. Results of the study suggested that different sociodemographic predictors exist for both perceived risk and burglary-specific fear of crime. For instance, it was determined that while younger people and whites were more fearful of burglary, gender had an insignificant impact when included in both models. It

was further found that routine activity variables were better predictors of burglary-specific fear than perceptions of risk. In particular, individuals who engaged in routine activities that made them more vulnerable were more likely to fear crime than those who refrained from participating in such lifestyle choices. Past experiences with burglary was also found to be a key predictor of both perceived risk and burglary-specific fear.

Mesch (2000) utilized a 67-question telephone survey to examine the relationship between perceived risk of victimization, fear of crime, and routine activities that occur at night. In particular, data were collected via a random systemic sample of phone numbers belonging to residents who live in Haifa, which is the third largest city in Israel. Various exogenous variables (such as past victimization and vicarious victimization) and demographic constructs (such as education, age, gender, and marital status) were included in the analysis. Findings revealed that most of the demographic variables were directly related to routine activities and indirectly related to fear of crime. It was also found that individuals who perceived their living environment as dangerous were less likely to engage in routine nightly activities and more likely to be fearful of crime.

Application to Current Study

The lifestyle choices and routine activities that college students engage in may increase their risk and exposure of victimization and heighten their fear of crime (Tewksbury & Mustaine, 2003). Such lifestyle choices include, but are not limited to, walking on campus alone at night, leaving campus to go out alone at night, frequent attendance at parties and other social gatherings, consuming alcohol, and using illicit drugs. These choices can increase a student's vulnerability and risk of being victimized, especially when the three components of routine activities theory converge in time and

space (Mesch, 2000). For example, routine activities can bring students (suitable targets) into contact with potential offenders without the presence of any guardianship (such as campus police). The convergence of these elements enhances students risk of victimization and could subsequently impact their fear of crime.

It is possible too that risk of victimization and fear of crime may lead individuals to refrain from certain lifestyle choices and routine activities, especially those that occur at night (Mesch, 2000). Research suggests that individuals who fear personal victimization may self-impose restrictions on their lifestyles and behavioral propensities. This, in turn, can further heighten feelings of fear and perceived risk of victimization (Rader et al., 2009; Ferraro, 1996). Take for instance women. Such individuals often find themselves less prone than men to being victimized even though they are more fearful of their own victimization. This can be attributed, in part, to the fact that they are more likely than men to avoid certain lifestyles and routine activities that can be deemed as risky or dangerous (Lane & Fisher, 2009). These self-imposed behavioral restrictions, then, tend to make women more fearful of crime than their male counterparts.

Summary

This chapter provided an overview of fear of crime and its correlates. It has been widely suggested in the literature that fear of crime is a serious social problem that can impact the lifestyle choices and behavioral propensities of an untold amount of individuals. Research also suggests that fear can be influenced by a number of individual- and contextual-level factors. These factors can range from demographic characteristics and perceived risk to lifestyle choices and perceptions of police. While there has been a fruitful amount of research conducted over the years on fear of crime and its correlates,

much more is needed to uncover why certain individuals or groups are more fearful compared to others in society. This is especially true as it pertains to college students.

Given the prevalence and undesirable effects often associated with fear of crime, relations between the police and community have gradually become more essential. So too have the relations between university police and students. It has been suggested that university police-student relationships that are enriched can increase student satisfaction with, and perceived legitimacy of, the police. This, in turn, can lower perceptions of risk and feelings of vulnerability among students, while it can also lessen their fear of crime and victimization.

CHAPTER III: METHODOLOGY

The current study examined the relationship between student perceptions of university police and fear of crime levels. Participants included both female and male undergraduate students at a state public university geographically located in the northeastern part of the United States. Data were collected through the use of two probability sampling techniques. In particular, a self-report survey was administered to students in classes that were randomly selected for this study. Survey questions were designed to examine various factors and characteristics that can potentially influence one's fear of crime level.

The following chapter provides a detailed description of the methods and procedures that were utilized in this study. Material is presented that details the sampling techniques used to select participants and the research design employed for the study. Information is also presented that discusses the method of data collection, the hypotheses and research questions, protections to human subjects as well as the concepts of validity and reliability. An analysis plan and summary conclude the chapter. First, however, a brief discussion of the pretest survey instrument follows.

Pretest of Survey Instrument

A pretest of the survey instrument developed for this study was administered to a convenience sample of undergraduate students enrolled at the campus of interest during the Fall 2012 semester. This was done for a number of different reasons. Various original survey questions were utilized in this study to measure fear of crime and other pertinent constructs. Also, this study attempts to fill a gap in the current fear of crime literature,

and as such, no existing surveys were available to use for data collection purposes. It is for these reasons that a pretest was administered.

The pretest of the survey was completed four weeks prior to the conclusion of the Fall 2012 semester. In particular, an upper-level undergraduate Criminology course was selected, and students enrolled in this class were recruited to pre-test the survey instrument. Prior permission for formal access into the course was given by the instructor of record. It is important to note that students were requested to not respond to each specific survey questions. Instead, students were asked to visually review the survey and subsequently provide oral feedback regarding the clarity of survey items. They were also encouraged to offer suggestions regarding the substance and layout of the survey. This was done in an effort to enhance the overall quality of the survey.

A total of 24 students were in class on the day that the pretest survey was distributed. Several of these students took the opportunity to offer feedback on the survey. A few notable issues were proposed. Perhaps the most reoccurring issue mentioned by students was the lack of applicability to some of the survey questions. For instance, some students mentioned that they did not know who the campus police were or they never had any interactions with them. Given this feedback, a decision was made to alter the layout of the first section of the survey. In particular, response categories in this section were expanded so as to allow for the inclusion of a 'not applicable' category.

Students were also asked whether any additional examples of criminal activities should be included in the next to last section of the survey, which measured student concerns about crime. This was done to ascertain whether there were any other notable unlawful activities (beyond those already included) that students may fear while on

campus. Two ideas were offered by students. These pertained to the theft (or attempted theft) of computers as well as articles of clothing. It is worthy to mention that these suggestions, particularly the latter, came as a surprise to the researcher. However, after some discussion, it was determined that theft of these items was an actual, semi-frequent concern among many students. These suggestions, then, led to a decision to include survey questions that measured both of the aforementioned activities.

The Current Study

Site Location

The campus of interest for this study is a medium sized state-funded school that, as of Spring 2013, has a total enrollment of 14,005 students, of which 11,892 are undergraduate students and 2,113 are graduate students (Indiana University of Pennsylvania [IUP], 2013). University statistics from Spring 2013 reveal that the majority of the student population is female (56%) and white (78%), with in-state students making up about 87% of the total student enrollment (IUP, 2013). The majority of students (71%) also live off-campus (IUP, 2013). Given its diversity in student population and educational attainment opportunity, it is argued that this site serves as an attractive location for conducting research. This diversity also better allowed for generalizations to be made from the sample to the overall population of students.

Sample Selection

The unit of analysis for this study is individuals. In particular, the sample consists of undergraduate students (both male and female) enrolled during the Spring 2013 semester at the university of interest. Recruitment of respondents occurred through the use of two probability sampling procedures. These techniques included stratified

sampling and random sampling. Stratified sampling involves dividing the sampling frame or population of interest into similar subgroups or strata, where a random sample is then independently taken from each group or stratum (Maxfield & Babbie, 2005). This type of sampling strategy was utilized to select a sample of underclass students (i.e. freshman and sophomores) that were representative of the total student population of underclass students on the campus of interest. For this study, the sampling frame included a total of 11.892 undergraduate male and female students enrolled for the Spring 2013 semester at the university of interest.

For inclusion in the study, underclass students were divided into homogenous strata that were representative of their educational attainment years (i.e., freshman and sophomore). Sections of required general education classes that include students of different majors were identified and randomly sampled. The current university curriculum requires underclass students to take certain required classes at specific points in their academic career. For instance, during their freshman year, all freshman students are required to take both *ENGL 101: Composition I* and one of the following history courses: *HIST 196: Explorations in U.S. History*, *HIST 197: Explorations in European History, or HIST 198: Explorations in Global History.* These courses are mandatory and are typically taken in separate semesters during a student's freshman year. Similarly, all sophomores are required to take *ENGL 202: Composition II* sometime during their sophomore year. Taking a random sample of these courses allowed for the inclusion of a representative sample of students of various academic years and majors.

For participation purposes, freshman students enrolled in *ENGL 101* or *HIST 196*, *197*, or *198* and sophomores enrolled in *ENGL 202* during the Spring 2013 semester were

recruited by the researcher. In particular, there were 55 sections of *ENGL 101*, seven sections of *HIST 196*, four sections of *HIST 197*, and 14 sections of *HIST 198* offered during the aforementioned semester. Moreover, there were 40 sections of *ENGL 202* that were offered. After these courses were identified, a random number generator was utilized to select courses for inclusion in the study. After the first round of selection was complete, the researcher sought permission for formal access into each randomly selected course from the instructor of record. This process produced several courses in which the researcher was given formal access to, but it did not yield enough classes to produce the targeted sample size. As such, additional rounds of selection were performed until the desired amount for underclass representation was met. There were a total of seven sections of the above-mentioned general education courses that were included in this study; three sections of *ENGL 101*, one section of *HIST 198*, one section of *HIST 197*, and two sections of *ENGL 202*. A total of 142 students were enrolled in the five selected freshman level courses, while a combined 56 students were enrolled in both selected *ENGL 202* classes. See Appendix F for a detailed list of these courses.

Upper-class students (i.e., juniors and seniors) were also included in this study. These students were sampled through the use of a random sampling technique. Unlike underclass students, all juniors and seniors are not required by the current university curriculum to take certain required general education classes. Instead, various elective liberal studies courses are offered each semester, and students are required to choose a certain number of classes from those offered. For this study, all sections of 300 and 400 level elective liberal studies courses offered for the Spring 2013 semester were first identified by the researcher. In particular, there were 35 of these type of courses offered.

Courses were then randomly selected via a random number generator to obtain a representative sample of junior and senior students for participation in this study. Permission from the instructor of record of each randomly selected course was sought prior to survey administration. This yielded several courses that were included in the sample, but similar to the sampling technique used for underclass representation, it did not produce enough classes to reach the targeted sample size. To this end, two additional rounds of random selection were done until the desired amount of students needed for upper-class representation was met. There were a total of eight 300 and 400 level elective liberal studies courses that were included in this study. These courses included the following: *JRNL 375*, *PHIL 460,* three sections of *PSYCH 310*, *SOC 363, PLSC 389,* and *RLST 375*. A combined 303 students were enrolled in these courses. See Appendix G for a detailed list of these courses.

The primary rationale for utilizing probability sampling techniques to select participants for this study is threefold. First, both stratified and random sampling procedures allow for each person in the sampling frame to have an equal chance of being selected to participate (Fowler, 2002). These sampling methods will ensure that all students on the campus of interest will have a random chance of being selected to participate. To this end, no students will be selectively excluded from having a chance to participate in the study. Both stratified and random sampling, like other probability sampling procedures, also allow for the greater generalizability of findings from the sample to the overall population (Maxfield & Babbie, 2005). As such, these sampling procedures will allow the researcher to better generalize the findings of this study from the sample to the overall population of students

Sampling error was an additional issue considered when the sampling techniques were selected. Given the focus of this study, a number of different sampling methods (such as a simple random sample) could have been utilized for data collection purposes. However, if random sampling was the only method chosen, it is possible that certain academic years or majors could have been overrepresented in the sampling process. For instance, it is possible that a random sampling technique could generate an abundant amount of underclass students and only a few upper-class students. Similarly, Criminology students could be disproportionately selected over other majors. If this occurred, the sample would not be as representative of the entire student population

Sample Size

The desired sample size for this study was obtained through the guidance of previous research estimates regarding the number of cases needed per independent variable for statistical power (with the use of multiple regression analysis). For a reliable regression equation and to achieve reliable results, Mertler and Vannatta (2005) maintain that a 15 to 1 minimum ratio is most suitable. Moreover, Meyers, Gamst, and Guarino (2005) propose that 20 cases are needed for each independent variable in a regression analysis. Given that there are approximately 11 independent variables included in this study, the minimum target sample size needed is approximately 165 to 220 students. This is a suggestive estimate, and research has indicated that an increase in sample size can yield a number of benefits. For example, increasing sample size can help offset issues associated with standard error and low participant response rates (Maxfield & Babbie, 2005). It can also help compensate for other issues that could arise that would limit the amount of usable cases for analysis. Such issues include, but are not limited to,

incomplete, unanswered, and/or unintelligible responses from participants (Maxfield & Babbie, 2005; Dillman, 2007). With these potential issues in mind, a decision was made to seek approximately 350 students for participation purposes.

It was the intent of the researcher to obtain a sample of undergraduate students that was representative, by class standing, of the total student population at the university of interest. A total of 11,892 undergraduate students were enrolled for the Spring 2013 semester at the campus of interest. The breakdown of undergraduate enrollment by class standing is as follows: 3,254 (or 27.4%) are freshman, 2,748 (or 23.1%) are sophomores, 2,660 (or 22.4%) are juniors, and 3,230 (or 27.2%) are seniors (IUP, 2013). Multiplying each percentage individually by the desired sample size yields an estimate of the total students needed per strata. To this end, a total of 177 underclass students (96 freshman and 81 sophomores) and 173 upper-class students (78 juniors and 95 seniors) were recruited to participate. This yields the total desired sample size. See Appendix E for an undergraduate student sample to population comparison in demographics.

Surveys were administered on the campus of interest over a three week period during the Spring 2013 semester. Prior to survey administration, the researcher briefed participants on the purpose of the study and its voluntary nature. Informed consent forms were also given to each respondent so as to allow them to make an informed decision on whether or not to participate. A total of 501 undergraduate students were enrolled in the sampled courses. Several students, however, were absent the day in which the survey was administered. Consequently, a total of 361 students completed the survey, thus representing an overall 72.1% response rate. It is important to note that of the students who were present on the day of survey administration, only one student chose to not

participate. This yielded a 99.7% response rate for those who were in attendance. Each of the 361 completed surveys was visually examined for cases involving incomplete data or extreme outliers. Thirteen cases in total were removed prior to analysis due to missing data. Thus, the final sample size was 348.

Research Design

A cross-sectional research design is utilized in this study. The primary rationale for the preference of using a cross-sectional design for this study is twofold. First, longitudinal research designs are primarily concerned with the examination of changes in patterns of behavior that occur over time (Carmines & Zeller, 1979). This study, however, is concerned with examining the relationship between fear of crime and other constructs at one point in time. Since change over time in people's fear of crime levels is not a focus of this research, a cross-sectional research design is preferred over a longitudinal design. Furthermore, longitudinal designs can be costly, time demanding, and labor intensive (Menard, 2002). It is the intention of the researcher to lessen the expenses and time required to conduct the study, which is something that most longitudinal research cannot provide. As such, a cross-sectional design was chosen.

Research Questions and Hypotheses

A key assumption advanced in this study is that student perceptions of the police may impact their fear of crime. Through a review of relevant fear of crime literature, this study sought to address the following research questions:

1) Do student perceptions of the police affect their fear of crime levels?

2) Do certain victimization-related factors impact a student's fear of crime?

3) Do certain lifestyle choices influence fear of crime levels among students?

4) Which individual characteristics influence a student's fear of crime level?

This study also posed several hypotheses. Through the guidance of previous fear of crime research and the research questions mentioned above, the following hypotheses were devised (with each corresponding research question in parentheses):

H_1: (1) Students who have favorable perceptions of *university police* will be less fearful of crime than students who view the police in an unfavorable manner.

H_2: (1) Students who have favorable perceptions of *local police* will be less fearful of crime than students who view local police in an unfavorable manner.

H_3: (1) Students who perceive university police as being more visible will report lower fear of crime than students who view the police as being not visible.

H_4 (2) Students who report being victimized in the past will be more fearful of crime than those students who report no such prior victimization.

H_5: (2) Students who perceive a higher risk of personal victimization will be more fearful of crime than those students who perceive a lower risk of victimization.

H_6: (3) Students who engage in lifestyle choices that can be classified as risky or unsafe will fear crime less than those students who refrain from such activities.

H_7: (4) Female students will be more fearful of crime than male students.

H_8: (4) Upper-class students (juniors and seniors) will exhibit greater fear of crime levels than underclass students (freshman and sophomores).

H_9: (4) Nonwhite students will be more fearful of crime than white students

H_{10}: (4) Older students will be more fearful of crime than more youthful students.

H_{11}: (4) Off campus students will exhibit greater fearful of crime levels than students who live on campus.

Independent Variables

Past research has indicated that fear of crime levels can vary, sometimes drastically, and depend on a number of different factors and contexts. Various independent variables are included in this study to examine the research questions and hypotheses developed in the previous section. These constructs included demographics, victimization-related factors, lifestyle choices, police visibility, and perceptions of university police. A number of survey questions measured each of these variables.

An extensive amount of past research has demonstrated that demographic variables (ie gender, age, race/ethnicity) may influence fear of crime levels. A plethora of research has found that women are more fearful of crime than men, although they are often victimized less (see Wilcox et al., 2007; Fisher & Sloan, 2003). Race/ethnicity also tends to be an important predictor of fear of crime. Research tends to find that nonwhites are generally more fearful of crime and personal victimization than whites (Reid & Conrad, 2004; Skogan, 1987). Moreover, age is a salient factor to consider in fear of crime research. A notable body of research supports the notion that individuals more advanced in age are typically more fearful of crime than their more youthful counterparts (Tewksbury & Mustaine, 2003; Joseph, 1997). This is even despite the fact that older individuals tend to be victimized less than those who are younger in age.

Victimization-related factors were also be included as independent variables. These factors included prior victimization and perceived risk of victimization. Some research has indicated that experiences with past victimization can help explain variation in fear of crime levels (see Skogan, 1987). That is, individuals who have been victimized in the past may be more fearful of crime and subsequent victimization than those who

have not experienced such victimization. Other research, however, has found that no link exists between the two constructs. For instance, McGarrell et al. (2007) determined that experiences with prior victimization had little influence on fear of crime. Although results tend to be mixed, prior victimization is an important factor to consider in fear of crime research. Moreover, perceived risk of victimization will also be measured and included for analysis. It was anticipated that perceptions of being victimized could impact fear of crime levels among college students.

The lifestyle choices of students included in the sample were examined through the guidance of routine activities and lifestyle exposure theory. Past research has suggested that lifestyle choices can impact fear of crime levels along with exposure and risk of being victimized (Radar et al., 2009; Ferraro, 1996; Hindelang et al., 1978). That is, certain lifestyles can place individuals in situations where personal victimization may be more likely to occur. This, in turn, may also increase an individual's fear of crime and risk of subsequent victimization. To the contrary, other lifestyles may put individuals in situations that are less conducive to crime and danger; thus helping to reduce incidences of fear and victimization. For this study, the following lifestyle choices were taken into account: walking on campus at night either alone or with friends, attendance at parties, drinking alcohol, using illicit drugs, and locking doors.

This study proposed that perceptions of university police may impact fear of crime among students. Roh and Oliver (2005) noted that an increased effort has been undertaken over the years to facilitate positive relations between the police and students. Such an endeavor can help increase positive perceptions of the police, while it can also help decrease fear of crime among students. To date, however, few studies have

specifically examined such a relationship. This study attempted to address this shortcoming by examining the potential influence that perceptions of university police has on student fear of crime levels.

Dependent Variable

The dependent variable utilized for this study is fear of crime. As discussed in the previous chapter, this construct has been conceptualized and operationally defined in numerous ways throughout the literature. This can be attributed, in part, to the fact that a general lack consensus exists among researchers regarding what fear of crime is and how it should be accurately measured (Rountree & Land, 1996). Adding to the problem is the fact that early fear of crime research failed to discern fear of crime from perceived risk of victimization. Mesch (2000) maintains that some of the conflicting findings from previous fear of crime research are the byproduct of such measurement issues.

The above-referenced information lends credence to the importance of providing an operational fear of crime definition. For this study, the definition of fear of crime advanced by Ferraro and LaGrange (1987) was utilized. Ferraro and LaGrange (1987) maintained that fear of crime refers to "the negative emotional reaction generated by crime or symbols associated with crime and is conceptually distinct from either judgments (risks) or concerns (values) about crime" (p. 73). This definition is utilized in this study because it considers fear as an emotionally-based response to crime rather than a cognitive assessment of risk. This, then, helps to underscore the difference between fear and perceived risk. The use of this definition also allowed the researcher to distinguish fear of crime from perceived risk of victimization.

Survey Design

Fear of crime has been studied over the years through the use of various research designs and methodologies. There has also been a lot of variation as it relates to how researchers have attempted to measure, and subsequently study, fear of crime. While there is no perfect, universally accepted method, one approach commonly used to study fear of crime has been through the use of self-report surveys. In fact, Warr (2000) noted that survey research on fear of crime has become rich in depth and breadth. This is even despite the lack of consensus that exists in the fear of crime literature regarding how it should be defined and subsequently measured.

This study utilized a survey methodology in an effort to study fear of crime and its relationship with student perceptions of university police. Dillman (2007) noted that surveys should be designed with two goals in mind, which include reducing nonresponse and measurement error. To help maximize the quality and quantity of student responses, each survey question was carefully constructed in a manner that would allow respondents to easily and accurately respond. Following the advice of Dillman (2007), a holistic approach was followed by the researcher in designing and implementing the survey. Specifically, the wording and visual appearance of questions in the survey was kept rather simple. Each question was typed in a bold font, whereas each response was typed in a lighter font. This approach typically makes it easier for respondents to follow along with each question and the response categories that ensue. It also helps to ensure that questions are not inadvertently overlooked or missed by the respondent. Also, key words and phrases were underlined and/or italicized wherever appropriate to emphasize their

importance to the question. Among other things, this approach helps in reducing respondent misinterpretation and/or misunderstanding of the question (Dillman, 2007).

The survey instrument included numerous questions designed to examine the research questions and hypotheses developed for this study. To facilitate a logical flow, the survey was divided into seven sections. Section one of the survey was designed to measure student perceptions of the police. In this section, a total of 20 items were included that ask respondents about their perceptions of university and local police. The first ten questions included statements about university police and Likert-type response categories, whereas the next ten questions consisted of statements regarding local police. The responses to the first 10 items were combined to form a single measure for perceptions of university police. Reponses to the last ten questions were also summated to create a single measure relating to perceptions of local police. Higher scores on these indexes represented more favorable attitudes of the police, whereas lower scores indicated a lower level of satisfaction from respondents.

Section two of the survey included three questions designed to measure the visibility of university police. These items asked respondents to indicate their level of agreement or disagreement with questions relating to the visibility of university police. Responses to these questions were combined to form a single measure, with higher responses indicating a greater perceived visibility of the police. It was anticipated that a significant inverse relationship would exist between police visibility and fear of crime. That is, students who perceived university police as being frequently visible around campus would report lower fear of crime than students who viewed the police as being less visible.

Section three contained questions regarding past victimization. In this section, two primary questions were included that asks participants whether they have ever been the victim of either a property crime or a violent crime in the past year. If a respondent indicated an affirmative answer to one or both of these questions, they were asked to respond to several follow-up questions regarding the victimization incident. Responses to these questions were dichotomously coded (1= yes, 0= no) and subsequently analyzed to determine whether students who report being victimized in the past are more fearful of future victimization than those students who report no such prior victimization.

Section four of the survey contained seven questions concerning perceptions towards the risk of victimization. These questions were borrowed from Radar and colleagues (2007) and are designed to measure the extent to which respondents cognitively assess the likelihood of threats towards their own personal victimization. Responses for these borrowed items were summated by Radar and colleagues (2007) to form a single index of perceptions of risk. The scale had a Cronbach's alpha of .891; thus demonstrating a high level of internal consistency. For this study, the response categories for each of these borrowed questions utilized a 5-point Likert scale format. Responses were combined to form a single perceived risk measure, with higher responses indicating a greater level of perceived risk of victimization. Perceived risk was included in the model as an independent variable to determine whether there was a relationship between perceived risk (i.e. students who perceive a higher risk of their own personal victimization) and fear of crime.

Section five of the survey included questions relating to the social life of participants. In this section, 12 items were included that ask respondents how often they

engage in certain lifestyle choices. These choices included walking alone on campus, walking with friends on campus, going out at night, attendance at parties, drinking, using illicit drugs, and locking doors to place of residence. Responses to these questions were combined to form a single measure, with higher responses indicating a greater level of participation in activities that can be classified as risky or potentially unsafe. These questions were designed to test whether fear of crime is influenced by the routine activities and lifestyles of college students. It was anticipated that those students who engage in lifestyle choices that can be considered risky would fear crime less than those students who refrain from engaging in such lifestyles.

Section six of the survey contained eight items designed to measure fear of crime, which is the dependent variable in this study. These questions, which are crime-specific, asked participants how afraid they were of various crime-related activities happening to them. Responses to these survey items, each coded on a 5-point scale, were combined to form a single fear of crime index. Higher scores on this index represented a higher fear of crime level for each participant, whereas lower scores indicated lower fear of crime. This index was utilized to help assess the research questions and test the hypotheses developed for this study.

It should be noted that the researcher's original intent was to use borrowed survey items from previous research to measure fear of crime. Of particular interest were fear-related survey items that were found in past studies to be both valid and reliable. After reviewing several relevant studies (i.e. Mesch, 2000; Russo & Roccato, 2010; Torres & Vogel, 2001; Skogan, 1987), a decision was made to develop original questions to measure fear of crime. This reasoning behind this decision stemmed from the population

of interest for this study. Past studies (see Mesch, 2000; Rountree, 1998) have asked community residents how afraid they were of being the victim of various crimes, such as burglary, assault, and robbery. Questions that utilize serious crimes to measure student fear may not yield sufficient variation for data analysis purposes. This is because many students may not exhibit any fear of more serious crimes (i.e. burglary or robbery), while others may be fearful of less serious crimes (i.e. theft of personal items). The decision, then, was made to develop original questions that asked about student concerns of less serious crime-specific activities happening to them.

The last section in the survey asked questions regarding various personal characteristics of each respondent. It contained a mix of ordered as well as dichotomous response categories. With the exception of age (which was measured as a continuous variable), each of the response categories in this section were arranged in a closed-ended format. Gender, which was included in this study as an independent variable, was coded as a dichotomous variable (where female= 1, male= 0). The other variables in this section were coded appropriately and utilized in the analysis to determine their impact on perceptions of police and fear of crime.

Survey Administration

Self-report surveys were administered to undergraduate students enrolled in each selected course during the Spring 2013 semester. Survey administration has been, and continues to be, a common data collection method, especially in the social sciences. This is due, in part, to the many advantages of survey designs. For instance, surveys can help facilitate the data collection process in an efficient and labor-friendly manner (Fowler, 2002). This is particularly evident when they are administered in person to selected

groups. Surveys are also relatively inexpensive to design and are able to provide a descriptive representation of the characteristics of a population (Fowler, 2002).

The researcher first sought prior permission from the instructor of record for formal access into each randomly selected class. This was primarily done via email communication. It was anticipated that response rate should not be an issue, as surveys administered to students in college classrooms normally result in a high participation rate (Dillman, 2007). All efforts were made, however, by the researcher to obtain a larger sample size than what was minimally needed. This approach helped to offset issues associated with nonresponse from participants. It also allowed the researcher to compensate for other issues that could limit the amount of usable cases for analysis. Such issues include incomplete, unanswered, and/or unintelligible responses from participants to any of the survey questions.

Prior to distributing the surveys, an informed consent form was distributed to students in each randomly selected classroom. This consent form outlined the purpose of the study and its voluntary nature in an effort to assist students with making an informed voluntary decision on whether or not to participate in the study (see Appendix B for a copy of the informed consent form). The form also ensured confidentiality to each participant and mentioned that anyone can terminate their participation at any time without fear of incurring negative sanctions. It was anticipated that this form and the declarations contained within would help to alleviate any potential feelings of coercion or forced participation from participants. Confidentiality and other human rights protections are discussed in the following section.

Human Subject Protections

Ensuring confidentiality to those who participate in research (especially in the social sciences) is of vast importance. This study took the necessary steps to ensure complete confidentiality to all of its participants. Absolutely no information was disclosed or presented that would make it possible to be able to identify, by name or face, any of the participants in the study. Also, respondents were ensured upfront that, in accordance with federal law, their answers to the survey questions would be kept strictly confidential and would only be used for statistical purposes. If participants know that they will be ensured full anonymity and confidentiality, they will likely be more willing to participate in the study as well as respond to the survey questions in a forthright, honest manner. This, in turn, benefits both the respondent and the researcher.

Self-reporting fear of crime and potential incidences with past victimization can be a sensitive issue to some participants. More specifically, it is possible that participants in this study may have self-identified when asked to recall information relating to fear and/or past victimization. It is conceivable that a participant may have become emotionally distraught or upset when past memories of victimization become resurfaced. To address this, proactive measures were taken so as to provide appropriate counseling numbers to each participant in this study. These numbers were listed on a form and distributed to participants (see Appendix C). This was done to assure the participant would get the help or guidance that he or she would need.

An additional human subject protection issue that needs to be safeguarded in this study is the topic of informed consent or voluntary participation. To ensure that participation in this study was voluntary, an informed consent form was distributed to

each participant prior to survey administration. The researcher verbally outlined the nature and purpose of the study, and each participant was asked to read over the form and encouraged to ask any questions that came to mind. The consent form notified students of the voluntary nature of the study as well as issues of confidentiality. It also informed students that their decision to participate would not affect their current relations with the university of interest nor would it impact their current class standing. The informed consent form is appended to this proposal (see Appendix B).

Reliability and Validity

An item is typically viewed as a good measure if it is reliable and valid. Both reliability and validity are important features of quantitative research. In particular, reliability refers to "the extent to which a measure yields similar results on repeated trials" (Carmines & Zeller, 1979, p. 11). Reliability is always a matter of degree primarily because it concerns itself with determining how reliable a measure is rather than whether it is reliable. In contrast, validity is a theory-laden concept that refers "to the extent that an instrument measures what it is designed to measure and nothing else' (Carmines & Zeller, 1979, p. 12)". According to Thornberry and Krohn (2000), validity is a more abstract concept than reliability.

The reliability of items can be assessed in a number of ways. The present study utilized the internal consistency method. This approach was employed to determine if the measures in each scaled variable included in the survey are consistent and therefore reliable. This was accomplished by utilizing Cronbach's alpha, which is a statistical measure of internal consistency. Cronbach's alpha is measured on a scale from 0 to 1 (Carmines & Zeller, 1979). Scores of .7 or higher are typically considered acceptable (if

not ideal) in most social science research because it indicates a greater internal consistency among items. Conversely, lower scores typically indicate items lack consistency because they fail to measure the same underlying construct (Carmines & Zeller, 1979). For this study, an alpha coefficient of .7 or higher was utilized as reference point, particularly when reliability tests were conducted for each of the scaled variables. This is further discussed in Chapter IV.

The validity of items can also be assessed in several ways. To evaluate the validity of the measures employed in this study, face validity and construct validity was assessed. Face validity, which is regarded as one of the weakest forms of validity in the social sciences, refers to the extent that the concepts being measured appear, at face value, to be valid and related (Carmines & Zeller, 1979). To assess face validity, the researcher distributed the survey instrument to fellow colleagues familiar with the research topic. Each individual was asked to look over the survey and provide feedback to ensure that the items appear valid and logical.

Construct validity was also assessed. According to Carmines and Zeller (1979), this type of validity "is concerned with the extent to which a particular measure relates to other measures consistent with theoretically derived hypotheses concerning the concepts that are being measured (p. 23)". To assess construct validity, the variables included for analysis were examined to see if they relate to fear of crime in theoretically expected ways. For instance, a large portion of the fear of crime literature has indicated that females and nonwhites are more fearful of crime than males and whites. Past research has also suggested that an individual's lifestyle and routine activities are important as it concerns their fear of crime. It was anticipated that the findings of this study would

demonstrate support for these (and the other) variables, indicating that they are related in theoretically expected ways.

Analysis Plan

A variety of statistical procedures are employed in this study to understand the relationship between student perceptions of university police and fear of crime. These techniques include descriptive statistics, bivariate analyses, and multiple ordinary least squares (OLS) regression analysis. Descriptive statistics were calculated by the researcher in an effort to examine the data in summary form. It was anticipated that these statistics would generate valuable information about the characteristics of the sample and the variables of interest (Bachman & Paternoster, 2004). This includes measures of centrality and dispersion as well as helping to determine the shape of the distribution for each variable included in the study.

After various descriptive statistics were calculated, bivariate analyses were conducted with the dependent variable and each of the independent variables included in this study. In particular, t-tests, analysis of variance (ANOVA), and Pearson's correlation coefficients were calculated in an effort to examine the direction and magnitude of the relationship between the independent variables and fear of crime. T-tests help to determine if the means of two different groups are statistically different from one another (Bachman & Paternoster, 2004). This, in turn, allows for conclusions to be drawn regarding the mean differences between two variables of interest. ANOVA is essentially an extension of a t-test. It is a statistical tool that examines mean differences among three or more different groups (Bachman & Paternoster, 2004). It is utilized in this study to explore group mean differences among several independent variables.

Pearson's correlation coefficient, which is typically represented by *r*, tests for possible linear dependence between two variables (Bachman & Paternoster, 2004). It ranges in value from +1 to -1. A correlation value of +1 indicates a perfect positive linear relationship between variables, and a value of -1 is an indicator that a perfect negative linear relationship exists between variables. A value of 0 implies that no linear relationship exists. While there is no definitive approach to interpreting Pearson's correlation coefficient, the following guidelines have been proposed by Cohen (1988): a small effect size exists if r = .10 to .29, a medium effect size exists if r = .30 to .49, and a large effect size exists if r = .50 to 1.00. These numbers are utilized as guidelines to examine the relationship between fear of crime and each independent variable.

Multiple OLS regression analysis was then conducted after all of the bivariate correlations were calculated. Multiple regression analysis offers several advantages. First, multiple regression gives a more complete explanation of the dependent variable as compared to other statistical techniques (Lewis-Beck, 1980). Additionally, multiple regression analysis allows for the inclusion of more than one independent variable into a regression equation. Bivariate regression, on the other hand, only examines the relationship between a dependent variable and one independent variable. To this end, multiple regression offers the benefit of making the effect of each independent variable more precise, given that the influence of other independent variables can be considered and controlled (Lewis-Beck, 1980). The equation for multiple regression is as follows:

$$\hat{Y} = a + b_1x_1 + b_2x_2 + \ldots + b_kx_k + \hat{e}_i$$

Where:

$\hat{Y}$ = the predicted value of the dependent variable (fear of crime)

a = the constant; or y-intercept when x = 0

b = slope of regression line (or the change in y that is associated with a change in x)

x_1 = perceptions of university police

x_2 = past victimization

x_3 = perceived risk of victimization

x_4 = lifestyle choices

x_5 = age

x_6 = sex

x_7 = race

x_8 = living arrangement

x_9 = class status

$\hat{e}_i$ = the predicted error term

Various multiple regression models were estimated, each using fear of crime as the dependent variable. The first model conducted included age, race, and living arrangement. These variables were included because past research suggests that they may impact fear of crime levels. The next model was run with gender and class standing as the independent variables and fear of crime as the dependent variable. The third model included the scaled variables of perceived risk, lifestyle choices, perceptions of university police, perceptions of local police, and police visibility. The final model was conducted with all of the variables included in this study. This approach allowed the researcher to examine the research questions and hypotheses to determine which independent variables influence fear of crime when other variables are considered.

As noted above, the intent was to utilize multiple regression to analyze the relationship between fear of crime and the various independent variables included in this study. It was possible, however, that some other type of statistical technique may have been utilized in lieu of multiple regression. This depended largely on the characteristics of the dependent variable. For instance, the data may have revealed insufficient variance among student fear of crime levels, particularly if fear of crime was skewed towards zero. If this occurred, the researcher would have dichotomized the dependent variable (where 0= no fear of crime, 1= fear of crime) to enhance variability and logistic regression would have then been used in favor of OLS regression. The data revealed, however, sufficient variation for analysis; therefore, this was not an issue.

The reliability of the scaled variables utilized in the survey instrument was also analyzed. This was accomplished through the utilization of Cronbach's alpha. This technique allowed the researcher to determine if the measures in each scaled item were highly intercorrelated and thus reliable. Cronbach's reliability coefficients range from a value of 0 to 1, with higher scores indicating a higher level of internal consistency among the items. Previous research suggests that an alpha of .70 or higher is an acceptable reliability coefficient (Carmines & Zeller, 1979). This value, at the minimum, was sought for each scaled variable in this study.

The extant fear of crime literature is replete with studies that indicate fear of crime levels can vary and depend on numerous factors (i.e. demographics, perceived risk, police visibility, prior victimization). Many of these factors were included in this study as independent variables in an effort to understand whether student perceptions of university police impact their fear of crime. Through the guidance of a lifestyle exposure

framework, this study adds to the current fear of crime literature and possibly informs future research on fear of crime and its correlates. The results may also help to highlight the importance to university police departments of developing and maintaining strong positive ties with students, especially considering that such a relationship can lead to more interaction with, and favorable perceptions of, the police.

Summary

This chapter described the methods and procedures utilized for the current study. In particular, the sampling strategies and research design were discussed along with the survey design and administration procedure. An overview of the human subject protections and concepts of reliability and validity was also presented. It is anticipated that the current study, through its quantitative methodology and multivariate regression analyses, will help to further understanding as it relates to university police-student relations and factors that make students more fearful than others. The following chapter presents the results of this study obtained from data analyses.

CHAPTER IV: RESULTS

This chapter presents the statistical analyses of data collected for this study. Descriptive statistics of the survey data are presented initially to examine the data in summary form. Next, the results from the bivariate analyses are reported. The assumptions of multivariate OLS regression are reviewed, and the results from the tests conducted to meet these assumptions are discussed. Regression analyses are also presented which examine the relationship between the dependent variable and the various independent variables included in this study. Several models were estimated, each utilizing fear of crime as the dependent variable. Each of these models will be discussed in detail in a subsequent section.

Descriptive Statistics

Descriptive statistics were calculated to examine the characteristics of the sample and the variables of interest in this study. The descriptive statistics of the demographic variables are presented first, followed by those for both the independent and dependent variables. Table 1 presents the frequencies and percentages for the following variables: age, sex, race, living arrangement, and class standing.

Table 1

Descriptive Statistics for the Sample

Variable	Frequency	Percent
Current Age		
18	42	12.1
19	108	31.0
20	69	19.8
21	74	21.3
22	36	10.3
>23 years	19	5.5

Sex		
Female	213	61.2
Male	135	38.8
Race		
White/Caucasian	290	83.3
Black/African American	39	11.2
Hispanic	14	4.0
Asian	5	1.4
Living Arrangement		
Alone on Campus	16	4.6
With Roommate on Campus	155	44.5
Alone off Campus	20	5.7
With Relative off Campus	25	7.2
With Roommate off Campus	132	37.9
Class Standing		
Freshmen	99	28.4
Sophomore	83	23.9
Junior	73	21.0
Senior	93	26.7

Undergraduate students of various class standings at the campus of interest were recruited for participation purposes. There was a higher percentage of females (61.2%) than males (38.8%) included in the sample. This is consistent with the current demographic profile of the undergraduate student population, which reveals that there are more female students (56%) than males (44%). The age of participants ranged from 18 to 58, with a mean age of 20.24 years (SD=2.647) and a mode of 19 years. The majority of respondents (94.5%) were between the ages of 18 to 22, while only 19 respondents (5.5%) were aged 23 or older. The racial composition of students was also similar to the current campus student population data. In particular, 83.3% of respondents in the sample were white, while 78% of students in the total student population are white. A slight majority of participants (50.8%) indicated that they lived off campus—either alone, with a relative, or a roommate.

It was previously discussed that two probability sampling strategies were utilized to select a sample of undergraduate students that was representative, by class standing, of the total student population on the campus of interest. There were more freshmen (28.4%) and seniors (26.7%) who participated in this study than sophomores (23.9%) and juniors (21.0%). This distribution of students by class is very similar to current university undergraduate enrollment data. These data, as of Spring 2013, reveal that 27.4% of undergraduate students are freshman, 23.1% are sophomores, 22.4% are juniors, and 27.2% are seniors (IUP, 2013).

Description of Independent Variables

Descriptive statistics for each independent variable included in this study were calculated and are presented in this section. The reliability of the scaled instruments is also addressed here and summarized. This was done to determine if the items in each scaled variable were consistent and therefore reliable.

Perceptions of University Police

The current study advances the assumption that student perceptions of university police may impact their fear of crime. University police include only those police officers who are employed directly by the university, and it does not include other police agencies (i.e. local, state) who may operate around campus. To measure perceptions of university police, ten original questions were devised by the researcher. These questions included statements regarding various activities and behavioral proclivities of university police. Students were asked specifically to indicate their level of agreement or disagreement with the ten statements, each utilizing a five-point Likert response scale. These statements tapped into various elements, ranging from the way in which the university police treat

students to how well they deal with crime and service calls. The frequencies for the perceptions of university police variable are presented in Table 2.

Table 2

Frequencies for Perceptions of University Police

Variable	Frequency	Percent
Treat students fairly		
Strongly Disagree	26	7.5
Disagree	45	12.9
Neutral	97	27.9
Agree	137	39.4
Strongly Agree	23	6.6
Not Applicable	20	5.7
Friendly and Approachable		
Strongly Disagree	14	4.0
Disagree	65	18.7
Neutral	104	29.9
Agree	121	34.8
Strongly Agree	24	6.9
Not Applicable	20	5.7
Provide Quality Services to Students		
Strongly Disagree	8	2.3
Disagree	31	8.9
Neutral	84	24.1
Agree	174	50.0
Strongly Agree	33	9.5
Not Applicable	18	5.2
Care about Student Safety		
Strongly Disagree	8	2.3
Disagree	15	4.3
Neutral	51	14.7
Agree	195	56.0
Strongly Agree	71	20.4
Not Applicable	8	2.3
Receptive to Student Needs		
Strongly Disagree	13	3.7
Disagree	24	6.9
Neutral	98	28.2
Agree	157	45.1
Strongly Agree	33	9.5
Not Applicable	23	6.6
Good Job at Preventing Crime		
Strongly Disagree	11	3.2

Disagree	49	14.1
Neutral	96	27.6
Agree	140	40.2
Strongly Agree	37	10.6
Not Applicable	15	4.3
Investigate Crimes Efficiently		
Strongly Disagree	13	3.7
Disagree	37	10.6
Neutral	131	37.6
Agree	93	26.7
Strongly Agree	23	6.6
Not Applicable	51	14.7
Good Job at Solving Crimes		
Strongly Disagree	12	3.4
Disagree	30	8.6
Neutral	155	44.5
Agree	83	23.9
Strongly Agree	15	4.3
Not Applicable	53	15.2
Enforce University Policies Consistently		
Strongly Disagree	11	3.2
Disagree	40	11.5
Neutral	73	21.0
Agree	163	46.8
Strongly Agree	41	11.8
Not Applicable	20	5.7
Timely Response to Service Calls		
Strongly Disagree	5	1.4
Disagree	16	4.6
Neutral	87	25.0
Agree	121	34.8
Strongly Agree	51	14.7
Not Applicable	68	19.5

These ten questions, as briefed in Table 2, were designed to measure student perceptions of university police. Each respondent was asked to indicate, on a Likert-type scale, their level or agreement or disagreement with various statements about the university police. The majority of students either agreed or strongly agreed with each of the questions, thus indicating higher levels of student satisfaction with university police. For instance, 46% of respondents indicated that they agreed or strongly agreed with the

statement “campus police treat students fairly”, while 41.7% of participants agreed or strongly agreed that campus police are friendly and approachable. Additionally, 58.6% of students agreed or strongly agreed that campus police enforce university policies in a consistent manner, while 49.5% of respondents indicated agreement that campus police respond to calls for service in a timely manner. Responses to the other questions also indicated more general positive perceptions of the university police among students.

As noted above, it was the researcher’s intent to combine responses to these ten survey items in an effort to create a single scaled measure relating to perceptions of university police. Prior to undertaking this task, however, the scaled survey measures were assessed to ensure that they were consistent and thus reliable. This was done through the use of Cronbach’s alpha, which is a measure often utilized in social science research to test for internal consistency of scaled items. Cronbach’s alpha can range from 0 to 1, but an alpha score of .70 or higher is typically considered very good because it denotes a greater level of internal consistency among survey items (Devellis, 1991; Carmines & Zeller, 1979).

Through a reliability analysis, it was determined that the perception of university police scale was internally consistent. That is, each item in the scale essentially measured the same concept. The item-total correlation coefficients were acceptable, and the Cronbach’s alpha value was very good (alpha = .895). Table 3 presents the reliability analysis results, specifically the item-total correlation statistics and Cronbach’s alpha, for the perceptions of university police scaled variable.

Table 3

Item-Total Correlation Statistics for Perceptions of Campus Police Scale

Item	Item-Total Correlation
Campus police treat students fairly	.620
Campus police are friendly and approachable	.541
Campus police provide quality services to students	.686
Campus police care about the safety of students	.659
Campus police are receptive to the needs of students	.736
Campus police do a good job at preventing crime on campus	.610
Campus police investigate crimes in an efficient way	.711
Campus police do a good job at solving crimes that occur	.687
Campus police enforce university policies in a consistent manner	.626
Campus police respond to service calls in a timely fashion	.526
Cronbach's Alpha = .895 N= 257	

Note. For this reliability analysis, 91 cases were removed due to missing scores. In these cases, one or more responses to the ten survey items fell under the 'not applicable' category, and were therefore coded with the value '9'. These cases were excluded from analysis in an effort to avoid biased correlation coefficients.

Given that the above scale exhibited a high level of internal consistency, the decision was made to combine the ten survey items that were designed to measure student perceptions of university police. To obtain a score for each participant, responses to the survey items were combined to form a single measure for perceptions of university

police. A decision was then made to average each of the scores. This was done due to missing data issues. In particular, in the survey, a ‘not applicable’ category was included along with Likert-type response categories. Some respondents did not know the campus police, thus they did not have any opinions (good, bad, or indifferent) of them. Responses that fell under the ‘not applicable’ category were coded with the value ‘9’ and were essentially treated as missing scores. Not excluding these cases would have biased the results, given that ‘not applicable’ responses fail to add any real meaning to the raw data. There were a combined 91 of these cases. With this in mind, and in an effort to limit the amount of missing cases, the researcher averaged the responses to the ten questions, while excluding the ‘not applicable’ scores.

To obtain an average university police perception score for each respondent, the raw scores (which ranged on a five-point scale from 1 = strongly disagree to 5 = strongly agree) were summated and then individually divided by the total number of corresponding survey items (which ranged from 1 to 10 and excluded those that contained responses that fell under the ‘not applicable’ category). This approach created a scale and an average score for each participant, with a possible low score of 1 to a possible high score of 5. Scores of 1 indicated a very low negative perception of the university police, while scores of 5 represented a very high positive perception. The actual score for participants ranged from 1 to 5, with a mean score of 3.49 (SD =.678) and a modal score of 3.60. The descriptive statistics for the perceptions of university police scaled variable are presented in Table 4.

Table 4

Descriptive Statistics for Scaled Perceptions of Campus Police Variable

	N	Mean	SD	Minimum	Maximum
Police Perceptions	342	3.49	.678	1	5

Note. Six cases were excluded from this analysis due to missing values. In each of these cases, the respondent answered all ten questions with a 'not applicable' response. These individuals had no opinions (good, bad, or indifferent) of the university police. Accordingly, their responses were coded as missing values and were subsequently excluded.

Perceptions of Local (Borough) Police

Student perceptions of local police may impact their fear of crime. Local police include those officers who patrol the borough outside of the campus of interest. To measure student perceptions of local police, ten original questions with Likert-type response categories were included in the survey instrument. These questions emulated those that were asked in reference to student perceptions of the university police. In particular, respondents were asked to indicate their level of agreement or disagreement with various statements about the local police. Asking this additional set of questions allowed for comparisons to be made between student perceptions of both local police and university police. The frequencies for the perceptions of local police variable are provided in Table 5.

Table 5

Frequencies for Perceptions of Local Police

Variable	Frequency	Percent
Treat students fairly		
Strongly Disagree	20	5.7
Disagree	43	12.4
Neutral	94	27.0
Agree	138	39.7
Strongly Agree	16	4.6
Not Applicable	37	10.6

Friendly and Approachable		
Strongly Disagree	15	4.3
Disagree	61	17.5
Neutral	92	26.4
Agree	122	35.1
Strongly Agree	14	4.0
Not Applicable	44	12.6
Provide Quality Services to Students		
Strongly Disagree	8	2.3
Disagree	18	5.2
Neutral	81	23.3
Agree	174	50.0
Strongly Agree	28	8.0
Not Applicable	39	11.2
Care about Student Safety		
Strongly Disagree	4	1.1
Disagree	21	6.0
Neutral	71	20.4
Agree	187	53.7
Strongly Agree	32	9.2
Not Applicable	33	9.5
Receptive to Student Needs		
Strongly Disagree	4	1.1
Disagree	24	6.9
Neutral	87	25.0
Agree	165	47.4
Strongly Agree	22	6.3
Not Applicable	46	13.2
Good Job at Preventing Crime		
Strongly Disagree	7	2.0
Disagree	40	11.5
Neutral	99	28.4
Agree	148	42.5
Strongly Agree	20	5.7
Not Applicable	34	9.8
Investigate Crimes Efficiently		
Strongly Disagree	7	2.0
Disagree	25	7.2
Neutral	119	34.2
Agree	119	34.2
Strongly Agree	21	6.0
Not Applicable	57	16.4
Good Job at Solving Crimes		
Strongly Disagree	6	1.7
Disagree	30	8.6
Neutral	136	39.1

Agree	94	27.0
Strongly Agree	20	5.7
Not Applicable	62	17.8
Enforce University Policies Consistently		
Strongly Disagree	12	3.4
Disagree	34	9.8
Neutral	78	22.4
Agree	159	45.7
Strongly Agree	26	7.5
Not Applicable	39	11.2
Timely Response to Service Calls		
Strongly Disagree	7	2.0
Disagree	16	4.6
Neutral	75	21.6
Agree	149	42.8
Strongly Agree	33	9.5
Not Applicable	68	19.5

These survey questions were designed to measure student perceptions of local (borough) police. Students were asked the extent in which they agreed or disagreed with various statements regarding the local police. As indicated in Table 5, a large number of students either agreed or strongly agreed with the ten survey items. For example, 44.3% of respondents (n=154) reported that they agreed or strongly agreed that local police treat people fairly. Another 39.1% of students (n= 136) agreed or strongly agreed that local police are friendly and approachable and an additional 52.3% (n= 182) reported agreement that local police respond to service calls in a timely manner. The majority of students also reported more positive responses to the other survey questions. This indicates that students, in general, possessed more favorable perceptions of the local police. This finding was similar to student perceptions of university police.

In an effort to obtain a local police perception score for each participant, responses to the ten survey items were summated into a single scaled variable. The reliability of the scale was first assessed to ensure that the survey items were measuring

the same underlying construct. Through the use of Cronbach's alpha, it was established that the scale had an alpha of .927, thus demonstrating a high level of internal consistency. The results from the reliability analysis for the perceptions of local police scale are presented in Table 6.

Table 6

Item-Total Correlation Statistics for Perceptions of Local Police Scale

Item	Item-Total Correlation
Treat citizens fairly	.688
Friendly & approachable	.629
Provide quality services to citizens	.778
Care about the safety of citizens	.798
Are receptive to the needs of citizens	.796
Do a good job at preventing crime	.686
Investigate crimes in an efficient way	.746
Do a good job at solving crimes that occur	.761
Enforce university policies in a consistent manner	.716
Respond to service calls in a timely fashion	.616
Cronbach's Alpha = .927 N= 253	

Note. Ninety-five cases were removed from this reliability analysis due to cases involving missing values. These cases contained one or more survey responses that fell under the 'not applicable' category.

After running the reliability analysis, a decision was made to aggregate the scores from each of the ten survey items. These scores, once summated, were then averaged. The rationale behind this decision related to issues with missing data. In the survey, a 'not applicable' category was added with the Likert-type response categories. This was done with the realization that some students may not have known who the local police were or had the chance to interact with them at any point. In these cases, students would have likely not been able to adequately indicate their level of agreement or disagreement to the ten survey questions. Cases involving responses that fell under the 'not applicable' category were each coded with the value '9' and were treated as missing scores. There were 95 of these cases. To limit the number of cases with missing data, the decision was made to combine and subsequently average the responses to the ten questions.

To obtain an average local police perception score for each respondent, the scores (which ranged from 1 to 5) were summated and then divided by the total number of corresponding survey items (which ranged from 1 to 10 and excluded those that contained 'not applicable' responses). This created an average score for each respondent, with a potential range from a low of 1 to a high of 5. Higher scores on this scale represented more favorable student perceptions of the local police, whereas lower scores denoted less favorable perceptions. The mean for the sample was 3.48 (SD =.681), with a modal score of 4.00. The descriptive statistics are depicted in Table 7.

Table 7

Descriptive Statistics for Perceptions of Local Police Scaled Variable

	N	Mean	SD	Minimum	Maximum
Police Perceptions	328	3.48	.681	1	5

Note. In this analysis, 20 cases were excluded due to discrete missing values. In each of these cases, the respondent answered all ten questions with a 'not applicable' response. Given this realization, a decision was made to code their responses as missing values.

University Police Visibility

This study predicted that an inverse relationship would exist between the visibility of university police and student fear of crime. That is, students who perceive the university police as being more visible would report lower fear of crime levels than those who viewed the police as being less visible. To measure this concept, three police visibility questions were included in this study. These questions, each utilizing a five-point Likert scale, asked respondents to indicate their level of agreement or disagreement with three statements. These statements included "university police patrol the campus on a daily basis", "university police can be seen walking around campus on a daily basis", and "university police interact with students on campus on a regular basis". The frequencies for each police visibility variable are presented in Table 8.

Table 8

Frequencies for Police Visibility

Variable	Frequency	Percent
University Police Patrol Campus Daily		
Strongly Disagree	4	1.1
Disagree	16	4.6
Neutral	16	4.6
Agree	168	48.3
Strongly Agree	128	36.8
Not Sure	16	4.6
University Police Walk Around Campus Daily		
Strongly Disagree	37	10.6
Disagree	134	38.5
Neutral	52	14.9
Agree	80	23.0
Strongly Agree	29	8.3
Not Sure	16	4.6
University Police Interact with Students Regularly		
Strongly Disagree	48	13.8
Disagree	115	33.0
Neutral	84	24.1
Agree	44	12.6

Strongly Agree	7	2.0
Not Sure	50	14.4

As reported in Table 8, the majority of respondents (85.1%) either agreed or strongly agreed with the statement, "university police patrol the campus on a daily basis". Responses to the other two questions, however, denoted more negative student perceptions regarding the visibility of campus police. For instance, 171 respondents (49.1%) disagreed or strongly disagreed with the premise that university police walk around campus on a daily basis. This compares to 109 respondents (31.3%) who indicated some level of agreement to this notion. Moreover, 163 people (46.8%) disagreed or strongly disagreed with the view that university police interact with students regularly on campus, while only a combined 51 respondents (14.6%) agreed or strongly agreed. This indicates that although most students believed the university police *patrol* the campus daily, more students than not disagreed that the police *walk* around campus daily as well as regularly interact with students.

It was the researcher's intent to aggregate responses to the three police visibility questions into a scale in an effort to obtain a single score for each respondent. Prior to this undertaking, a reliability analysis was performed to check the internal consistency of the scale. The scale had an initial alpha estimate of .648. Remember that an alpha value of .70 or higher is normally considered acceptable, while Devellis (1991) considers an alpha value between .65 and .70 as *minimally* acceptable. It should be noted that the item-total correlation for the patrol campus survey item (.352) was noticeably low. This suggests that the item was not a very consistent measure of police visibility. Therefore, the decision was made to delete the item from the scale. This yielded a new alpha of .679,

demonstrating a higher level of internal consistency for the scaled variable. Table 9 reports the results of the reliability analysis conducted for the police visibility variable.

Table 9

Item-Total Correlation Statistics for Police Visibility Scaled Variable

Item	Item-Total Correlation
University police patrol the campus on a daily basis	.352
University police can be seen walking around campus daily	.549
University police interact with students on campus regularly	.503

Cronbach's Alpha = .648 (initial estimate)
Cronbach's Alpha= .679 (when 'patrol the campus' survey items was deleted)
N = 289

After determining that the police visibility scale was reliable, a decision was made to aggregate, and subsequently average, the scores from the survey items. This approach was undertaken in an effort to limit the amount of cases with missing data. In particular, in the survey instrument, respondents could indicate a 'not sure' response to any of the three questions that were designed to measure police visibility. This additional category was included because some students may have been unsure about one or more of the questions. They may have also not known who the police were, thus making it difficult to accurately respond to the questions In these cases, 'not sure' responses were each coded as a '9' and were entered as discrete missing scores. In an effort to enhance the amount of useable cases for analysis, the decision was made to summate and subsequently average the responses.

To obtain an average police visibility score for each respondent, scores from both questions were combined and subsequently divided by the total number of corresponding survey items (which ranged from 1 to 2 and excluded items with 'not sure' responses). This process helped to create an average score for each participant, with higher scores denoting a greater level of visibility of campus police and lower scores representing less visibility. The mean score for the entire sample was 2.66 (SD = .975), with an actual range of 1 to 5. The descriptive statistics for the police visibility scaled variable are reported in Table 10.

Table 10

Descriptive Statistics for Police Visibility Scaled Variable

	N	Mean	SD	Minimum	Maximum
Police Visibility	336	2.66	.975	1	5

Note. In this analysis, 12 cases were excluded due to discrete missing values. In each of these cases, the respondent answered both questions with a response of 'not sure'. Given that these individuals had no opinion regarding the visibility of campus police, a decision was made to code their responses as missing values.

Prior Victimization

Two variables were included in this study to measure prior victimization. In particular, participants were asked whether they have ever been the victim of a property crime and violent crime. If a 'yes' response was indicated, participants were asked to answer a few supplemental questions that were specific to the crime incident. To the contrary, respondents who had never been victimized were directed to skip over the supplemental questions. In these cases, responses were coded with the value '9' and subsequently treated as discrete missing values. Binary response categories to the primary questions and follow-up questions were included (1= yes, 0= no). The frequencies for the

prior property crime and violent crime victimization variables are reported in Tables 11 and 12, respectively.

Table 11

Frequencies for Past Property Crime Victimization

Variable	Frequency	Valid %
Victim of Property Crime		
Yes	26	7.5
No	322	92.5
Victimized by Whom		
Stranger	24	92.3
Someone you knew	2	7.7
Did you Report the Incident		
Yes	13	50.0
No	13	50.0
Satisfied how Police Handled Report		
Yes	5	38.5
No	8	61.5
More Fearful because of Incident		
Yes	17	65.4
No	9	34.6

As denoted in Table 11, a total of 26 respondents (7.5%) indicated that they had been a victim of a property crime while enrolled at the campus of interest. Most of these individuals (n=24) reported that they were victimized by a stranger, while only two stated that they were victimized by someone they knew. Exactly half (n=13) of those respondents who experienced property victimization reported the incident to university police, and of these, eight suggested that they were not satisfied with how the university police handled the report. About two-thirds (n=17) also reported that the incident made them more fearful of future property crime happening to them. Table 12 presents the frequencies for the prior violent crime-specific victimization variable.

Table 12

Frequencies for Past Violent Crime Victimization

Variable	Frequency	Valid %
Victim of Violent Crime		
Yes	19	5.5
No	329	94.5
Victimized by Whom		
Stranger	13	68.4
Someone you knew	5	26.3
I Don't Know	1	5.3
Did you Report the Incident		
Yes	5	26.3
No	14	73.7
Satisfied how Police Handled Report		
Yes	3	60.0
No	2	40.0
More Fearful because of Incident		
Yes	6	31.6
No	13	68.4

Table 12 illustrates that only a small percentage of the sample (5.5%, n=19) had experienced a violent crime victimization while enrolled at the campus of interest. Thirteen of these respondents conveyed that they were victimized by a stranger. The majority of individuals (n=14) decided to not report the incident to university police. Of the 19 individuals who experienced victimization, about one-third (n=6) indicated that the incident made them more fearful of future violent crime occurring to them.

Perceived Risk

It has been suggested in the literature that perceived risk of victimization may help predict fear of crime (Mesch, 2000; Ferraro, 1996; Warr & Stafford, 1983). In this study, it was anticipated that students who report a higher level of perceived risk of victimization will fear crime more than those who have a lower level of risk perception. To measure this construct, seven questions were included in the survey instrument. These

questions, which were borrowed from Radar and colleagues (2007), asked respondents about the likelihood of various crime-specific activities happening to them over the next 12 months. Response categories ranged from 1 (not likely at all) to 5 (very likely). Table 13 reports the frequencies for the perceived risk variable.

Table 13

Frequencies for Perceived Risk Variable

Variable	Frequency	Percent
Breaking into Home		
Not Likely At All	157	45.1
Somewhat Unlikely	105	30.2
Neutral	34	9.8
Somewhat Likely	49	14.1
Very Likely	3	0.9
Stealing a Motor Vehicle		
Not Likely At All	204	58.6
Somewhat Unlikely	88	25.3
Neutral	28	8.0
Somewhat Likely	28	8.0
Very Likely	0	0.0
Stealing Items Without Force		
Not Likely At All	101	29.0
Somewhat Unlikely	114	32.8
Neutral	40	11.5
Somewhat Likely	82	23.6
Very Likely	11	3.2
Stealing Items With Using Force		
Not Likely At All	152	43.7
Somewhat Unlikely	121	34.8
Neutral	42	12.1
Somewhat Likely	32	9.2
Very Likely	1	0.3
Physically Attack With Weapon		
Not Likely At All	156	44.8
Somewhat Unlikely	114	32.8
Neutral	45	12.9
Somewhat Likely	32	9.2
Very Likely	1	0.3
Verbally Threaten to Harm		
Not Likely At All	71	20.4

Somewhat Unlikely	107	30.7
Neutral	69	19.8
Somewhat Likely	78	22.4
Very Likely	23	6.6
Forced Sexual Intercourse		
Not Likely At All	191	54.9
Somewhat Unlikely	76	21.8
Neutral	39	11.2
Somewhat Likely	36	10.3
Very Likely	6	1.7

The majority of respondents, as represented in Table 13, reported a lower level of risk perception to various crime-specific activities. For instance, 75.3% of students (n=262) indicated that either it was not likely at all or somewhat unlikely that someone would break into their current place of residence in the next 12 months. Additionally, 78.5% of respondents (n= 273) reported that the likelihood of someone taking something from them by force or threat of force was minimal (somewhat unlikely) or nonexistent (not likely at all). Out of the seven survey items, the most variation in responses involved the question that asked about verbal harm. In particular, 101 students (29.0%) agreed that it was somewhat likely or very likely that someone would verbally threaten to harm them in the next 12 months, while 178 students (51.1%) indicated disagreement. In total, this implies that most respondents perceived the risk of victimization to be low.

As previously mentioned, Radar and colleagues (2007) aggregated responses to these survey items to form a perceptions of risk scaled variable, which had a Cronbach's alpha of .891. This suggests that a high level of internal consistency existed among the perceived risk scaled items utilized in their research. For this study, responses to each of the seven questions were summated to form a single perceived risk measure. The reliability of the scaled survey items was first evaluated to ensure that they were internally consistent and thus reliable. It was determined, through an analysis of

Cronbach's alpha, that the scale had an alpha value of .847. This demonstrates, once again, that the scale had a high level of internal consistency. Table 14 depicts the results of the reliability analysis for the perceived risk scaled variable.

Table 14

Item-Total Correlation Statistics for Perceived Risk Scaled Variable

Item	Item-Total Correlation
Someone Breaking into Residence	.605
Someone Stealing a Motor Vehicle	.510
Someone Stealing Items Without Force	.566
Someone Stealing Items With Using Force	.752
Someone Physically Attack With Weapon	.708
Someone Verbally Threaten to Harm	.615
Forced Sexual Intercourse	.524
Cronbach's Alpha = .847 N = 348	

Given that the perceived risk scale was found to be internally consistent, the decision was made to summate the scores obtained from the seven survey items. Higher scores on this index represented a greater level of perceived risk of victimization, whereas lower scores denoted a lower level of perceived risk. The mean for the sample was 14.21 (SD =5.45), with a potential range from a low of 7 to a high of 35. The descriptive statistics for the perceptions of risk variable are reported in Table 15.

Table 15

Descriptive Statistics for Perceptions of Risk Scaled Variable

	N	Mean	SD	Minimum	Maximum
Perceived Risk	348	14.21	5.45	7	31

Routine Activities / Lifestyle Choices

This study advances the assumption that engagement in certain lifestyle choices and routine activities that can be classified as potentially risky or unsafe may have an impact on student fear of crime levels. Past fear of crime research (see Mesch, 2000; Hindelang et al., 1978) has indicated that these activities can enhance the risk of victimization, particularly when the three components of routine activities theory (suitable target, motivated offender, lack of capable guardian) converge. Such activities can also impact a person's fear of crime. For instance, participation in risky or potentially unsafe lifestyle activities may increase an individual's fear of crime, especially when victimization occurs. In contrast, however, people who consciously refrain from engaging in such activities may also possess a heightened level of fear. This is despite the fact that they are less likely to be victimized than those who routinely participate in such risky activities.

To measure this construct, 12 questions were devised that asked how often respondents engaged in certain lifestyle choices. These lifestyle choices included walking on campus at night (both alone and with friends), leaving campus to go out at night (alone and with friends), attendance at campus parties (alone and with friends), attendance at off campus parties (alone and with friends) consuming alcohol, and using illicit drugs. Response categories were created utilizing a five-point Likert scale, which ranged from 1 (never) to 5 (almost always). It was assumed that respondents who rarely

(if ever) participated in these lifestyle choices would be more fearful of crime compared to those individuals who frequently engaged in such activities. The frequencies for the lifestyle choices included in this study are presented in Table 16.

Table 16

Frequencies for Lifestyle Choices Variable

Variable	Frequency	Percent
Walk Alone on Campus at Night		
Never	30	8.6
Rarely	65	18.7
Sometimes	106	30.5
Often	91	26.1
Almost Always	56	16.1
Walk with Friends On Campus at Night		
Never	31	8.9
Rarely	51	14.7
Sometimes	99	28.4
Often	123	35.3
Almost Always	44	12.6
Leave Campus to go out Alone at Night		
Never	88	25.3
Rarely	99	28.4
Sometimes	85	24.4
Often	55	15.8
Almost Always	21	6.0
Leave Campus to go out with Friends at Night		
Never	42	12.1
Rarely	45	12.9
Sometimes	81	23.3
Often	122	35.1
Almost Always	58	16.7
Go to a Party On Campus Alone		
Never	231	66.4
Rarely	70	20.1
Sometimes	33	9.5
Often	11	3.2
Almost Always	3	0.9
Go to a Party On Campus with Friends		
Never	141	40.5
Rarely	51	14.7
Sometimes	59	17.0

Often	60	17.2
Almost Always	37	10.6
Go to a Party Off Campus Alone		
Never	171	49.1
Rarely	80	23.0
Sometimes	57	16.4
Often	32	9.2
Almost Always	8	2.3
Go to a Party Off Campus with Friends		
Never	43	12.4
Rarely	33	9.5
Sometimes	78	22.4
Often	108	31.0
Almost Always	86	24.7
Drink Alcoholic Beverages		
Never	44	12.6
Rarely	36	10.3
Sometimes	123	35.3
Often	109	31.3
Almost Always	36	10.3
Drink to the Point of Heavy Intoxication		
Never	111	31.9
Rarely	113	32.5
Sometimes	78	22.4
Often	33	9.5
Almost Always	13	3.7
Use Illegal Drugs		
Never	236	67.8
Rarely	37	10.6
Sometimes	41	11.8
Often	15	4.3
Almost Always	19	5.5
Lock Your Doors		
Never	17	4.9
Rarely	18	5.2
Sometimes	30	8.6
Often	40	11.5
Almost Always	243	69.8

Participation varied among respondents in the lifestyle choices included in Table 16. For example, 253 respondents (72.7%) indicated that they at least sometimes, if not often or almost always, walk on campus alone at night. This activity can be considered potentially dangerous, as it could bring students (suitable targets) into close contact with

potential offenders without an existence of guardianship (i.e. university police). In addition, 44.8% of respondents (n=156) reported that they sometimes, often, or almost always attend on-campus parties with friends, while 76.9% of individuals (n=268) indicated that they at least sometimes, if not often or almost always, drink alcoholic beverages. Moreover, the vast majority of the sample (n=273, 78.4%) reported that they either rarely or never use illicit drugs. Illicit drug use, like alcohol assumption, can be considered a potentially risky lifestyle choice that can enhance the risk of victimization. However, students who participate in these activities may have a lower level of perceived risk, and as such, they may fear crime less.

To obtain a lifestyle choice score for each participant, a decision was made to aggregate the responses to the 12 survey items into a single scaled variable. Prior to further analysis, the internal consistency of the scale was assessed. The scale had an initial alpha value of .829, which suggests that the combined survey items measured the same underlying concept. It should be noted, however, that the item-total correlation for the lock doors survey item was very low (.055). This indicates that the item was not a very consistent or reliable measure of the construct being measured. It is for this reason that the decision was made to delete the item from the scale. This yielded a new estimated alpha value of .849. This, in turn, helped to enhance the reliability of the scale. Table 17 presents the results from the reliability analysis conducted for the lifestyle choices variable.

Table 17

Item-Total Correlation Statistics for Lifestyle Choices Scaled Variable

Item	Item-Total Correlation
Walk alone on campus at night	.434
Walk with friends on campus at night	.610
Leave campus to go out alone at night	.485
Leave campus to go out with friends at night	.640
Go to a party on campus alone	.464
Go to a party on campus with friends	.429
Go to a party off campus alone	.519
Go to a party off campus with friends	.679
Drink alcoholic beverages	.607
Drink to the point of heavy intoxication	.565
Use illegal drugs	.405
Lock doors	.055

Cronbach's Alpha = .829 (initial estimate)
Cronbach's Alpha = .849 (when 'lock doors' survey item was deleted)
N= 348

As noted above, the scores (which ranged from 1 to 5) to each of the lifestyle questions (minus the deleted 'lock doors' question) were summated to create a scaled variable. Higher scores on this scale represent greater participation in risky or potentially

dangerous activities, while lower scores depict less participation in such activities. The mean score for the sample was 28.70 (SD =.8.166), with an actual range of 11 (no participation in referenced lifestyle choices) to 48 (frequent participation). The descriptive statistics for the lifestyle choices scaled variable are presented in Table 18.

Table 18

Descriptive Statistics for Lifestyle Choices Scale

	N	Mean	SD	Minimum	Maximum
Lifestyle Choices	348	28.70	8.166	11	48

Description of Dependent Variable

The dependent variable utilized for this study was fear of crime. To measure this construct, eight original questions were devised and included in the survey instrument. In particular, respondents were asked how afraid they were of several crime-specific activities happening to them. These activities, which are lesser in severity, ranged from theft of various items (cell phone, computer, textbooks, money, and clothing) to physical assault (during the day and night). As noted earlier, a conscious effort was made to develop questions that asked about student concerns of less serious crimes. Not doing so, and instead including questions that asked about more serious crimes, could have yielded data that lacked normality and sufficient variation. This, in turn, could have presented some issues while running the regression analyses. Table 19 reports the frequencies for the fear of crime construct.

Table 19

Frequencies for Fear of Crime Variable

Variable	Frequency	Percent
Breaking into Your Home		
Not Afraid At All	157	45.1
Somewhat Not Afraid	78	22.4
Neutral	45	12.9
Somewhat Afraid	54	15.5
Very Afraid	14	4.0
Stealing Your Cell Phone		
Not Afraid At All	149	42.8
Somewhat Not Afraid	71	20.4
Neutral	55	15.8
Somewhat Afraid	60	17.2
Very Afraid	13	3.7
Stealing Your Computer		
Not Afraid At All	134	38.5
Somewhat Not Afraid	82	23.6
Neutral	42	12.1
Somewhat Afraid	74	21.3
Very Afraid	16	4.6
Stealing Your Textbook(s)		
Not Afraid At All	196	56.3
Somewhat Not Afraid	62	17.8
Neutral	53	15.2
Somewhat Afraid	31	8.9
Very Afraid	6	1.7
Stealing Your Money		
Not Afraid At All	103	29.6
Somewhat Not Afraid	78	22.4
Neutral	46	13.2
Somewhat Afraid	105	30.2
Very Afraid	16	4.6
Stealing Your Clothes		
Not Afraid At All	206	59.2
Somewhat Not Afraid	63	18.1
Neutral	41	11.8
Somewhat Afraid	30	8.6
Very Afraid	8	2.3
Physically Attacking You During the Day		
Not Afraid At All	230	66.1
Somewhat Not Afraid	56	16.1
Neutral	31	8.9
Somewhat Afraid	20	5.7

Very Afraid	11	3.2
Physically Attacking You During the Night		
Not Afraid At All	106	30.5
Somewhat Not Afraid	81	23.3
Neutral	38	10.9
Somewhat Afraid	92	26.4
Very Afraid	31	8.9

It can be ascertained from Table 19 that a number of respondents reported relatively low (if any) levels of fear for the eight crime-specific questions. The majority of participants for each question suggested that they were not afraid at all, while less than 9% in any category indicated that they were very afraid. Despite this, however, variability in fear of crime levels was present. For instance, 25.9% of respondents (n=90) indicated that they were somewhat afraid or very afraid that someone will steal their computer. Another 34.8% of students (n=121) conveyed that they were afraid or very afraid of someone stealing their money, while 123 respondents (35.3%) reported that they were somewhat afraid or very afraid of being physically attacked at night.

Participant responses to the eight fear-based survey items, each utilizing a five-point Likert scale, were summed to form a single fear of crime scaled variable. Higher scores on this scale indicate a higher fear of crime score for each participant, while lower scores represent a lower fear of crime score. Prior to scaling the variable, a reliability test was conducted to assess the scale's internal consistency. The results from this analysis are presented in Table 20.

Table 20

Item-Total Correlation Statistics for Fear of Crime Scaled Variable

Item	Item-Total Correlation
Someone breaking in to your home	.694
Someone stealing your cell phone	.723
Someone stealing your computer	.768
Someone stealing your textbook(s)	.727
Someone stealing your money	.758
Someone stealing your clothing	.662
Someone attacking you during the day	.649
Someone attacking you during the night	.644

Cronbach's Alpha = .906
N= 348

For this study, a decision was made to aggregate the scores from each question in an effort to create a fear of crime scaled variable. The average score among the sample was 17.00 (SD =7.618), with a potential range from 8 (not afraid at all) to 40 (very afraid). The descriptive statistics for the fear of crime variable are offered in Table 21.

Table 21

Descriptive Statistics for Fear of Crime Scaled Variable

	N	Mean	SD	Minimum	Maximum
Fear of Crime	348	17.00	7.618	8	40

Bivariate Results

Several bivariate analyses were conducted to examine the relationship between fear of crime and several independent variables included in this study. The results from the independent sample t-test analysis are reported first in this section, followed by the results obtained from several ANOVA tests and bivariate correlations. Two separate t-test analyses were conducted. The variables that were included in the first t-test were as follows: gender, prior victimization involving a property crime, prior victimization involving a violent crime, and living arrangement. The second t-test utilized the variables gender, race, and perceived risk. It is important to note that the variable living arrangement was recoded into dichotomous categories (1= on campus, 0= off campus) so as to compare the difference of means between groups. Table 22 reports the obtained t values and level of significance for the variables included in the initial t-test analysis.

Table 22

T-test Analysis of Gender, Prior Victimization, & Living Arrangement

Item		N	Mean	SD	*t*
Gender:	Male	135	15.13	6.751	3.699**
	Female	213	18.18	7.910	
Property Victim:	Yes	26	18.08	8.759	.751
	No	322	16.91	7.527	
Violent Victim:	Yes	19	19.26	7.171	1.335
	No	329	16.87	7.633	
Living:	On campus	171	15.84	7.038	-2.807*
	Off campus	177	18.11	8.002	

* Significant at p <.01

** Significant at p <.001

Results from the independent sample t-test suggest that there is a statistically significant mean difference between male and female students as it concerns fear of

crime. In particular, male students (M = 15.13, SD = 6.751) scored 3.05 points less on the fear crime scale than females (M = 18.18, SD = 7.910), where *t* = 3.699 and p = .000 (two-tailed), with a 95% confidence interval between 1.426 and 4.664 This suggests that a student's gender is related to their fear of crime level. This finding is consistent with most fear of crime literature, which reports that gender is the most consistent and prominent predictor of fear. It also lends support to Hypothesis 7, which predicted that female students would be more fearful of crime than male students.

An additional statistically significant variable was living arrangement. The results suggested that there is a significant mean difference in regards to fear of crime between students who reside on campus (M = 15.84, SD = 7.038) and those who live somewhere off campus (M = 18.11, SD = 8.002), where *t* = -2.807 and p = .005 (two-tailed). More specifically, students who live on campus had a lower fear of crime by 2.27 points than students who live off campus, with a 95% confidence interval between -3.862 and -.680. This indicates that the living arrangement of students is related to their level of fear. This finding supports Hypothesis 10, which predicted that off campus students would possess higher fear crime levels than students who established residency on campus.

There were also some variables that were not statistically significant at the .05 level. These included both prior victimization variables. In particular, there was no statistically significant difference in means among those respondents who were a victim of a property crime (M = 18.08, SD = 8.759) and those who were not (M = 16.91, SD = 7.527), where *t* = .751 and p = .453 (two-tailed). Similarly, the mean scores of those respondents who were a victim of a violent crime (M = 19.26, SD = 7.171) were not significantly different than those who never experienced a violent crime-related

victimization (M = 16.87, SD = 7.633), where *t* = 1.335 and p = .183 (two-tailed). This supports rejecting Hypothesis 4, which stated that students who have been victimized in the past will be more fearful of crime than those students who reported no victimization.

The second independent sample t-test included the variables gender and race as possible indicators of perceived risk. Results of the analysis, as presented in Table 23, suggest that there is a statistically significant difference in means between whites and nonwhites regarding their level of perceived risk. In particular, white students (M =14.43, SD = 5.406) reported a greater level of perceived risk by 1.33 points than nonwhite students, where *t* = 1.702 and p < .10 (two-tailed), with a 95% confidence interval between -.207 and 2.869. Admittedly, the direction of this relationship was unexpected. The literature suggests that perceived risk is an important fear of crime correlate and nonwhites in general fear crime more than whites (see Parker, 1988). Therefore, it was anticipated that nonwhites would have also a higher level of perceived risk than whites. While the direction of this relationship was unexpected, the results nonetheless revealed a significant mean difference among whites and nonwhites as it concerns perceived risk.

It was found also that gender was not significant in the analysis. In particular, results revealed that females reported a higher level of perceived risk of victimization than male students. However, there was no significant difference in means among male (M = 13.78, SD = 4.997) and female students (M = 14.49, SD = 5.714) as it concerns their level of perceived risk, where *t* = 1.186 and p = .237 (two-tailed). Table 23 presents the mean scores, t values, and level of significance for the variables that were included in the second t-test analysis.

Table 23

T-test Analysis of Gender & Race on Perceived Risk

Item		N	Mean	SD	*t*
Gender:	Male	135	13.78	4.997	1.186
	Female	213	14.49	5.714	
Race:	White	290	14.43	5.406	1.702*
	Nonwhite	58	13.10	5.584	

* Significant at p <.10

Analysis of Variance

Analysis of variance (ANOVA) was utilized to further explore key baseline differences among several variables included in this study. While a t-test helps to determine whether the means of two different groups are statistically different, ANOVA assesses mean differences among more than two groups; therefore, the latter tool is essentially an extension of the former (Bachman & Paternoster, 2004). Four ANOVA tests were conducted. The first test examined the impact of gender, race, and living arrangement on student fear of crime. The second test explored the relationship between police visibility and fear of crime. The third test assessed gender, race, and living arrangement as possible correlates of perceived risk of victimization. The final test examined the relationship between police visibility, gender, race, and living arrangement. Table 24 presents the results of the first test.

Table 24

ANOVA of Gender, Race, & Living Arrangement

Item	N	Mean	SD	F	Eta^2	*P*
Male – Off Campus	58	15.55	6.554	7.017	.058	.000**
Male – On Campus	77	14.82	6.922			
Female – Off Campus	119	19.36	8.364			
Female – On Campus	94	16.68	7.058			
White – Off Campus	152	17.92	7.374	2.888	.025	.036*
White – On Campus	138	15.75	6.658			
Nonwhite – Off Campus	25	19.28	11.216			
Nonwhite – On Campus	33	16.24	8.555			

* Significant at p <.05

** Significant at p <.001

Results of the ANOVA revealed a statistically significant difference in means among groups when the relationship between gender and living arrangement was considered in predicting student fear of crime. The relationship between gender and living arrangement on fear of crime was significant, where $p < .001$ and $F = 7.017$. A Tukey's post-hoc analysis test was utilized to determine if the means for each group were statistically different from one another. It was revealed, through a Tukey's post-hoc test, that there was a significant difference in means between the following groups: (1) males who lived off campus and females who lived off campus, (2) males who lived on campus and females who lived off campus, and (3) females who lived on campus and females who lived off campus. The test further revealed that the largest difference was between males who lived on campus and females who lived off campus, with $p < .001$, a 95% confidence interval between 1.739 and 7.348, and a mean difference of 4.54 points. This suggests that females who lived somewhere off campus had a higher fear of crime by 4.54 points than males who lived on campus.

The ANOVA test also uncovered, as depicted in Table 24, that there was a significant difference in means between race and living arrangement when predicting student fear of crime. The relationship between race and living arrangement was statistically significant, with $p < .05$ and an F statistic of 2.888. A Tukey's post-hoc test revealed that the largest difference in means was between white students who lived on campus and nonwhites who lived somewhere off campus, with a mean fear of crime score difference of 3.53 points. This suggests that there is a significant difference in means when predicting fear of crime levels among white students who live on campus and nonwhite students who establish residency off campus.

A second one-way ANOVA test was conducted to examine police visibility as a possible fear of crime correlate. Recall that for this study, multiple questions were included in the survey instrument to measure police visibility. For this analysis, each question was examined independently from one another and treated as a separate variable. This approach was undertaken so that the mean score of each group could be identified and subsequently compared to the mean score of other groups. Conclusions were then drawn based off the observed differences in means among groups. Table 25 reports the mean scores, F statistic, and p value for each police visibility variable included in the ANOVA analysis.

Table 25

ANOVA of Police Visibility

Item	N	Mean	SD	F	Eta^2	*P*
Police Walk Around Campus						
Strongly Disagree	37	18.22	8.440	1.774	.021	.134
Disagree	134	17.79	8.087			
Neither Agree or Disagree	52	16.06	6.989			
Agree	80	16.63	7.182			
Strongly Agree	29	14.28	6.313			
Police Interact w/ Students						
Strongly Disagree	48	16.77	7.982	.690	.009	.599
Disagree	115	17.60	7.828			
Neither Agree or Disagree	84	17.25	8.013			
Agree	44	15.93	7.000			
Strongly Agree	7	13.86	8.533			

* Significant at p <.05

Results revealed that that neither police visibility variable had an impact on student fear of crime. For the first variable, the largest difference in means was between students who strongly disagreed that the police walk around campus daily and students who strongly agreed with the statement, with a mean difference of 3.94 points and F statistic of 1.774. However, this difference was not statistically significant ($p = .134$). Moreover, for the second police visibility variable, the largest difference in means was between students who disagreed that the police regularly interact with students and students who strongly agreed with the statement. This mean difference, however, was not statistically significant at the $p < .05$ level.

The third ANOVA test examined the impact of gender, race, and living arrangement on perceived risk. Results of the analysis are presented in Table 26. In particular, it was found that neither gender nor race, when combined with living

arrangement, had an impact on student perceptions of risk. When gender and living arrangement were taken into consideration, the largest difference in means was between males who lived on campus and males who lived off campus, with a mean difference of 1.871 points. The difference, however, was not statistically significant at the $p < .05$ level. Moreover, when race and living arrangement were considered in predicting perceived risk, the largest mean difference was between white students who lived somewhere off campus and nonwhites who resided on campus, with a mean perceived risk score difference of 1.91 points. However, this difference was not statistically different from the other group means at the $p < .05$ level. The data therefore suggests that both gender and race, when combined with living arrangement, are not statistically significant predictors of student perceived risk.

Table 26

ANOVA of Gender, Race, & Living Arrangement on Perceived Risk

Item	N	Mean	SD	F	Eta^2	*P*
Male – Off Campus	58	14.84	5.244	1.857	.016	.137
Male – On Campus	77	12.97	4.676			
Female – Off Campus	119	14.65	6.082			
Female – On Campus	94	14.29	5.236			
White – Off Campus	152	14.97	5.662	1.996	.017	.114
White – On Campus	138	13.85	5.064			
Nonwhite – Off Campus	25	13.16	6.530			
Nonwhite – On Campus	33	13.06	4.854			

* Significant at p <.05

As presented in Table 27, results of the third ANOVA test demonstrated a significant relationship when gender and living arrangement were considered in predicting police visibility. When combined with living arrangement, gender had a statistically significant impact on student perceptions of police visibility, where $p < .05$

and F = 3.691. A Tukey's post-hoc test illustrated that the largest mean difference was between females who lived on campus and females who lived off campus, with a mean difference of .43 points. Recall that survey items designed to measure police visibility were summated, averaged, and combined into a scale; therefore, scores ranged from 1 to 5 (with a mean score of 2.66 for the entire sample). For this analysis, results signify that females who lived on campus perceived the police to be more visible by .43 points than females who lived off campus.

A significant relationship also emerged when race and living arrangement were considered in predicting student perceptions of police visibility. In particular, results illustrated a statistically significant difference in means among groups, where $p < .05$ and $F = 3.306$. A Tukey's post-hoc test revealed that the largest difference in means was between white students who lived off campus (M = 2.47) and nonwhites who lived off campus (M= 2.87), with a mean difference of .40 points (based on a 1 to 5 scale). This finding suggests that both race and living arrangement, when combined, have a significant impact on student perceptions of police visibility.

Table 27

ANOVA of Gender, Race, & Living Arrangement on Police Visibility

Item	N	Mean	SD	F	Eta^2	*P*
Male – Off Campus	55	2.74	.902	3.691	.032	.012*
Male – On Campus	77	2.73	1.114			
Female – Off Campus	111	2.42	.921			
Female – On Campus	93	2.84	.912			
White – Off Campus	143	2.47	.866	3.306	.029	.020*
White – On Campus	138	2.78	1.027			
Nonwhite – Off Campus	23	2.87	1.189			
Nonwhite – On Campus	32	2.83	.930			

* Significant at p <.05

Bivariate Correlations

Bivariate correlations were also conducted to assess the relationship between fear of crime and various independent variables. Pearson's correlation coefficient (*r*) was utilized to test for the direction and magnitude of the relationship among these variables. As previously reported, Pearson's correlation ranges from +1 (perfect linear positive relationship) to -1 (perfect linear negative relationship). The following guidelines have been offered by Cohen (1988) in analyzing Pearson's correlation: small effect size = .10 to .29, medium effect size = .30 to .49, and a large effect size = .50 to 1.00. As a general rule of thumb, the closer *r* is to 1, the stronger the relationship between variables. The results from the bivariate correlations analysis are reported in Table 28.

Table 28
Bivariate Correlations

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Perception of campus police	1.00	.581**	.275**	-.035	-.052	-.101	-.281**	.017	.170*	-.014	.006	-.011	-.055
2. Perception of local police score		1.00	.174**	.024	-.003	-.042	-.207**	-.001	.082	.081	.031	-.032	-.030
3. Police visible			1.00	.027	-.020	.039	.040	-.118*	-.059	-.085	.137*	-.117*	-.110*
4. Victim of past property crime				1.00	.076	.077	.057	.057	.002	.010	-.148**	.188**	.040
5. Victim of past violent crime					1.00	.135*	.173**	.055	-.042	-.028	-.135*	.144**	.072
6. Perceptions of risk						1.00	.119*	.027	.064	.091	-.093	.067	.496**
7. Lifestyle choices							1.00	-.144**	-.232**	-.044	.069	-.074	-.005
8. Age								1.00	-.025	-.021	-.305**	.526**	.006
9. Gender									1.00	-.040	-.126*	.036	.195**
10. Race (white)										1.00	-.069	-.055	-.033
11. Live (on campus)											1.00	-.488**	-.149**
12. Class stand.												1.00	.045
13. Fear of crime													1.00

* Correlation is significant at the .05 level (two-tailed)

** Correlation is significant at the .01 level (two-tailed)

Several variables had a significant correlation with the dependent variable, as illustrated in Table 28. Perceptions of risk was positively correlated with fear of crime ($r = .496$, $p < .01$). This correlation represents a medium effect size, and it indicates that students who perceived a higher risk of personal victimization were more likely to fear crime compared to those students who had a lower perceived risk of victimization. Gender ($r = .195$, $p < .01$) was positively correlated with fear of crime, while police visibility ($r= -.110$, $p <.05$) and living arrangement ($r = -.149$, $p < .01$) were negatively correlated with fear. It is important to note that due to recoding (1 = on campus, 0 = off campus), the negative correlation implies that students who lived on campus possessed lower fear of crime than those students who lived off campus. These magnitude and direction of these correlations were anticipated, given that past research has indicated that perceived risk, gender, and living arrangement can influence one's fear of crime.

Regression Assumptions

There are a number of key assumptions of multivariate OLS regression. Prior to conducting the multiple regression analyses, several assumption diagnostics were run in an effort to ensure that the data did not violate any of these assumptions. Meeting these assumptions helps to facilitate proper hypothesis testing and generate inferences from a sample to the population. It also helps to ensure desirable, non-biased estimates of the population parameters (Menard, 2002).

OLS regression assumes that a linear relationship exists among the dependent and independent variables. To ensure this assumption was met, a matrix scatterplot was conducted and subsequently analyzed. The scatterplot indicated that the existence of a linear relationship between the variables was likely. Moreover, it is assumed with OLS

regression that the residuals (error terms) are normally distributed, and the mean of these residuals should sum to zero (Lewis-Beck, 1980). To assess these assumptions, a histogram was run, followed by a regression analysis. The histogram revealed that the residuals were in fact normally distributed. Also, through an analysis of the residual statistics, the regression analysis revealed that the mean of the residuals was zero. It is also important to note that the error term was not correlated with any of the independent variables. This was determined by conducting several bivariate correlations, in which the unstandardized residual was correlated with each of the independent variables.

Another assumption of multivariate regression relates to independent random sampling. This implies that everyone in the population had a random, nonzero chance of being selected to participate. This study, as previously mentioned, utilized two probability random sampling techniques. This approach was undertaken to ensure that all students who were enrolled at the university of interest had a random chance to be included in the sample. Moreover, the distribution of variables is another factor that must be considered, and subsequently met, prior to running a regression analysis. In particular, it is assumed with multivariate regression that *y* is normally distributed for each value of *x* (Lewis-Beck, 1980). This assumption can be relaxed if the sample size is sufficient, which it is for this study (n = 348).

The absence of perfect multicollinearity among the independent variables is an additional key assumption of OLS regression (Bachman & Paternoster, 2004). Multicollinearity is present when independent variables are highly correlated with one another. A lack of consensus exists, particularly in the social sciences, regarding what constitutes a good or weak correlation between variables. As a general rule, however, it

has been proposed that correlations among independent variables that are below .80 lack issues with multicollinearity (Bachman & Paternoster, 2004; Lewis-Beck, 1980).

To test for possible issues with multicollinearity, two diagnostics were run and subsequently examined. First, bivariate correlations among the independent variables were analyzed. As indicated in Table 28, there were no correlations that were above the .80 threshold, illustrating that multicollinearity was not a problem in the subsequent analyses. In fact, the vast majority of correlations revealed a small effect size ($r < .29$) between independent variables. The variance inflation factor (VIF) for each variable was also examined to detect for multicollinearity. A VIF that exceeds four generally indicates the presence of multicollinearity. It was determined that each of the variables had a VIF under four. This signifies the absence of perfect multicollinearity, and as such, the analysis proceeded as planned. The next section reports the results for the multivariate regression models that were estimated. These results are then examined to assess the impact that the independent variables have on fear of crime.

Multivariate Regression Analyses

Multivariate OLS stepwise regression was conducted after the bivariate analyses were ran. This type of statistical technique assumes linear association between variables, and it allows for an interpretation of the relationship between multiple independent variables and the dependent variable (Lewis-Beck, 1980). It is utilized in this study in an effort to provide a more complete explanation of the variables, while controlling for other constructs, and to analyze the various research questions and hypotheses. In particular, five models were estimated, each utilizing fear of crime as the dependent variable. These models, which are depicted in Tables 29 and 30, are examined in this section.

Model 1

The first model included the independent variables of race, age, and living arrangement. For this model, the unstandardized regression coefficient (b; slope) for living arrangement was -2.531, and it was significant at the $p < .05$ level. The unstandardized coefficient is a measure of the impact that the independent variable has on the dependent variable, when scaled to the independent variable. Since the coefficients are measured in their natural units, they cannot be compared against one another to determine which is more influential. The unstandardized regression coefficient can be interpreted as the unit increase in the dependent variable associated with a one unit increase in the independent variable. For the variable living arrangement, the unstandardized coefficient can be interpreted as follows: For this sample, students who live on campus are 2.531 units less fearful of crime than students who reside off campus.

The regression coefficient for race was not significant at the $p < .05$ level. This implies that there is no statistically significant difference in fear of crime levels among whites and nonwhites, while controlling for age and living arrangement. This finding contradicts past studies that have found that race may impact fear of crime (see Parker, 1988). Moreover, age was also found to not be significant. It has been maintained in the literature, with no collective unanimity, that older individuals are typically more fearful of crime than younger folks (see Tewksbury & Mustaine, 2003; Warr, 1984). To this end, the finding for age contrasts with past research that has found that age is a significant fear of crime correlate. This contradiction can be attributed, in part, to the close proximity in age among students included in the sample. The vast majority of respondents (95.5%) were between the ages of 18 to 22, whereas only 4.5% of the sample was age 23 years or

older. These individuals are still in their youthful years, which is perhaps why age was found not to be significantly correlated with fear of crime.

Model 1, as depicted in Table 29, had a R^2 value of .026 and an F statistic of 3.064 (significant at $p < .05$). R^2, or the coefficient of determination, is a descriptive statistic that refers to the amount of variance in the dependent variable that can be explained by the independent variable. It also has a proportionate reduction in error (PRE) interpretation. The coefficient of determination can be interpreted as follows: For this sample, by taking into consideration age, race, and living arrangement in predicting fear of crime, the error was reduced by 2.6% in comparison to the error made when the independent variables were not taken into consideration. Despite this, however, 97.4% of the variance in the dependent variable remains unexplained. This suggests that other fear of crime correlates exist, and as such, these constructs are explored in subsequent models.

Model 2

The independent variables of gender and class standing were included in the second model. As anticipated, gender emerged as a significant variable at the $p < .001$ level, while controlling for class standing. The unstandardized regression coefficient for gender was 3.024. This value can be interpreted as follows: For this sample, females were 3.024 units more fearful of crime than male students. As mentioned previously, this finding supports previous research that suggests gender is the most constant fear of crime correlate (see Lane & Fisher, 2009; Cobbina et al., 2008; Haynie, 1998).

Class standing was not significant, as indicated by the regression coefficients. This suggests that there was no difference in fear of crime among students of different classes. For instance, fear of crime among, say, seniors was not significantly different

than fear of crime levels among, say, sophomores. This finding supports rejecting Hypothesis 8, which stated that upper-class students would be more fearful of crime than underclass students. This finding is further discussed in the next chapter.

Model 2, with the inclusion of gender and class standing as independent variables, had a R^2 value of .040. This implies that 4.0% of the variation in the dependent variable can be explained by gender and class standing. The model also had an F statistic of 7.097 (significant at $p < .01$). While this model explained more of the variation in the dependent variable than the previous model, it still leaves 96.0% of the variation in the dependent variable unexplained. As with model 1, this implies that there are other factors that need to be considered in an effort to provide a more complete examination of fear of crime and its correlates. The next model undertakes this endeavor.

Model 3

The third regression model included the independent variables of perceptions of campus police, perceptions of local police, perceived risk, police visibility, and lifestyle choices. In this model, two variables emerged significant. These constructs included police visibility ($p < .01$) and perceived risk ($p < .001$). The unstandardized regression coefficient (slope) for police visibility was -1.144. This indicates that for every one unit increase in police visibility, fear of crime decreased by 1.144 units. The nature and direction of this relationship was predicted, as evidenced by Hypothesis 3. Moreover, the regression coefficient for perceived risk was .742, which illustrates that students who perceived a higher risk of personal victimization were more fearful of crime than students who perceived a lower risk of victimization. This finding supports past research that indicates perceptions of risk can impact fear of crime (see Rountree & Land, 1996).

Perceptions of the police (campus and local) and lifestyle choices were not significant variables in the model. That is, there was no significant difference in fear of crime among respondents when their perceptions of the police were taken into account. The same holds true when the lifestyle choices of respondents were considered. These findings contradict past studies that suggest perceptions of the police and lifestyle choices can be important predictors of fear (see Roh & Oliver, 2005; Mesch, 2000). Several temporal ordering-related possibilities for these disparities are evident. For instance, it is possible that people who possess higher fear of crime levels may hold less favorable perceptions of the police, rather than vice versa. Similarly, this fearful population may avoid engaging in lifestyle choices that can increase their vulnerability to victimization.

This model had an obtained R^2 value of .275. This illustrates that 27.5% of the variation in the dependent variable can be explained with the inclusion of perceptions of police (campus and local), police visibility, perceived risk, and lifestyle choices as independent variables. The model was reliable, with an F statistic of 23.447, and significant at the $p < .001$ level. Out of all the partial models estimated to this point, this model helps to explain the most variance in fear of crime. Despite this, however, 72.5% of the variance in the dependent variable remains unexplained, thus implying that other fear of crime correlates have yet to be considered.

Model 4

The fourth model incorporated all of the independent variables that were included in the previous three partial regression models. This decision to include all of the independent variables in one model was made in an effort to obtain a more complete explanation of the dependent variable while controlling for other variables. In this model,

as depicted in Table 29, five variables emerged significant. These variables included gender, living arrangement, race, perceived risk, and police visibility. With the exception of race, these variables were statistically significant when the previous partial models were estimated, and they remained significant when included in the full model.

Results from model 4 indicated that both gender and perceived risk were positively related to fear of crime, while living arrangement, race, and police visibility were negatively associated with fear of crime. The most influential of these variables was perceived risk (beta = .509, b = .732). The next most influential variable in the model was police visibility (beta = -.138, b = -1.087), followed by race (beta = -.121, b = -2.551), gender (beta = .113, b = 1.778), and living arrangement (beta = -.110, b = -1.685), respectively. This was somewhat unexpected, given that many prior studies have found gender to be the most significant fear of crime predictor. Although gender was not the most influential variable in the full model, it was found to be significant nonetheless.

Model 4, with the inclusion of all ten independent variables, had an F statistic of 13.779 and an R^2 of .312. These values imply that the model was significant ($p < .001$), and it explained 31.2% of the variance in fear of crime, respectively. This full model explains more variance in the dependent variable than each of the partial models that were estimated. Despite this, however, the model still fails to explain 68.8% of the total variance in fear of crime. This implies that other significant fear of crime correlates exist beyond those that were included in this study. Opportunities, then, exist for future research to explore and subsequently analyze these constructs in relation to their influence on fear of crime. This notion is further discussed in Chapter V.

Table 29

Multivariate Linear Forward Stepwise Regression Models

Variable	**Model 1** b (Beta)	**Model 2** b (Beta)	**Model 3** b (Beta)	**Model 4** b (Beta)
Living Arrangement	-2.531 (-.166)**			-1.685 (-.110)*
Age	-.132 (-.046)			-.107 (-.024)
Race	-.921 (-.045)			-2.551 (-.121)*
Gender		3.024 (.194)***		1.778 (.113)*
Class Standing		.251 (.038)		-.296 (-.045)
Perceived Risk Score			.742 (.516)***	.732 (.509)***
Lifestyle Choices Score			-.076 (-.078)	-.053 (-.054)
Perceptions of Campus Police Score			.470 (.042)	.117 (.010)
Perceptions of Local Police Score			-.317 (-.028)	-.069 (-.006)
Police Visibility Score			-1.144 (-.145)**	-1.087 (-.138)**
Model R^2	.026	.040	.275	.312
Adjusted R^2	.018	.034	.263	.289
F Value	3.064*	7.097**	23.447***	13.779***
P Value	.028	.001	.000	.000
N	348	348	315	315

* Significant at p < .05 *** Significant at p < .001

** Significant at p < .01

Model 5

The first four models utilized a forward stepwise linear regression approach to examine the relationship between the independent variables and fear of crime. In an effort to procure a parsimonious final model that best fits the data, a backward deletion stepwise linear method also was used. This procedure allows for insignificant independent variables to be sequentially removed from a full model, thus yielding a final improved model that best represents the data. For this study, the deletion method continued until no further improvement emerged in the model building process. This undertaking was accomplished through a visual analysis of the R^2 and F statistic values.

A full model was assessed to begin the backward deletion stepwise process. Recall that model 4, with the inclusion of all ten independent variables, explained 31.2% of the variance in fear of crime. Five variables were significant in this model ($p < .001$), while five variables lacked statistical significance. An analysis of the *t* values revealed that the statistically weakest variable was perceptions of local police ($t = .103$, $p = .918$), followed by perceptions of campus police ($t = .167$, $p = .867$). These variables were sequentially removed; however, the R^2 value remained the same ($R^2 = .312$), while the significance of the model improved ($F = 17.332$). Given the improvement, the deletion process continued. The next statistically weakest variable removed from the model was age ($t = .331$, $p = .741$). The R^2 value again remained unchanged with the removal of this variable, but the overall significance of the model did improve yet again ($F = 19.850$).

Class standing was the next weakest construct, and as such, it was removed from the model. The R^2 value (.309) decreased slightly with the removal of this construct; however, the significance of the model increased once again ($F = 22.945$). The decision

was therefore made to continue with the deletion process. The next weakest variable was lifestyle choices (t = 1.055, p = .292); therefore, it was removed from the full model. The R^2 value (.306) decreased once again, implying that less of the variance in the dependent variable was being explained as additional constructs were being removed from the full model. It was at this point that the deletion method was discontinued, given that no further improvement materialized in the model building process. The final reduced model contained five variables. These included: perceived risk, police visibility, gender, race, and living arrangement.

Table 30 depicts the full and final reduced model obtained from the stepwise backward deletion process. Results indicated, similar to model 4, that perceived risk was statistically the most influential fear of crime correlate (beta = .499, p < .001), and it maintained statistical significance throughout the deletion process. The second most influential variable was gender (beta = .132, p < .01), which remained significant as weaker variables were removed from the full model. The next most influential variable retained in the final model was police visibility (beta = -.130, p < .01), followed by race (beta = -.111, p < .05) and living arrangement (beta = -.080, p < .05), respectively. The other variables – perceptions of the police (campus and local), age, class standing, and lifestyle choices— lacked statistical significance and were subsequently removed through the backward deletion model building process.

Table 30

Multivariate Linear Backward Deletion Stepwise Regression Models

Variable	**Full Model** b (Beta)	SE	t	**Final Model** b (Beta)	SE	t
Living arrangement	-1.685 (-.110)	.854	-1.973*	-1.221 (-.080)	.739	-1.651*
Age	-.107 (-.024)	.323	-.331	--	--	--
Race	-2.551 (-.121)	1.039	-2.456*	-2.355 (-.111)	1.014	-2.322*
Gender	1.778 (.113)	.802	2.217*	2.073 (.132)	.752	2.758**
Class Standing	-.296 (-.045)	.482	-.614	--	--	--
Perceived Risk	.732 (.509)	.070	10.390***	.718 (.499)	.069	10.379***
Lifestyle Choices	-.053 (-.054)	.050	-1.055	--	--	--
Perceptions of Campus Police	.117 (.010)	.702	.167	--	--	--
Perceptions of Local Police	-.069 (-.006)	.669	-.103	--	--	--
Police Visibility	-1.087 (-.138)	.401	-2.710**	-1.025 (-.130)	.379	-2.706**
Model R^2 = .312 F Value = 13.779*** N = 315				Model R^2 = .306 F Value = 27.301*** N = 315		

* Significant at p < .05 ** Significant at p <.01 *** Significant at p < .001

Research Questions and Hypotheses

The research literature suggests that fear of crime may be influenced by a number of different constructs. With this in mind, various research questions and hypotheses were developed for this study in an effort to examine factors that may influence fear of crime among students. Each of these questions and hypotheses were devised through the guidance of extant fear of crime research and are sequentially examined in detail below.

Research Question 1

The first research question asked about the relationship between student perceptions of the police and fear of crime, specifically whether the former influences the latter. To address this question, three hypotheses were developed. The first hypothesis predicted that "students who have favorable perceptions of *university police* will be less fearful of crime than students who view the police in an unfavorable manner". This relationship was expected, given that past research has suggested that positive police-citizen relationships can enhance trust and perceptions of the police, which in turn can decrease fear of crime. Surprising, when entered into the partial model, student perceptions of university police was positively associated with fear of crime. When entered into the full model, however, a negative relationship between constructs was revealed. This relationship, however, was not statistically significant in both models.

The second hypothesis focused specifically on the relationship between student perceptions of *local (borough) police* and fear of crime. It was expected that students who had favorable perceptions of the local police would fear crime less compared to students who viewed the police unfavorably. The rationale behind this expected relationship mirrored that of the first hypothesis. So too did the results. The relationship

between student perceptions of local police and fear of crime was not significant, indicating that the former seems to not be a good predictor of the latter. An inverse relationship between both constructs was found in the partial model, but it lacked statistical significance. Hypothesis 2, therefore, was not supported by the data.

Hypothesis 3 stated that "students who perceive university police as being more visible will report lower fear of crime than students who view the police as being not visible". Previous research has suggested that enhanced police presence and visibility can reduce people's fear of crime (see Zhao et al., 2002; Torres & Vogel, 2001). Results of the regression analysis revealed that there was an inverse relationship between police visibility and fear of crime. That is, students who perceived the police as being more visible feared crime less than students who reported a lack of police visibility. This relationship was statistically significant in both the partial and full models, thus demonstrating support for previous research in general and this hypothesis in particular.

Research Question 2

Victimization-related factors can also be important predictors of fear, as evidenced in previous research. The second research question asked about this relationship. To address this question, two hypotheses were developed. The first hypothesis predicted that "students who report being victimized in the past will be more fearful of crime than those students who report no such prior victimization". Both property and violent crime victimization was measured. These two variables were not included in the regression analyses due to issues with variability. Instead, bivariate analyses were conducted to examine both variables. Results from the t-test analysis indicated that there was no significant difference in means between victims and non-

victims of both property and violent crime. Therefore, the hypothesis was not supported, and it appears that prior victimization may not be a strong predictor of fear of crime. This finding is inconsistent with past research that demonstrates that a relationship exists between victimization and fear (see Skogan, 1987 and Russo & Roccato, 2010).

As suggested in the literature, perceived risk of victimization is an important factor to consider as it concerns fear of crime. Recall that perceived risk is often loosely defined in the literature as a general cognitive assessment of safety, while fear of crime is defined as a negative emotional reaction to crime. The second hypothesis, developed to address research question 2, stated "students who perceive a higher risk of personal victimization will be more fearful of crime than those students who perceive a lower risk of victimization". Data revealed that this hypothesis was supported, as perceived risk emerged as a statistically significant variable in both the partial and full model. In particular, perceived risk was positively associated with fear of crime, while controlling for other key constructs. This yields support for previous research, signifying that perceived risk of victimization is a key source of fear of crime.

Research Question 3

The third research question sought to address the relationship between lifestyle choices and fear of crime. Through the guidance of rational theory as a framework, it was hypothesized that "students who engage in lifestyle choices that can be classified as risky or unsafe will fear crime less than those students who refrain from such activities". It has been suggested in the literature that college students' lifestyles or routine activities can heighten their risk of victimization and fear of crime (Tewksbury & Mustaine, 2003). This is particularly true when the activities can put students in risky or potentially

dangerous situations. To this end, it would appear that the hypothesis that corresponds with research question 3 is counterintuitive. However, it has been suggested by other scholars (see Mesch, 2000) that individuals who fear crime may refrain from engaging in certain activities that can enhance their risk for victimization. Similarly, individuals who fear crime less may not perceive any adverse issues coming from the participation in risky lifestyle choices. This possibility, then, guided the development of the hypothesis.

Results of the regression analysis revealed a lack of support for the hypothesis. As expected, an inverse relationship appeared between lifestyle choices and fear of crime. This relationship, however, was not statistically significant in both the partial and full model. One notable factor that could help to explain this unexpected finding is worthy of mention. In particular, a few of the survey questions asked about student participation in potentially risky activities that occurred on campus, particularly at night. Descriptive statistics revealed that a little over 50% of students in the sample lived somewhere off campus. Many of these students may have never participated in such activities due to lack of opportunity or their living arrangement. It is possible too that some of these individuals may have had higher fear of crime levels compared to other students who resided on campus. In this case, their high levels of fear would not necessarily be best explained by their lack of participation in the various lifestyle choices, at least compared to other possibly more relevant variables (i.e. gender, living arrangement). This, then, could help to explain the lack of support for the hypothesis.

Research Question 4

Individual characteristics may also be important predictors of fear. The fourth research question asked about which individuals characteristics influence student fear of

crime. Of primary concern were the variables of gender, age, race, class standing, and living arrangement. Five hypotheses were devised to answer this question. Hypothesis 1 predicted that female students would be more fearful of crime than male students. This finding was expected, as previous research has confirmed that gender is one of the most vital and constant predictors of fear (Rader et al., 2009; Cobbina et al., 2008; Wilcox et al., 2007). The results revealed strong support for Hypothesis 1, indicating that female students included in the sample were more fearful of crime than male students. Gender emerged as a significant variable in the partial model as well as the full model, controlling for other key fear of crime correlates.

It was also predicted that class standing would be an important social characteristic that influences student fear of crime. In particular, the second hypothesis stated that "upper-class students (juniors and seniors) will exhibit greater fear of crime levels than underclass students (freshman and sophomores)". This hypothesis was not supported by the data. The relationship between class standing and fear of crime was not statistically significant; therefore, it appears as if a student's class standing in school is not a key fear of crime correlate.

Hypothesis 3 predicted that nonwhite students would be more fearful of crime than white students. While no consensus exists in the literature regarding the relationship between race and fear, some studies (see Parker, 1988) have found support for the contention that nonwhites are typically more fearful than whites. For this study, the relationship between race and student fear of crime was not significant, while controlling for age and living arrangement, when the first partial stepwise regression model was estimated. However, the relationship between both constructs emerged as statistically

significant when entered into the full and reduced regression models. Based off the data, it appears that a student's race is an important factor that can contribute to fear of crime. Support therefore existed for the third hypothesis.

Previous research has also demonstrated that age is a significant fear of crime correlate. Guided by this finding, the fourth hypothesis stated that "older students will be more fearful of crime than more youthful students". The results of the regression analysis revealed no support for this hypothesis. This finding is inconsistent with past research that has found a significant relationship between the two constructs. The reason behind this incongruity likely relates to the closeness in age of participants included in the sample. The vast majority of students fell in the age group 18 to 22, while only a few students exceeded this age range. This lack of age-related variation may explain why age was found to not be significant in both the partial and full model.

Hypothesis 5 predicted that students who lived off campus would possess higher fear of crime levels than students who resided on campus. The university of interest, like other institutions of higher learning, promotes student-centered learning and professional development in a safe and secure environment. Crime, particularly violent crime, very rarely occurs on the campus. This is more the rule rather than the exception, as crime occurs noticeably less on most college campuses than in the general public (Wada et al., 2010). It is this realization that guided the prediction regarding the relationship between living arrangement and fear. For this study, support was found for Hypothesis 5, as living arrangement emerged as a significant variable in both the partial and full model. This indicates that living arrangement appears to be an important predictor of student fear.

Summary

This chapter presented the results obtained from the survey data that was collected for this study. Student perceptions were explored in an effort to examine the relationship between fear of crime and a number of other constructs, namely perceptions of the police, victimization-related factors, lifestyle choices, and individual characteristics. Descriptive statistics were first presented, followed by the results obtained from the bivariate analyses. The results of the multivariate regression analyses were then reported. Finally, the research questions and hypotheses were examined in relation to the obtained data.

The results obtained from the analyses demonstrated support for several hypotheses. A total of four models were estimated, with three being partial models and the fourth being a full model. It was found, as predicted, that gender was a significant predictor of fear, with female students being more fearful of crime than males. Living arrangement was another characteristic found to be significant in both the partial and full models. The other two constructs that emerged as statistically significant variables were perceived risk and police visibility. Students who perceived a higher risk of victimization were more likely to fear crime than those who had a lower level of perceived risk. Also, students who viewed the police as being more visible were less likely to fear crime than students who reported lower levels of perceived police visibility.

The next chapter discusses the findings of this study in further detail, particularly as it relates to criminological theory, public policy, and fear of crime research. Strengths and limitations of this study are identified and subsequently discussed. Implications are then examined, followed by additional conclusions drawn from this research. Finally, suggestions for further study are offered.

CHAPTER V: DISCUSSION AND CONCLUSION

Accurately defining and subsequently measuring the emotional-laden concept of fear can be a very difficult and labor intensive process. This process often requires careful consideration of factors, or a combination of factors, that can influence its occurrence. Previous research has identified several factors that can contribute to fear, and numerous research designs and statistical analyses have been used to measure this phenomenon. Some of these notable fear-inducing factors include demographics, perceived risk, prior victimization, perceptions of crime and safety, lifestyle characteristics, and attitudes toward the police. These factors have been extensively studied over the years by a number of researchers. Regardless, however, the exact pervasiveness of fear remains unknown. It is also unclear which fear of crime correlates (with the exception of gender) are more influential than others. This, in part, is due to the fact that many past fear of crime studies have yielded inconsistent results at best.

A plethora of research on fear of crime has been conducted over the past four decades. This is understandable, especially considering the wide-ranging impact that fear of crime can have on a person's thoughts, behavioral propensities, and connectedness to others. Recall too that some scholars even suggest that fear of crime is more serious of a social problem than crime itself (Radar et al., 2009; Lane & Fisher, 2009). Through the guidance of rational theory, this study examined various constructs, notably perceptions of the police, that can impact student fear of crime. This chapter, in part, serves as an extension of the previous chapter, as it discusses the results in greater detail. Strengths and limitations of this study are considered, followed by implications and suggestions for future research. A summary is then provided to conclude the study.

Discussion of Results

The results obtained from the bivariate and multivariate statistical analyses help to provide a greater understanding of various factors that can influence students' fear of crime. Several research questions and hypotheses were developed, particularly through a review of the extant literature and guidance of rational theory. A particular focus was placed on the relationship between student perceptions of the police and fear of crime. The previous chapter analyzed the survey data and addressed each research question and hypothesis in detail. The following section provides added discussion regarding some of the key findings obtained from this study.

Perceptions of the Police

A key assumption advanced by this study was that student perceptions of the police would impact their fear of crime. This supposition was quantitatively analyzed via three hypotheses and the use of multivariate linear stepwise regression. The first two hypotheses focused on student perceptions of university police and local police, respectively, while the third hypothesis examined specifically student perceptions of the visibility of university police. Surprisingly, support was established only for Hypothesis 3, which found that police visibility was a statistically significant fear of crime correlate. In particular, results of the study revealed that students who perceived campus police as being more visible feared crime less than students who reported the police as being less visible. This inverse relationship emerged in both the partial and full models of the linear forward stepwise multivariate regression technique that was used. Police visibility also remained statistically significant as other variables were removed from the full model using the backward deletion stepwise regression technique.

As mentioned previously, the results illustrated that student perceptions of the police is not a particularly sound predictor of fear of crime. In fact, when entered into multiple linear regression models, perceptions of the police (both campus and local) was consistently one of the weakest variables, while controlling for other constructs. This finding was somewhat unexpected, given that past research has indicated that perceptions of the police can impact an individual's fear of crime, either directly or indirectly (see Torres & Vogel, 2001; Hawdon et al., 2003). It is important to note, however, that much of this research has utilized a sample of citizens – not students – for purposes of data collection. Therefore, the relationship between perceptions of the police and fear of crime appears at least somewhat contingent on the targeted sample. That is, while *citizen* perceptions of the police may be an important fear of crime correlate, it appears that *student* perceptions of the police may not necessarily influence their fear of crime.

An explanation for the above-mentioned finding relates to the location where this study took place. The university of interest, like many other college campuses, is a relatively safe and secure place where criminal activity is more the exception than the rule. It is in this type of environment where many students, for one reason or another, do not fear crime or personal victimization. It is possible, then, that many students do not rely on the campus police, nor do they see any benefit of establishing any type of relationship with them. In these cases, perceptions of the police would likely not have any impact on a student's fear of crime. On the other hand, crime generally occurs more frequently in the general public than on college campuses (Elmes & Roedl, 2012; Robinson & Roh, 2001). As such, citizens may exhibit greater levels of fear than students. This possibility can be exacerbated when citizens hold unfavorable perceptions

of the police. It is not unrealistic to think, then, that citizen perceptions of the police can help explain why some are more fearful of crime than others, while student fear of crime is not necessarily best explained by their perceptions of the police.

Victimization-Related Factors

It was predicted that several victimization-related factors would be significantly related to student fear of crime. These factors included prior victimization involving property crime and/or violent crime and perceived risk of victimization. As discussed previously, past studies have examined prior victimization as a possible fear of crime correlate (see Skogan, 1987; Russo & Roccato, 2010). Many of these studies, like the current study, anticipated that a statistically significant relationship would exist between prior victimization and fear of crime. More specifically, those individuals who have experienced personal victimization in the past will be more likely to fear crime compared to those persons who have not experienced such victimization. Through the use of an independent samples *t* test, this study found no support for such a relationship. In particular, the results demonstrated that there was no significant difference in means among students who were victimized in the past compared to those who were not. This included both property and violent crime victimizations.

As depicted in the previous chapter, a noticeably small number of students indicated that they had been the victim of a prior property crime or violent crime. Also, when asked whether the incident made them more fearful of that particular category of crime happening to them in the future, a notable amount of students suggested that it did not. It is possible that some of these students may have perceived the incident as not very serious in nature, while others may have considered it an isolated incident that would not

happen to them again. In either case, these students possessed a low fear of crime, despite the fact that they were victimized in the past. This finding illustrates that past victimization is not necessarily a strong or consistent predictor of student fear of crime.

It was also hypothesized through the guidance of previous research that perceived risk of victimization would be related to a student's fear of crime. Recall that perceived risk has been defined in the fear of crime literature as a general cognitive assessment of safety or the danger for victimization (see Mesch, 2000). For this study, respondents were asked about the likelihood of various crime-specific events happening to them within the next 12 months. Results of the multivariate regression analysis revealed support for the above-mentioned prediction. In fact, both the backward deletion and forward stepwise regression models revealed that perceived risk was the most salient factor influencing student fear of crime, while controlling for other constructs. This finding has major policy implications for colleges and universities, and for that reason, it will be discussed in a subsequent section in this chapter.

Lifestyle Choices

Utilizing rational theory as a theoretical framework, this study advanced the assumption that the lifestyle choices and routine activities of students can impact their fear of crime. Engaging in certain lifestyle choices or activities, particularly those that can be classified as potentially risky or dangerous, can enhance a student's risk and exposure to victimization. A few examples of such activities could include attendance at alcohol-fueled parties, walking alone on campus at night, and leaving campus to walk alone during the nighttime hours. These activities can bring students (suitable targets) together with other people (potential offenders) without any guardianship (i.e. campus

police) in situations or environments that can be conducive to criminal activity. This study further argues that such activities can also impact a student's fear of crime and perception of risk. For example, when students engage in potentially unsafe or risky behaviors, the likelihood of being victimized is heightened, especially when the components of routine activities theory materialize. In this scenario, a student's fear of crime may also be adversely affected, particularly if a heightened sense of perceived risk also exists. On the other hand, when students avoid engaging in such behaviors, the likelihood of being victimized is lessened, despite the fact that fear of crime may actually increase due to the self-imposed behavioral restrictions.

Contrary to expectations, results of the linear regression analyses indicated that students' fear of crime was not significantly related to their lifestyle choices. No statistically significant relationship emerged between the two constructs in any of the partial or full models that were estimated. Several possibilities for this unexpected finding are evident and worthy of consideration. The first possibility pertains to temporal ordering. It was predicted, as mentioned above, that the lifestyle choices of students would impact their fear of crime. This relationship was not statistically significant, as determined in part by the statistical analyses that were utilized. It is possible, nevertheless, that the converse is true. That is, perhaps student fear of crime is a significant predictor of their lifestyle choices, rather than vice versa. This relationship is conceivable, as students who are fearful of crime may avoid certain lifestyle choices that can heighten their risk of victimization, while students who possess lower fear of crime levels may engage in such activities without any consideration of the potential risks involved. This possibility provides an avenue that can be explored in future research.

A second possibility that can help explain the finding relates to survey construction. In particular, a few survey questions asked participants how often they engaged in particular activities that occurred *on campus,* particularly at night. It was revealed, through an analysis of the data,that a slight majority of students in the sample actually did not live on campus. Therefore, the chances of these students participating in such activities may have been low; this may have been attributed to their living arrangement more so than their own choice. It is possible too that these same students possessed higher fear of crime levels than students who resided on campus. If this were the case, their fear of crime would likely have been better explained by their living arrangement rather than their lifestyle choices. This may help explain why a lack of support was found for the relationship between student lifestyle choices and fear of crime, while living arrangement emerged as a significant fear of crime correlate. Future research that examines student lifestyle choices as a possible fear of crime predictor should take this possibility into consideration.

Individual Characteristics

Several individual characteristics were included in this study and examined as possible correlates of student fear of crime. These characteristics included gender, age, race, living arrangement, and class standing. Various partial and full regression models were estimated with the inclusion of these constructs. Results of the linear multivariate regression analyses revealed mixed results. In particular, gender, living arrangement, and race were found to be statistically significant predictors of student fear of crime, while a lack of support was found for age and class standing. This section provides further discussion of these results.

It was anticipated that gender would emerge as a significant fear of crime correlate in this study. The large majority of prior studies have found support for the contention that females are more fearful of crime than males. This, in fact, is one of the most reoccurring findings in the fear of crime literature. Results of this study provided further statistical support for the relationship between gender and fear of crime, while controlling for other constructs. Moreover, living arrangement also was found to be a significant predictor of student fear of crime. More specifically, students who lived on campus were less fearful of crime than students who lived somewhere off campus.

It should be noted that the relationship between living arrangement and fear of crime is not as well-established in the literature as the relationship between gender and fear of crime. Despite this, it was predicted that student fear of crime could be explained by their living arrangement. This rationale behind this prediction was twofold. First, the university of interest, like many other colleges, is a reasonably safe place where crime occurs noticeably less than in the general public. Given the rare occurrence of criminality occurring on campus, it is relatively safe to assume that many students possess a reduced level of fear, if any at all. Second, students who live on campus are typically exposed to an increased level of guardianship compared to those who live somewhere off campus. This guardianship can come in many forms, from campus police to resident assistants and security systems. Students who perceive that they are well-guarded may feel less vulnerable as a potential victimization target; therefore, it was presumed that students who lived on campus would fear crime less than those individuals who resided somewhere off campus. This prediction, as mentioned above, was supported by the data.

It was also predicted that nonwhite students would be more fearful of crime than whites. Results illustrated that nonwhites in the sample did in fact report greater fear of crime levels than whites. The significance of this relationship varied, however. For instance, when entered into the partial model with age and living arrangement, race was found to be an insignificant predictor of student fear of crime. Moreover, when it was included in the full model, it emerged as a significant fear of crime correlate. It also remained significant throughout the stepwise regression backward deletion process. Accordingly, it can be concluded that race is a key predictor of student fear of crime. This finding, however, should be interpreted with caution.

Although gender, age, and living arrangement emerged as significant constructs, there were a couple individual characteristics that lacked statistical significance in both the partial and full regression models. These variables included class standing and age. It was assumed, for instance, that a significant relationship would materialize between class standing and fear of crime. More specifically, it was predicted that upper-class students would fear crime more than underclassmen. The rationale for this prediction centered on likely differences in social experiences. In particular, upper-class students generally have more experiences with the social atmosphere of campus life than underclassmen, given their longer period of enrollment. These experiences are normally positive in nature. In some cases, however, such experiences can be undesirable or unsafe to the student, especially if they are threatened with harm or actually harmed in some manner. Underclassmen normally do not have the same amount of experiences with campus life, given that they have not been enrolled in school for as long as upperclassmen. They also may fear crime less, particularly if they have never been involved in any negative or

potentially detrimental situation. Intuitively, it makes sense then that upper-class students would be more fearful of crime than underclassmen. The data revealed, however, a lack of support for this assumption.

A final individual characteristic predicted to be related to student fear of crime was age. Similar to the other hypotheses developed for this study, this prediction was guided by a review of the extant fear of crime research. Contrary to expectations, results of the linear regression analyses demonstrated that age was not statistically related to student fear of crime. One noteworthy reason for this unexpected finding relates to the lack of variation in age among students included in the sample. Most individuals who participated in this study were between the ages of 18 to 22, with only a few exceptions. This proximity in age among respondents may help explain why age was not a significant variable in any of the linear regression models that were estimated.

Strengths of the Study

This study explored the relationship between student fear of crime and other constructs, namely perceptions of the police, victimization-related factors, lifestyle choices, and personal characteristics. It is maintained that this distinct focus is a major strength of the study. Over the years, a fruitful amount of research on fear of crime has been conducted through the use of various methodologies and statistical analyses. A notable portion of this research, however, has focused on examining fear of crime and its correlates within a community-wide context. Fewer studies have completed a comprehensive examination of college students' lifestyle choices and their impact on fear of crime levels. No studies were identified that have used a rational choice theoretical framework to specifically explore student perceptions of the police (university and local)

and its impact on fear of crime. This study addresses this key gap in the literature, thus advancing research on fear of crime and the factors that can influence its manifestation.

A second notable strength of this study pertains to survey construction. The survey instrument utilized for this study was created with the use of extant fear of crime research as a guide. Particular attention was paid to the research designs and sampling strategies employed by a wide range of previous studies. This was done in an effort to build on the strengths of past fear of crime research while additionally addressing some of the key issues (i.e. sampling, methodological concerns) that have plagued the data collection efforts of prior studies. Recall too that they survey instrument was pre-tested by a sample of undergraduate students prior to it being administered to the sample of students who participated in this study. This decision proved to be advantageous, in that it helped to provide additional clarity and specificity to several survey questions. Student feedback also aided in the decision to include other crime-specific survey questions. The inclusion of these questions yielded additional variability in student fear of crime levels.

An additional strength of this study relates to sampling. This study utilized two probability sampling techniques for data collection purposes. A probability sampling technique affords each individual a random chance of being selected for purposes of participation. No person, therefore, was advertently denied a chance to participate in this study. Furthermore, such a sampling procedure helps augment the generalizability of findings from the sample to the overall population of students *on the campus of interest*. Caution must be taken though, as the findings cannot be generalized to non-student populations or the student population on *all* college campuses nationwide. This is noted as a limitation of this study, and it will be discussed in the following section.

Limitations of the Study

Any good research is not without its limitations, and this study is no exception. As previously mentioned, a cross-sectional research design was utilized for this study. Cross-sectional designs offer many benefits to individuals conducting research. It should be noted, however, that such designs also have some notable limitations. For instance, while useful in determining whether a relationship exists between variables at one point in time, cross-sectional designs cannot determine temporal ordering (Menard, 2002). Given that temporal ordering is one of the main components of demonstrating causation, the results of this study cannot be used to make statistical causal inferences using the variables of interest. Establishing causation, however, was not an objective of this study. Rather, the primary focus was on examining various constructs that could impact a student's fear of crime level at one point in time. As such, it is contended that a cross-sectional design is appropriate for the focus and nature of this study.

Another limitation pertains to the limited generalizability, or external validity, of its findings. As previously mentioned, the researcher employed two probability sampling techniques to recruit undergraduate students to participate in the study. This type of sampling strategy typically allows for greater generalizability of findings from a sample to the population. The university of interest, however, is a medium-sized state institution, and therefore the student population may be a bit more diverse than other universities nationwide. Accordingly, the results are not fully representative of students at all universities around the nation. Instead, the results can only be generalized from the sample to the student population at the university of interest. It can be argued, however, that the chosen research design and sampling procedure can help mitigate this limitation.

A third limitation relates to the manner in which police visibility was measured in this study. Recall that three survey questions were used to measure student perceptions of campus police visibility. The first two questions asked about police patrolling campus and walking around campus daily, while the last question asked about police interaction with students. It should be noted that three questions, particularly the last, may not serve as the best indicator of police visibility. This is a possibility given the fact that some student responses may have been less than accurate. For instance, university police are tasked with the responsibility of patrolling the campus on a daily basis, which is typically done via motorized patrol. Accordingly, some students may have reported a low level of perceived police visibility, despite the fact that the police typically drive around campus daily. The question then becomes whether this is a lack of visibility or just a lack of interaction with students. Future studies should consider addressing this ambiguity so as to advance understanding of the key factors that can contribute to student fear of crime.

Policy Implications

Prior studies have illustrated that fear of crime can be influenced by a number of key variables. This study examined, through a quantitative methodology, numerous factors that can influence student fear of crime. These factors were identified through a review of the literature and subsequently analyzed through the use of multiple linear regression techniques. The results indicated that student fear of crime can be explained by several factors, which include gender, living arrangement, perceived risk, and police visibility. Recognition of these factors can help advance our understanding of student fear of crime and what factors make certain students more fearful than others. This section examines various policy implications regarding college student safety and fear of crime.

Practical Approaches to Student Safety Enhancement

Addressing crime and safety concerns on college campuses can be a very arduous task, particularly for the police. This undertaking, nevertheless, is imperative to the campus community and to those who live and work within its parameters. In the campus environment, the police are often looked upon to perform a number of key functions. For instance, campus police departments are often tasked with the responsibility of maintaining order and preventing crime on campus. Also of typical concern is the safety and security of students and others who are a part of the campus community. These issues have spurred many police departments nationwide to embrace ongoing efforts toward maximizing campus safety and the quality of life for students. This focus, in turn, can help lower student levels of perceived risk, which is an important fear of crime correlate, as revealed by the results of this study.

The available research evidence yields many implications regarding student safety enhancement and fear of crime prevention on college campuses. First, campus police departments should form partnerships with other agencies to enhance information sharing and the quality of policing services. This tactic was recently undertaken through a collaborative effort between several researchers and police practitioners in West Virginia (Elmes & Roedl, 2012). Funded by the U.S. Department of Justice, the project sought to develop an information sharing system between multiple individuals and agencies. It also utilized spatial data to empower police agencies to develop strategies to enhance student safety and community safety. One of the significant findings revealed that spatial technologies and crime mapping produced greater levels of information sharing and interaction between police agencies. This research suggests that police partnerships can

help facilitate information sharing and collaboration, which in turn can generate safer campuses and increase the quality of life for students.

The issue of campus safety also was addressed in a 2004 national summit that was sponsored by the U.S. Department of Justice and the Office of Community Oriented Policing Services. The primary purpose of the summit was to identify challenging issues in the field of campus safety and suggest appropriate courses of action to preserve the safety and security of our nation's campuses (U.S. Department of Justice, 2004). Three main areas of focus emerged, which included the need to: (1) strengthen the partnership and coordination among individuals tasked with implementing safety and security practices on campus, (2) establish a national agenda on campus safety, and (3) create a national center that supports information sharing, policy development, and research initiatives. These areas of suggestion are essential to the field of campus safety. Campus police departments, in particular, should embrace these areas and devote continued attention to campus safety concerns. Other individuals (administrative executives, local police, state legislatures) should also consider these suggestions in an effort to further our commitment toward campus and student safety.

Guidance of Research Findings

An additional policy implication of this study concerns the value of its findings to university police, especially at the campus of interest. This research can inform university police of the significant factors that influence fear of crime among students. This can assist the police in addressing these factors in a way that can further enhance the safety and quality of life of students. The police can, for instance, focus on making themselves more visible to students on a daily basis, given that police visibility was found to be a

significant fear of crime correlate in this study. They can also place an added emphasis on foot patrol and interacting with students on a more proactive basis. These activities can enrich police-student relations, while they can also enhance student perceptions of police visibility. Such activities can also help decrease student perceptions of risk, which in turn, can help lessen student fear of crime.

Results of this study revealed that living arrangement is an additional factor that can help explain student fear of crime. This finding has important implications, especially for university housing authorities. Living on campus can offer a number of benefits to students. For instance, on campus living can help enhance student social interactions and networking. It can also help students grow and develop in a welcoming, non-threatening environment. For this study, students who lived on campus also reported lower fear of crime levels than students who established residency somewhere off campus. It is reasonable to believe that more students than not who live on campus feel relatively safe and secure in their environment. These students may also perceive the risk of victimization as low; thus, their concerns about crime may also be low, if not nonexistent. These considerations can help university housing authorities in their student housing recruitment efforts, particularly at the campus of interest.

The findings of this study can also help inform policy development and strategies relating to student fear of crime prevention. This implication is essential, especially given the impact that crime and victimization can have on the attitudes and lives of students. Recall that numerous legislative and administrative responses have been initiated over the years due, in part, to various high-profile violent acts occurring on college campuses. These responses have made significant contributions toward fear of crime recognition

and the development of programs designed to mitigate its occurrence. It is important to not allow our efforts to stop here, however. Rather, additional fear reduction and safety enhancement strategies should be considered and subsequently adopted, both in the academic and legislative milieus. These strategies should be based on available evidence and guided by extant fear of crime research. The findings of this study, in addition to the studies reviewed in this section, can help guide this endeavor; thus helping research on fear of crime and its correlates to move forward.

Future Research Considerations

While many studies have addressed factors that can influence student fear of crime, still much more is left to be done to more fully understand why some students are more fearful of crime than others. Accordingly, continued research that focuses on factors that can enhance or lessen fear of crime would be of benefit to the scientific community and society in general. This continued research would also likely be imperative to college administrators and university police. This study can serve as a guide for future studies that examine fear of crime and factors related to its occurrence. In this section, four particular areas of inquiry for future research are discussed.

This study addressed several possible factors that could influence student fear of crime. Many of these constructs emerged as significant predictors, both in the partial and full models that were estimated. It is important, however, to be cognizant of the fact that other important fear of crime indicators exist beyond those that were included in this study. This is evidenced by the fact that the full model, with the inclusion of all ten independent variables, failed to explain approximately 70% of the total variance in fear of crime. Future research should identify and subsequently analyze these constructs as

possible indicators of student fear of crime. Exploring these factors could advance our understanding of student fear of crime and the lasting impact that it can have on their attitudes and behavioral propensities.

A second area for future inquiry pertains to theoretical considerations regarding the potential relationship between student lifestyle choices and fear of crime. It is reasonable to believe that some students may avoid engaging in certain lifestyles due to their fear of crime or victimization. The lifestyle choices identified in the survey instrument used for this study were item-specific. However, some students, particularly those who lived off campus, may have had a difficult time responding to some of the questions. This is because several questions asked about lifestyle choices that occurred on campus, thus they may have lacked applicability for some students. This is perhaps one reason why the relationship between lifestyle choices and student fear of crime did not emerge as being statistically significant in this study. Future studies should consider and further explore this relationship, with particular attention paid to the applicability of test items. A focus on the latter may produce data that yields statistical empirical support for student lifestyle choices as a key fear of crime correlate.

A final consideration for future research relates to methodology. In particular, future studies could benefit from utilizing qualitative and longitudinal methods to further examine student fear of crime. The emotional-laden element of fear can be very a difficult concept to fully capture, even with the most methodologically sound study. Qualitative studies could tap into this element as well as the factors that can influence its occurrence. Researchers could, for instance, interview participants to explore some of the underlying factors that contribute to their fear of crime. This technique could help elicit

rich meaningful responses from participants regarding their perceptions toward fear of crime and other constructs, namely perceptions of the police. Future research could also consider utilizing a longitudinal design to study changes in student fear of crime levels that occur over time. This type of research design could also help assess the temporal ordering-related issues that may have emerged in the data analysis process in this study.

Conclusion

Fear of crime is a significant social problem that impacts a large number of college students nationally. It appears as if it is a growing issue as well; an issue that seems to have been influenced by several recent high-profile criminal incidences that have occurred on various college campuses nationwide. These events, while still rare, can have a wide-ranging adverse impact on students and the rest of the campus community. It is therefore vital that we continue to advance fear of crime research as well as the development of sound initiatives and programs that can help facilitate fear of crime reduction. The need for such an effort cannot be overstated.

The findings of this study demonstrated statistical support for several correlates of student fear of crime. Based on the results, it is clear that gender remains as one of the most important predictors of student fear of crime. Living arrangement also emerged as a significant fear-inducing factor, both in the partial and full regression models that were estimated. Results also indicated that perceived risk of victimization and police visibility were significant factors that influence student fear of crime. These findings have clear social implications, particularly for university police. One of the most enduring tasks for university police is preserving the safety and welfare of all students. Such a task can be challenging, especially when students lack trust in the police due to their own levels of

fear. This lack of trust, in turn, can breed student discontent with the police, which can then make it arduous for the police to be fully responsive to students. With this in mind, university police should consider addressing key factors that can generate student fear and subsequently develop appropriate courses of action to address such factors. This research can help inform these efforts.

Researching student fear of crime continues to be a very intricate process that requires attention to detail and consistency in measurement. Over the last 40 years or so, fear of crime has been extensively studied through the use of numerous samples, research designs, and statistical analyses. The literature is replete with studies that have provided substantial contributions to the study of fear of crime. Embedded in this literature, however, are crucial gaps that need to be more fully explored. Through the guidance of rational choice theory and extant research, this study provided further clarification of the factors that can enhance student fear of crime. Nevertheless, additional research is needed to provide further clarity regarding why some students are more fearful of crime than others and what factors contribute to this happening. This study can serve as a framework for future fear of crime research studies.

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APPENDICES

APPENDIX A: Survey Instrument

This survey seeks to measure your views of university police and campus life. For this study, university police should be only considered as those police officers that are employed directly by the Indiana University of Pennsylvania (IUP). Also, for Section 1, local police should be only considered as the Indiana Borough Police.

Directions: Please mark the appropriate response for each question included in this survey. Feel free to write on the back of this survey if you need additional space. If you have any questions, please don't hesitate to contact the researcher for assistance.

Section 1: Views of the Police

This section is designed to measure your views of both IUP campus police and local police. Please indicate the extent to which you agree or disagree with the following statements. Please select only ONE answer for each question by placing an 'X' in the appropriate box.

IUP campus police…

Statement	Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree	Not Applicable
1. Treat students fairly.						
2. Are friendly and approachable.						
3. Provide quality services to students.						
4. Care about the safety of students.						
5. Are receptive to the needs of students.						
6. Do a good job at preventing crime on campus.						
7. Investigate crimes that occur on campus in an efficient way.						
8. Do a good job at solving crimes that occur on campus.						
9. Enforce university policies in a consistent manner.						
10. Respond to service calls in a timely fashion.						

The following questions relate to your views of local police. Indicate the level in which you agree or disagree with the following statements by placing an 'X' in the appropriate box. Please answer each question as truthfully as possible.

Local police (i.e., the Indiana Borough Police)…

Statement	Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree	Not Applicable
11. Treat citizens fairly.						
12. Are friendly and approachable.						
13. Provide quality services to citizens.						
14. Care about the welfare of citizens.						
15. Are receptive to the needs of citizens.						
16. Do a good job at preventing crime.						
17. Investigate crimes that occur in an efficient way.						
18. Do a good job at solving crimes that occur.						
19. Enforce policies in a consistent manner.						
20. Respond to service calls in a timely fashion.						

Section 2: Police Visibility

This section contains questions regarding the visibility of IUP campus police. Please answer each question by placing an 'X' in the appropriate box for each question.

21. IUP university police patrol the campus on a daily basis.

☐ Strongly agree

☐ Agree

☐ Neither agree or disagree

☐ Disagree

☐ Strongly disagree

☐ I'm not sure

22. IUP police can be seen walking around campus on a daily basis.

☐ Strongly agree

☐ Agree

☐ Neither agree or disagree

☐ Disagree

☐ Strongly disagree

☐ I'm not sure

23. IUP university police interact with students on campus on a regular basis.

☐ Strongly agree

☐ Agree

☐ Neither agree or disagree

☐ Disagree

☐ Strongly disagree

☐ I'm not sure

Section 3: Campus Life Experience

This section is designed to measure your campus life experience(s). Please select only ONE answer for each question by placing an 'X' in the appropriate box.

24. Have you ever been the victim of a property crime on campus while enrolled at IUP? [Property crimes involve the theft or destruction of personal property and include such crimes as burglary, motor vehicle theft, and larceny/theft of personal items (including but not limited to computer, cell phone, textbooks, money, and clothing)]. Note: *If multiple victimizations have occurred, please answer the following questions with the most recent victimization in mind.*

☐ Yes

☐ No → Skip to #29

25. Who were you victimized by?

☐ Stranger

☐ Someone you knew

26. Did you report the incident to campus police?

☐ Yes

☐ No → Skip to #28

☐ I don't know / remember

27. Were you satisfied with the way in which campus police handled the report?

☐ Yes

☐ No

28. Did the incident make you fearful of future property crime happening to you?

☐ Yes

☐ No

29. Have you ever been the victim of a violent crime on campus while enrolled at IUP? (Violent crimes involve force or threat of force and include such offenses as physical assault, rape, sexual assault, and robbery). Note: *If multiple victimizations have occurred, please answer the following questions with the most recent victimization in mind.*

☐ Yes

☐ No → Skip to #34

30. Who were you victimized by?

☐ Stranger

☐ Someone you knew

☐ I don't know

31. Did you report the incident to campus police?

☐ Yes

☐ No → Skip to #33

☐ I don't know

32. Were you satisfied with the way in which campus police handled the report?

☐ Yes

☐ No

33. Did the incident make you fearful of future violent crime happening to you?

☐ Yes

☐ No

Section 4: Campus Safety:

This section contains questions asking about campus safety. Please indicate your response to the following questions by placing an 'X' in the appropriate box for each question.

What is the likelihood of the following activities happening to you in the next 12 months?

Statement	Not likely at all	Somewhat unlikely	Neither likely or unlikely	Somewhat likely	Very likely
34. Someone breaking into your current place of residence to steal something.					
35. Someone stealing or attempting to steal a motor vehicle belonging to you.					
36. Someone stealing items that belong to you *without using force*.					
37. Someone taking or attempting to take something from you *by force or threat of force.*					
38. Someone physically attacking you with some type of weapon.					
39. Someone verbally threatening to harm you.					
40. Someone forcing you or attempting to force you to have sexual intercourse with them against your will.					

Section 5: Campus Social Life

This section asks questions about your social life on campus. Please indicate how often you engage in the following behaviors by placing an 'X' in the appropriate box for each question.

How often do you….

Behavior	Never	Rarely	Sometimes	Often	Almost Always
41. Walk alone on campus at night (after 9pm)					
42.Walk with friends on campus at night (after 9pm)					
43. Leave campus to go out *alone* at night (after 9pm)					
44. Leave campus to go out *with friends* at night (after 9pm)					
45. Go to a party *on campus alone*					
46. Go to a party *on campus with friends*					
47. Go to a party *off campus alone*					
48. Go to a party *off campus with friends*					
49. Drink alcoholic beverages					
50. Drink to the point of heavy intoxication					
51. Use illegal drugs					
52. Lock the doors to your dorm room or place of residence					

Section 6: Concern about Crime

This section contains questions in reference to concerns about crime. Please answer each question as truthfully as possible by placing an 'X' in the appropriate box for each question. Select only ONE answer for each question.

How afraid are you of the following activities happening to you?

Statement	Not afraid at all	Somewhat not afraid	Neither afraid or unafraid	Somewhat afraid	Very afraid
53. Someone breaking into your current place of residence to steal something.					
54. Someone stealing or attempting to steal your cell phone.					
55. Someone stealing or attempting to steal your computer.					
56. Someone stealing or attempting to steal your textbook(s).					
57. Someone stealing or attempting to steal your money.					
58. Someone stealing or attempting to steal an article(s) of clothing					
59. Someone physically attacking you *during the day*.					
60. Someone physically attacking you *during the night*.					

Section 7: Background Information

This section includes several questions that relate to your background. Please answer each question as truthfully as possible.

61. What is your *current* age? _____

62. What is your gender?

☐ Male

☐ Female

63. What race do you most identify with?

☐ White / Caucasian

☐ Black / African-American

☐ Asian

☐ Hispanic / Latino / Latina

☐ Other — *Please specify* _____

64. Which of the following best describes your *current* living arrangement?

☐ Live alone on campus

☐ Live with a roommate(s) on campus

☐ Live alone off campus

☐ Live with a relative (i.e. parent, family member) off campus

☐ Live with a roommate(s) off campus

65. What is your *current* class standing?

☐ Freshman (0-29 credits)

☐ Sophomore (30-59 credits)

☐ Junior (60-89 credits)

☐ Senior (90 credits and above)

Thank you for taking the time to complete this survey!

APPENDIX B: Informed Consent Form

Research Project: Student views of the police and its impact on fear of crime.

You are invited to participate in a research study on fear of crime and its relationship with perceptions of university police. The following information is provided in order to assist you to make an informed decision on whether or not to participate in the study. You are eligible to participate in this study because you are currently enrolled as a student for the Spring 2013 term at the Indiana University of Pennsylvania (IUP).

For data collection purposes, you will be asked to complete a self-report survey that will take you approximately 15-20 minutes to complete. The information obtained from this study may assist scholars and criminal justice practitioners in their efforts to understand crime and the dynamic factors that contribute to fear of crime among individuals, particularly college students.

Participation in this study is strictly **voluntary**. Your decision whether or not to participate in this research study will not affect your current status or relations with IUP. Your refusal to participate in this study will not result in a loss of benefits to which you are entitled, nor will it provide you with any further benefits to which you may or may not be entitled. If you decide to participate, you can withdraw at any time by submitting an incomplete or blank survey when others have completed. Rest assured that all personal information will be kept strictly confidential. Your responses will be considered only in combination with the responses provided by other participants.

The information obtained from this study may be later published in a journal and/or presented at an academic conference, but any information that would make it possible to reveal your identity will remain confidential. By completing this survey, you are giving the researchers named below consent to use your responses.

You are certainly free to ask questions that you may have regarding this research at any time. If you have any questions and/or concerns, please don't hesitate to contact the individuals below:

Justin Crowl
Doctoral Candidate
Department of Criminology
G-10 Wilson Hall
Indiana, PA 15705
Email: j.n.crowl@iup.edu

Dennis Giever, Ph.D
Department of Criminology
Indiana University of PA
G-12 Wilson Hall
Indiana, PA 15705
Email:dgiever@iup.edu

The Indiana University of Pennsylvania Institutional Review Board has approved this project for the Protection of Human Subjects (Phone: 724/347-7730).

APPENDIX C: Counseling Services

The following is a list of counseling service providers located on campus and around the Indiana area. If you suffer any emotional distress as a result of participating in this study, please contact any of the following agencies:

The Counseling Center
Indiana University of Pennsylvania
Suites on Maple East, G31
901 Maple Street
Indiana, PA 15705
Telephone: 724-357-2621

Indiana County Guidance Center
793 Old Route 119 Highway North
Indiana, PA 15701
724-465-5576

The Open Door
334 Philadelphia Street
Indiana, PA 15701
724-465-2605

APPENDIX D: Support for Hypotheses

	Hypothesis	**Support**
H1:	Students who have favorable perceptions of *university police* will be less fearful of crime than students who view the police in an unfavorable manner.	No
H2:	Students who have favorable perceptions of *local police* will be less fearful of crime than students who view local police in an unfavorable manner.	No
H3:	Students who perceive university police as being more visible will report lower fear of crime than students who view the police as being not visible.	Yes
H4:	Students who report being victimized in the past will be more fearful of crime than those students who report no such prior victimization.	No
H5:	Students who perceive a higher risk of personal victimization will be more fearful of crime than those students who perceive a lower risk of victimization.	Yes
H6:	Students who engage in lifestyle choices that can be classified as risky or unsafe will fear crime less than those students who refrain from such activities.	No
H7:	Female students will be more fearful of crime than male students.	Yes
H8:	Upper-class students will exhibit greater fear of crime levels than underclass students	No
H9:	Nonwhite students will be more fearful of crime than white students	Yes
H10:	Older students will be more fearful of crime than more youthful students.	No
H11:	Off campus students will exhibit greater fearful of crime levels than students who live on campus.	Yes

APPENDIX E: Undergraduate Student Sample to Population Comparison

Variable	Sample n = 348		Population n = 11,892	
	N	Percent	N	Percent
Sex				
Female	213	61.2	6549	55.1
Male	135	38.8	5343	44.9
Race				
White/Caucasian	290	83.3	9374	78.8
Black/African American	39	11.2	1188	10.0
Hispanic	14	4.0	323	2.7
Asian	5	1.4	111	0.9
Other	-	-	896	7.5
Living Arrangement				
On Campus	171	49.1	3973	33.4
Off Campus	177	50.9	7919	66.6
Class Standing				
Freshmen	99	28.4	3,254	27.4
Sophomore	83	23.9	2,748	23.1
Junior	73	21.0	2,660	22.4
Senior	93	26.7	3,230	27.2

APPENDIX F: List of Selected Required General Education Courses

Course	Title	Days	Time	Instructor	Room	Enrollment
ENGL 101 014	English Composition I	MWF	11:15AM - 12:05PM	T. Heflin	LNRD 118	22
ENGL 101 017	English Composition I	MWF	12:20PM - 1:10PM	M. Gainer	LNRD 205	25
ENGL 101 042	English Composition I	TR	11:00AM - 12:15PM	L. Sabatino	LNRD 213	20
HIST 197 004	Explorations in European History	TR	11:00AM - 12:15PM	T. Whited	KEITH 233	50
HIST 198 009	Explorations in Global History	MWF	2:30PM - 3:20PM	A. Ribeiro	KEITH 238	25
ENGL 202 007	English Composition II	MWF	10:10AM - 11:00AM	S. Kraynak	LNRD 214	28
ENGL 202 011	English Composition II	MWF	11:15AM - 12:05PM	A. Amicucci	LNRD 204	28

APPENDIX G: List of Selected Elective Liberal Studies Courses

Course	Title	Days	Time	Instructor	Room	Enrollment
PSYCH 310 001	Developmental Psychology	MWF	11:15AM - 12:05PM	L. Newell	WEYDT 201	59
PSYCH 310 002	Developmental Psychology	MWF	1:25PM - 2:15PM	L. Newell	WEYDT 201	60
PSYCH 310 004	Developmental Psychology	TR	9:30AM - 10:45AM	T. Johnson	WEYDT 201	59
SOC 363 002	Sociology of Gender	MWF	11:15AM - 12:05PM	D. Witham	KEITH 102	40
JRNL 375 002	World News Coverage	TR	5:00PM - 6:15PM	S. Mukasa	DAVIS 418	15
RLST 375 001	Religions of India	TR	11:00AM - 12:15PM	J. Kimball	WALSH 211	25
PLSC 389 W01	International Dev. Strategies	TR	9:30AM - 10:45AM	S. Wheeler	KEITH 164	15
PHIL 460 W01	Philosophy of Language	MW	3:35PM - 4:50PM	B. Rives	WILSN 101	30