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Safety and Security On Campus: Student Perceptions and Influence on Enrollment

A thesis

presented to

the faculty of the Department of Criminal Justice and Criminology

East Tennessee State University

In partial fulfillment

of the requirements for the degree

Master of Arts in Criminal Justice and Criminology

by

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August 2022

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Keywords: College Choice, Fear of Crime, Perception of Safety and Security and Public Safety

ABSTRACT

Safety and Security on Campus: Student Perceptions and Influence on Enrollment

by

Kaitlyn Puckett

Research examining college choice has traditionally focused on factors relating to demographics of the student and the college/university. Less attention has been directed towards how safety and security of the campus and the surrounding community play a role in college choice. In addition, some studies have examined students' fear of crime, perception of safety and security, and perception of public safety; however, there is still much to be learned. The current study sought to further the research by (1) assessing how campus safety and security impacts enrollment decisions, (2) assessing how students perceive fear of crime and their personal safety, and (3) determining how students view campus public safety officers and the various programs/policies designed to improve their safety. Survey data was gathered from a sample of students attending East Tennessee State University. Results suggested that several factors played a role in the outcomes of interest. Findings served to better our understanding of the topic and promote future research in the field.

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Chapter 1. Introduction

College campuses have seen large numbers of students, faculty, and staff on their premises at any given time. According to the National Center for Education Statistics, there were 19.6 million students enrolled in postsecondary institutions in 2018 (U.S. Department of Education, National Center for Education Statistics, 2021). A further 3.9 million were employed by them (NCES, 2021). It was also important to recognize that individuals that were employed by or enrolled in these institutions were not the only individuals with access to their campuses. As most of these institutions are open to the public, there is little preventing unaffiliated individuals from gaining access to the campus. For example, many universities were large enough to function as small towns and/or were located in downtown areas with mixed land use (Office of Community Oriented Policing Services, 2005). This presented a significant security issue for each of these institutions. To account for this, the majority of colleges have relied on the creation of public safety departments. A recent assessment by the Bureau of Justice Statistics examined over 900 U.S. 4-year universities and colleges (featuring enrollment of 2,500+) and found that about two-thirds of these institutions employed sworn police officers. These police officers had full arrest powers and provided multiple law enforcement services to the campuses (Reaves, 2015).

As with any community, there are a multitude of issues and problems that relate to providing and maintaining a secure, safe campus environment for all individuals that study and/or work there (Office of Community Oriented Policing Services, 2005). These campuses were largely designed to promote freedom of movement and to encourage staff/student usage of available spaces and amenities (Office of Community Oriented Policing Services, 2005). One way this has occurred is by allowing access to many services 24 hours a day, including weekends

and designated breaks (e.g., spring break). Institutions also value the freedom of expression and the ability for individuals to openly explore and share ideas among their peers in academic environments. While beneficial, each of these goals also present the potential for conflict and/or criminal activity to occur. As such, prospective students must consider their own safety when not only selecting an institution, but also as it relates to their daily activities on campus.

Universities and colleges are designed to provide and foster a safe and secure place for students to grow and gain life skills needed following graduation. Even with the strides that colleges and universities have taken, campus crime has been an ever-growing issue in the United States. The most common examples include rape, robbery, assault, and underage alcohol or drug use (Office of Postsecondary Education, Campus Safety and Security, 2019). Also of note was the fact that several institutions have experienced active shooter incidents, with the most notable event occurring at Virginia Tech in 2007. Though these mass-casualty events draw the most media attention, it has been found that students consider all types of safety risks in their assessment of educational institutions. As such, it has been important to further explore the topic to develop a better understanding that the role of these assessments play in the application process, as well as daily life once attending their school of choice. The current study seeks to do so by assessing such perceptions among a sample of students at East Tennessee State University. The current chapter provides an overview of campus crime and the role of public safety officers in order to set the stage for this work.

History of Campus Public Safety

The origin of campus safety offices can be traced to the late 1800's, when Yale University employed two New Haven municipal police officers to patrol their campus in response to concerns regarding crime (Allen, 2021). Other institutions followed suit after the turn

of the Century, employing a night watchmen approach to campus safety. Officers employed in this role had the primary duties of enforcing campus rules and facility maintenance. At this time campus police officers lacked specific law enforcement training, so when serious issues arose on campus, local municipal police officers were called upon to address them.

This type of approach continued across most institutions until the 1960s (Allen, 2021). Several developments during this period led to a new paradigm for campus policing. Most notable among these developments were the emergence of campus shootings and widespread protests regarding the Vietnam War (Allen, 2021). During this time, university administrators handpicked experienced officers from local departments to become dedicated campus police. Their job was to staff, develop, and oversee campus public safety in the same way that municipal departments address community-level crime. In essence, this marked the shift towards campus public safety mimicking those departments in terms of both operational and organizational style. In conjunction, state legislatures passed laws that allowed universities to create and staff public safety departments that utilized POST-certified and sworn officers to improve services and add legitimacy to campus departments (Allen, 2021).

Campus security and safety featured another paradigm shift as a result of the 1986 murder of Jeanne Ann Clery (Allen, 2021; Sloan & Fisher, 2011). Clery was a Lehigh University student who was assaulted and murdered in her residence hall (Clery Center, 2021). A subsequent investigation spearheaded by her parents found that the institution was not informing students of significant crimes on and around campus. Their lobbying efforts paved the way for reform in how higher education institutions report crime to their students. This in essence helped usher campus public safety away from reactive policing to a more proactive approach (Allen, 2021). Further, public safety departments began moving towards community policing tactics

with the goal of better preventing and responding to crime events (Allen, 2021). As such, modern public safety officers train and act in nearly identical fashion to municipal officers. They are outfitted with side arms, chemical/pepper spray, batons, and/or tasers. Certain departments also allow for the use of shotguns, rubber bullets, rifles, flash/bang grenades, and bean bag rifles. Further, they are provided with the tools and training that they need to respond to large scale incidents (i.e., school shootings) (Allen, 2021). For example, most institutions now regularly conduct drills related to armed shooters, emergency evacuations and extreme weather responses (Reaves, 2015).

On average, individuals that qualify for employment with campus public safety must have at least a high school diploma (Reaves, 2015). Some departments go beyond this to require a two- or four-year degree for new officers. Similar to traditional policing agencies, the majority of campus law enforcement agencies utilize multiple screening methods. These primarily include reference checks, assessing driving records, personal interviews, background investigations, and criminal record checks. Other steps in the process include psychological evaluations, medical exams, drug tests, physical agility tests, written aptitude tests, credit history checks, and personality inventories (Reaves, 2015).

While campus safety offices are certainly the most notable example of colleges and universities working to prevent crime and victimization on their campuses, other responses have also emerged over time. By 2006, 19 states had enacted legislation that was similar to the Clery Act (Sloan & Shoemaker, 2007). A further 17 states implemented criminal penalties for specific institutions when they fail to provide campus police records for public access, while also expanding the responsibility of disclosure for institutions (Burling, 2003). In addition, institutions worked to provide better security for resident housing, better security information

access to students and access to mental health services, among other resources designed to address problematic students and situations in a proactive manner (Jackson, 2009). Institutions have also worked to provide non-policing options for less serious behaviors in the form of campus disciplinary boards (Carrico, 2016). In summation, many efforts have been targeted at addressing the problem of campus crime.

Major Crimes on Campus

Rates of campus crime have fluctuated over time. Fortunately, it appears that the efforts detailed thus far have been effective. For example, between 2005 and 2019 there was a 50% reduction in reported criminal offenses on college campuses (66,221 incidents in 2005 compared to 34,933 in 2019) (Office of Postsecondary Education, Campus Safety and Security, 2019). Fluctuations in disciplinary actions (those handled by the institution, but non-criminal in nature) have also been observed. These primarily relate to alcohol- and drug-related violations. A steady increase in these actions were seen between 2005 and 2014, though more recent years have witnessed a steep decline (216,409 cases in 2005, 192,318 in 2019).

Several forms of offending have been found to be most common in the campus setting. For 2019, sexual-related offenses constituted slightly over 13,000 of the reported incidents. This was followed by burglary (10,051), motor vehicle theft (4,776), aggravated assault (4,084), and robbery (2,330). In terms of non-criminal disciplinary actions, the vast majority (143,095) were liquor law violations. Drug abuse violations (48,017) and those related to weapons on campus (1,206) were the second and third most common infractions (Office of Postsecondary Education, Campus Safety and Security, 2019).

Alcohol use has been shown to be one of the main contributors to crime and violence on campuses (Hingson et al., 2017). Supportive of the extent of the problem, an estimated 1,519

college students ranging from 18 to 24 die from alcohol-related injuries each year (Hingson et al., 2017). Data indicates that 52.5 percent of full-time college students between the ages of 18 to 22 consume alcohol on a monthly basis (Center for Behavioral Health Statistics and Quality, 2019). Specific student organizations that have higher alcohol use include sororities and fraternities. In 2001, the Harvard School of Public Health conducted a study that found 75% of fraternity members partook in excessive drinking, a higher rate than seen for male student populations overall (49%). They also found that 62% of sorority members did the same, compared to 41% of non-sorority members (Wechsler & Nelson, 2008).

The sheer number of alcohol-related violations on campuses is concerning for a variety of reasons. For example, alcohol use can have a significant impact on college performance as measured by grade point average (GPA) (Carrico, 2016). Most individuals enrolled in college are between the ages of 18 and 24. As a result, the college setting can be the first place that individuals begin to experiment with alcohol. Peer pressure and the learning process influence rates of use, which can mean that developing an understanding of moderation may be difficult. This can result in negative impacts on school performance, can contribute to higher levels of antisocial behavior, and can negatively impact meaningful societal relationships (Porter & Pryor, 2007). Other forms of campus crime can also be impacted. According to the National Council on Alcoholism and Drug Dependence (2015), 95% of all violent crimes on campus settings involve some component of alcohol use, either by the victim, assailant, or both (Murphy & Shafir, 2021). One specific violent crime that alcohol has been shown to play a role in is sexual assault. Over 90% of acquaintance sexual assaults on campus involved some form of alcohol use (Cantalupo, 2009).

Sexual violence against students has been an unfortunate reality on many university and college campuses. In 2008, the National Institute of Justice estimated that approximately 18 to 20% of undergraduate, female-identifying students were victims of sexual violence while attending postsecondary institutions. With that said, underreporting of these offenses makes it difficult to provide an accurate estimate of the actual number of victims (National Institute for Justice, 2008). This underreporting could have been due to many different factors, including victims fearing that they will not be believed or that they lack the support to actually speak out and file a report (Cantalupo, 2009). As one would expect, the trauma associated with experiencing sexual violence has the potential to not only affect the victim's ability to complete their degree, but can lead to anxiety and other negative effects as well (Kilpatrick et al., 2007; Marcotte & Palmer, 2016).

Another form of crime common on college campuses is drug law violations. Between 2002 and 2007, researchers pointed to an increase in the total number of on-campus drug violations (Nobles et al., 2012), a trend that continued until 2017 (Office of Postsecondary Education, Campus Safety and Security, 2019). Many students use drugs as a study enhancer (e.g., Adderall) or simply for recreational purposes (Pino et al., 2017). Bavarian et al. (2014) found that approximately 11% of all college students in their sample utilized stimulants of some sort in the previous year. Though types vary, the most common drugs used by college students include non-medical prescription drugs, like Adderall or Ritalin, and marijuana. Not only has this use been ruled illegal in and of itself, it also had the potential to influence the commission of other crimes, such as sexual assault (Pino et al., 2017).

Property crimes, like motor vehicle theft and burglary, are other areas of concern for college campuses. Past research has consistently shown that college students are much more

likely to experience property theft or vandalism than they are to experience violent crime (Fisher et al., 1998; Fisher & Wilkes, 2003; Hart & Colavito, 2011). For example, Sloan et al. (1997) found that college students are five times more likely to be the victim of theft than any form of violent victimization. In 2019, more than 17,151 property crimes were reported to campus police, with many others going unreported for various reasons (Office of Postsecondary Education, Campus Safety and Security, 2019).

While knowledge of the various forms of offending/victimization on college campuses has spurred additional measures to address them, it would be remiss to not consider the impact that noteworthy criminal events have had on the evolution of policy and campus policing strategies. The following section will discuss several events that have contributed to this evolution.

Major Events that Contributed to Campus Public Safety

One of the most well-known tragedies that has contributed to advancements in campus safety was the incident that occurred at Virginia Polytechnic Institute and State University on April 16, 2007 (Kaminski et al., 2010). That morning, a student, Seung-Hui Cho, gained access to the West Ambler Johnston dormitory where he shot and killed a male residential advisor and a female freshman (Virginia Tech Review Panel, 2009). He fled the building prior to campus police arrival. During the initial investigation, campus police were notified of another attack that was initiated at 9:45 AM. Cho had entered a classroom building armed with a 9-millimeter and 22-caliber handgun. Upon entry he chained and locked the main entrance doors and then moved from classroom to classroom firing the weapons. He ultimately murdered five (5) faculty members and 27 students, in addition to injuring 17 others before he killed himself.

Less than a year later, on February 14th, 2008, another mass shooting occurred at Northern Illinois University. A former NIU graduate, Steven Kazmierczak, walked into a lecture hall that contained roughly 120 students and opened fire (Stambaugh, 2009). Five students were murdered, while an additional 18 others suffered injuries. Similar to Cho, Kazmierczak committed suicide instead of surrendering to officers. These incidents garnered the attention of higher education institutions across the world (Virginia Tech Review Panel, 2009). One targeted aspect of criticism was the lack of notification systems present at either University. These systems would have alerted the campus community of imminent danger and students, faculty and staff more opportunities for escape. As a result, many individuals made requests for better communication systems as they pertained to campus emergencies, with institutions largely complying.

As a further response to these incidents, institutions have shifted from an insular reactive approach for safety and security on campus to a more collaborative and proactive approach (Carrico, 2016; Jackson, 2009). As a result of the shift, there has been increased access to improved security and safety measures. Some of these include offering self-defense classes to students and offering police escorts after dark. Better surveillance in resident housing and parking structures have also been implemented, including cameras, target-hardening measures and an increased police presence on campus.

Federal responses to campus crime have also been influenced by significant events (Carrico, 2016; Jackson, 2009). The previously mentioned 1986 murder of Jeanne Clery prompted significant evolutions in campus safety. Her murder highlighted that college campuses were failing to report and/or minimizing crimes that occurred on their campuses. The ensuing investigation found that there were thirty-eight (38) violent crimes that were committed on

Lehigh's campus in the preceding three years that were not reported to students. In response, her parents filed a lawsuit against Lehigh that resulted in extensive improvements to campus safety. Perhaps of more importance, their efforts resulted in the passage of The Student Right-to-Know and Campus Security Act of 1990 by Congress. This Act contained a subsection titled the Crime Awareness and Campus Security Act, also commonly referred to as the Clery Act of 1990 (Clery Center, 2021).

The Clery Act requires nearly all private and public educational institutions to publicly disclose any information regarding criminal activity on their campus (Clery Center, 2021). Further, it mandates an annual report to be published by colleges and universities that details the last three years of crime statistics for their institution. This includes security procedures and policies, along with the basic rights that victims of sexual assault have. All current students and employees have this report made available to them. Perspective employees and students must also be made aware of this report and given a copy if requested.

Public safety departments are primarily responsible for the collection and dissemination of this data, with specific instructions provided to them (Clery Center, 2021). Any fires or criminal events that happen in residential facilities on campus must be reported in these logs within two days of the incident. The Act specifically outlines which crimes must be reported. These include robbery, sexual offences, burglary, arson, criminal homicide, motor vehicle theft, aggravated assault, and hate crimes. Any referrals for campus discipline or arrests that relate to the violation of drug/liquor laws or possession of illegal weapons must also be reported (Clery Center, 2021).

More recently, the federal government enacted the Violence Against Women Reauthorization Act of 2003 (VAWA) into law (Office of Postsecondary Education, 2016). The

Act made amendments to the Clery Act of 1990. Specifically, it required institutions to disclose data on victimizations, programs, and policies that relate to sexual assault, dating violence, stalking, and domestic violence. Any private or public postsecondary institution that is a part of any Title IV programs are required to comply with the Higher Education Act (Office of Postsecondary Education, 2016). Title IV institutions are institutions that have signed a Program Participation Agreement with the United States Department of Education. This agreement allowed for the administration of financial aid programs, such as Federal Work-Study Programs, Federal Perkins Loans, Pell Grant, and Federal Direct Loan Program.

Purpose of the Current Study

As discussed, crime has been shown to be a significant problem on many campuses in the United States. Institutions have attempted to address this through the creation of public safety departments, enhanced training, target-hardening, added surveillance and other proactive measures. It has been important to determine whether such measures are effective. Some work has attempted to do so by reviewing campus crime trends. However, another important consideration has been how students feel about campus safety and the various measures that are designed to improve it. The current study attempted to add to the research literature on the topic by exploring the following research questions.

R1: What impact do crime and safety play in the college selection process?

R2: What levels of fear (related to the potential for victimization) do students have, and do

R3: How do students perceive campus safety and security?

R4: How do students perceive campus public safety offices and the officers employed by them?

R5: What role do personal characteristics (i.e., demographics) play in conditioning student responses?

First, it assessed how students perceive fear of crime and their personal safety. Second, and related, it looked at the impact of campus security and safety on enrollment decisions. Finally, it sought to determine how students view campus safety offices and various programs/policies designed to improve their safety. This was achieved through primary data collection with a sample of students attending East Tennessee State University, a public institution located in Johnson City, Tennessee.

This chapter served to provide a foundational understanding of crime on college and university campuses and how institutions have attempted to respond to it. The following chapter will discuss the relevant research literature, focusing on previous studies that have explored student perceptions. This will be followed by Chapter 3, which will detail the methodology of the current work. Chapter 4 will provide an overview of the study's findings. Finally, Chapter 5 will serve as a discussion of those findings and how they can inform our understanding of the topic. Directions for future research and possible limitations of the work will also be discussed.

Chapter 2. Literature Review

As previously discussed, the current study seeks to develop a better understanding of how campus crime and perceptions of public safety influence student selection of higher education institutions. In addition, it seeks to develop an understanding of student perceptions related to fear of crime and confidence in the public safety apparatus. This chapter will examine the works of previous researchers who have explored fear of crime and perceptions of safety and security in campus settings. A variety of relevant topics will be covered. This will be followed by a final section that discusses the current study by outlining the research questions it seeks to answer.

The process of choosing a postsecondary institution has been unique for each individual. Williams (1984) found that when the beliefs and values of a student aligned with those of the institution they chose to attend, the student was satisfied with their choice and persisted in their education. Put differently, there was an enhanced chance that the student would complete their college degree (Nora, 2004). Other studies have found that students were more satisfied with their institution, and thus less likely to withdraw, when there was an alignment of the college environment and their personality types (Litten, 1991; Nora, 2004; Tinto, 1993; Williams, 1984). (Nora, 2004)

There has been much research done on the college choice process (Chapman, D. W., 1981; Chapman & Jackson, 1987; Hossler & Gallagher, 1987; Litten, 1991; Nora, 2004). Most of these studies are based on a three-stage model. This model includes the predisposition, a search, and finally a choice stage. The results of these studies have revealed attributes that potential students deem most important when choosing a postsecondary institution. Broadly speaking, these attributes include financial aid availability, offering of desirable academic

programs, institutional geographic location, social atmosphere, affordable tuition, size, and general academic reputation (Chapman & Jackson, 1987; Nora, 2004).

There are limitations, however, associated with this three-stage model. The model was sequential in creation, so it was more relevant to typical college students (Perna, 2006). Put differently, it was not equally applicable to nontraditional students, such as those returning to school or those who are of a more advanced age. Another factor was that it focused on the selection process as a one-time event and did not highlight how the process of choosing a college works the second time around (i.e., when students decide to pursue a second degree, return to complete an unfinished degree, or transfer to a different university) (Iloh, 2018). Another limitation was that other factors that may potentially impact college selection—such as fear of crime and confidence in security measures—were not considered. This was an important limitation, as fear of crime plays a role in everyday decision-making for many individuals.

In spite of these limitations, the general model provides a foundation on which the college selection process can be better understood (Shaw et al., 2009). By utilizing it and building upon the core assumptions to include other concerns (namely student safety), much can be learned. What follows is an overview of the literature to date relating to student fear of crime and perceptions of both campus crime and public safety offices. This knowledge can assist in reevaluating the aforementioned model to better specify the range of factors that may be influential within it.

Students' Fear of Crime

A portion of this reevaluation must focus on how students' fear of crime plays a role in college choice. Fear of crime has been common within society and has been routinely explored since the early 1960s (Kaminski et al., 2010). Previous research has shown that contextual

factors and personal characteristics are significantly related to fear (Clarke & Lewis, 1982; Kennedy & Krohn, 1984; Warr, 1990). There has been a general observation of higher levels of fear among females, the elderly, and minorities (Clarke & Lewis, 1982; Lane & Meeker, 2003; Riger et al., 1978). College students are also impacted by fear of crime, as they find themselves in new settings without long-standing sources of support (e.g., parents). This fear can serve to influence behavior and change perceptions. For example, Hignite et al. (2018) found that higher fear of crime and a higher perception of victimization on college campuses influenced the protective behavior of students. The following sections will discuss the different factors associated with fear of crime in campus settings.

Personal Factors

The first category that was discussed is personal factors. Available research had shown that there were higher levels of fear among females, minorities, and younger students (Kaminski et al., 2010). For example, Kaminski et al. (2010) found that female students reported substantially higher levels when asked about their fear of being a victim of crime, as well as their overall level of fear, when compared to their male counterparts. As a result of this fear, they engaged in behaviors that they felt reduced their victimization risks on campus (Brantingham & Brantingham, 1994; Fisher, 1995; Woolnough, 2009). Tomsich et al. (2011) similarly found that females in college settings tend to have higher levels of fear, with sexual violence being a primary area of concern.

Day (1994) expanded upon this line of research by identifying a conceptual model that included several different factors as being of interest. Some of these factors included the physical characteristics of the campus, personal factors, and how the media portrayed sexual assault. Results of the study suggested that these factors played a role in women's fear of crime,

specifically those that involved sexual assault, in the campus setting. As such, the author advocated for a focus on prevention strategies, as it was thought that these would help reduce levels of fear (Day, 1994). Fisher and Sloan (2003) found that female college students feared rape more than they feared personal crimes on campus (Kaminski et al., 2010). Similar, Jennings et al. (2007) revealed that sexual harassment concerns were one of the main contributing factors to higher rates of fear among women in their sample.

One additional interesting factor worthy of discussion was that program of study and incidence of criminal events on campus also serve to condition fear of crime. For example, del Carmen et al. (2000) found that fear of violent crime increased significantly following the occurrence of a sexual assault on the campus that students were located. They also identified that college majors played somewhat of a role in fear of crime. Specifically, it was revealed that criminal justice majors had a lower overall level—and were less impacted by events—than those enrolled in other programs of study (del Carmen et al., 2000). Wu (2010), also exploring the impact of majors, found that it affected the perception of campus police and fear of crime among a sample of 841 students. They also found that criminal justice majors had more favorable opinions of police officers and lower levels of fear in terms of crime victimization (Wu, 2010).

Contextual Factors

Contextual considerations have also been found to be influential in conditioning fear of crime. These factors included things such as specific areas on campus or specific times of day, and students' perceptions of them (Kaminski et al., 2010). For example, del Carmen et al. (2000) found that time of day was one of the most significant predictors of fear of crime on campus for their sample. Results indicated that 68% of students were more fearful of crime during nighttime hours. This starkly contrasted with the 16% who indicated that they had higher levels of fear

during the daytime. Related, McConnell (1997) found that 20% of individuals in their sample were afraid to walk alone during the day, whereas 66% suggested that they were fearful of doing so at night. It was important to note that interactive effects may also exist for temporal concerns. Put differently, other variables, such as gender, may influence perceptions. For example, Brantingham and Brantingham (1994) found that 88% of the males providing data for their study felt that the campus was safe after dark, whereas only 52% of females responded similarly.

As mentioned, campus location also appears to play a role based upon past research. It has been commonly found that students avoid specific areas on campus because of the fear of being victimized in that location (del Carmen et al., 2000). For example, parking garages tend to be a location of concern. Fisher and Nasar (1992) found that parking garages provided a refuge for potential offenders because of low visibility. They also found that areas with high refuge levels for offenders were those that students were most fearful of visiting (Fisher & Nasar, 1992). Brantingham and Brantingham (1994) built upon this work by identifying several areas that led to higher levels of fear: (1) those lacking in physical security, (2) multi-level parking garages, and (3) any area on campus that was perceived as being isolated.

In addition to micro-level concerns regarding location, it was important to understand that fear may also relate to the general location of a campus. One aspect of college location that had not been heavily examined is potential differences between urban and rural campus settings. There was a chance that fear of crime may differ between these settings. Only one study to date has explored fear of crime in a rural setting. Mrolza (2012) found that males were more fearful of property crimes on rural campuses, while females were more fearful of violent crimes in the surrounding area (off campus property). They also found that prior victimization significantly related to the fear of crime both off and on campus (Mrolza, 2021). Little research has been

conducted to determine the effects of urban campus locations either. Woolnough (2009), gathering data from participants at a large, urban university in the Mid-Atlantic region, found that women engaged in more self-protective behaviors than men, while also indicating that the urban setting contributed to their levels of fear (Woolnough, 2009). Though these two works assist in our understanding of geographical factors, much remains to be learned

Effect of Previous Tragedies

These personal and contextual factors are not the only ones to play a role in fear of crime on college campuses. Another factor that was examined was that much of the previous research was conducted before the tragedies at Virginia Tech and Northern Illinois University. As such, they did not take into consideration the effect of school shootings, in general, on students' fear of crime. Stretesky and Hogan (2001) did so in examining the data related to fear of dating violence before and after the April 1999 mass shooting at Columbine High School outside of Denver, Colorado. They found that there was a decrease in the perceived safety of the respondents, all of whom were female, following the shooting (Stretesky & Hogan, 2001). Another study conducted during this time period also found that general fear of crime had increased after Columbine. However, the majority of participants indicated that this fear was less prominent within the school setting than when they were in other locations (Addington, 2003).

Specifically addressing the aftermath of the mass shootings at Virginia Tech and Northern Illinois University, Kaminski et al. (2010) found that there was an increase in various measures of fear among surveyed students. They also found that the specific impact of the tragedies depended on both the specific type of fear that was measured and student characteristics. The Virginia Tech shooting resulted in an increased fear specifically for minorities, women, on-campus residents, and younger students. Students were also found to be

more afraid of certain crime types than crime as a whole. Specifically, females had higher fear of crime and avoided specific areas after dark. They also found that non-White students were more afraid to walk alone during the day than White students. Non-White students also feared being attacked with weapons and being murdered on campus more than their White counterparts. (Kaminski et al., 2010).

This section of the review established that fear of crime is a concern on college campuses. Further, it has shown that there were multiple factors that may impact it. However, it was important to note that students' perceptions of safety and security on campus were also of concern. Previous research on this topic is highlighted in the section that follows.

Perceptions of Safety and Security

As discussed, multiple studies had examined students' perceptions of their safety on college campuses (Bohmer & Parrot, 1993; Crawford et al., 2008; Kelly & Torres, 2006). Of interest, most of these studies found that similar factors (to those that condition level of fear) influenced these perceptions. University campuses are relatively safe environments for learning; however, victimization, or the threat of it, has been a reality for many students (Owusu, Akoto, & Abnory, 2016). Further, research suggested that specific factors work to impact these perceptions.

Environmental factors, such as the physical environment of the campus setting, have been found to share an association with perceptions of fear (Owusu et al., 2016). Johnson (2009) suggested that the physical environment of a campus could be defined as any physical space where violence could theoretically occur. They further suggested that the interactions that occurred within the physical environment impacted student behavior, and as such were important concerns for student safety. Building on this notion, Loukaitou-Sideris and Fink (2009)

suggested that factors such as lack of individuals in surrounding areas, darkness, poor maintenance, and desolation served to influence fear. They further argued that addressing these needs could serve to improve perceptions of safety and security.

Constrained Behavior

One factor commonly that was found to relate to students' perceptions of crime is the idea of constrained behavior. Constrained behavior has been defined as the behavioral changes or actions that individuals take in the hope of reducing their risk of victimization (Jenning et al., 2007; Maier & DePrince, 2020). These changes were the results of students' perception of security and safety on campus. To clarify, perception of security and safety goes hand in hand with fear of crime. As a result, the increase in these constrained behaviors shared a correlation with increasing levels of fear, causing students' perceptions of security and safety to decline (Jenning et al., 2007). One specific example of constrained behavior involved asking for an escort to and from their car (Fisher & Sloan, 2003). Further, McCreedy and Dennis (1996) found that a percentage of their sample stated that they would avoid night classes due to safety concerns or fear. However, such changes in behavior may vary from campus to campus. For example, a 2004 study by Griffith et al. found that only 8% of students stated that they changed their routine because of a fear of crime.

Another form of constrained behavior involved the utilization of precautionary measures; for example, carrying pepper spray, a knife, or a gun (Jenning et al., 2007). Tewksbury and Mustaine (2003) found that 17% of students reported regularly carrying a gun, while 22% reported carrying pepper spray for self-defense. One additional finding that Tewksbury and Mustaine (2003) identified was that students who used drugs or alcohol had the same likelihood

of perceiving the need for specific precautions that helped avoid victimization as students that did not use drugs or alcohol.

Opinions of Campus Public Safety

Student perceptions of safety and security may also be impacted by their awareness and opinion of campus public safety officers. Fletcher and Brydon (2007) identified that most individuals in their study were aware of foot patrols and campus security, but few actually used services provided by them (such as the availability of escort requests). They found that students were instead more likely to utilize some sort of weapon, pursue avoidance strategies, or walk with another person as opposed to utilizing foot patrols or contacting campus security (Fletcher & Bryden, 2007).

Communication between campus security services and students has been shown to be one of the most effective ways to minimize the safety risks present (Franzosa, 2009). However, to achieve successful communication, students' perceptions of campus security services had to be taken into consideration. Few studies have explored student satisfaction with campus police services to date, but much can be learned from the research that is available (Jenning et al., 2007). For example, Miller and Pan (1987) found that when a student had an involuntary or direct encounter with campus police, they were more likely to report unfavorable attitudes towards the entire campus security department. They also found that students generally had positive perceptions of these campus police officers, but that encounters (likely as a result of rules violations or traffic infractions) served to negatively influence them (Miller & Pan, 1987).

Wada et al. (2010) built upon this line of research by further exploring students' satisfaction with campus police and their perceptions of safety on campus. Data revealed that students had low levels of faith in campus police officers' ability to put them at ease, their ability

to solve problems, and their overall fairness. Comparing perceptions of campus police and traditional officers revealed interesting findings. Wada et al. (2010) found that there was a statistically significant difference between the perceived legitimacy of the campus and local police departments. In essence, students felt that local police were more legitimate than campus police (Wada et al., 2010). It appears that students saw campus police as security personnel, as opposed to sworn law enforcement officers.

Jacobsen (2015) built upon these research questions in seeking to explain how particular contexts associated with college campuses impacted students' views of campus police. They further sought to explain how campus police can enhance their legitimacy among student populations. Results indicated that students expected campus police to protect them from harm, but that officers should not interfere with their lives while fulfilling this function. More to the point, respondents felt that overreactions to less serious problems (e.g., underage alcohol possession) helped to delegitimize public safety (Jacobsen, 2015).

Hignite et al. (2018) suggested that confidence in public safety officers impacted students' perceptions of the likelihood that they will be victimized on campus. Similar to the work of Skogan (2009) and others, they indicated that increased confidence in police helped to reduce crime-related concerns. It also appears to have the potential to affect the constrained and avoidance behaviors discussed in the last section. Chadee et al. (2007) found that risk perceptions, fear and reporting behaviors were impacted by trust in expect systems, to include campus police. It is likely that measures to enhance student satisfaction must involve significant efforts on the part of officers. For example, Griffith et al. (2004) found that simple measures, such as the neatness of an officer's appearance, had the lowest impact on satisfaction. Alternatively, higher levels of satisfaction were seen when students were confident in officers'

abilities to solve problems. While each of the factors discussed to this point appear to be important to our understanding of perceptions, it is also necessary to consider individual-level characteristics, such as the impact of student demographics.

Impact of Student Demographics

The first demographic characteristic worthy of discussion is gender identity, which has been found across several studies to influence perceptions of campus police and safety. Much of the research that examined the relationship between gender and perceptions of safety and security has reached similar conclusions to those focused on fear of crime. For example, Jennings et al. (2007) found that there were significant gender differences in student perceptions when surveying 564 students enrolled in criminology courses at a large Southeastern university. Although male participants had a higher rate of victimization than their female counterparts, females featured a more negative perception of safety and security on campus.

Gender disparities may be explained by forms of victimization common to the campus setting. For example, sexual violence offenses are of great concern as they have been found to significantly affect perceptions of campus safety and security (Jenning et al., 2007; Linder & Lacy, 2020). Linder and Lacy (2020), exploring this reality, studied college-aged females, their perceptions of campus safety, and the factors that affected these perceptions. One of their key findings was that the fear of potential sexual violence affected their perception of safety and security more so than other forms of victimization.

This may be partially explained by how institutions have handled sexual violence offenses in the past (Linder & Lacy, 2020). For instance, Bedera and Nordmeyer (2015) found that tips posted on campus security websites detailing prevention measures for sexual violence were largely directed towards females (approximately 80% of all messaging), indicating that

females should have more concern for their safety (Bedera & Nordmeyer, 2015). These tips also outlined how alcohol was a factor and commonly led to sexual violence. Bedera and Nordmeyer (2015) argued that these tips, especially the ones involving alcohol, promoted a victim-blaming message, especially if the victim happened to be drunk at the time of their assault.

While risk of such victimization is certainly present, Linder and Lacy (2020) argued that overall student perceptions of campus safety were inconsistent with the students' actual risk reality. They posited that they may have experienced higher victimization risks due to the argument that they might not have accurate information about crime occurrence on campus. This was supported by their finding that there are contradictory messages that relate to campus safety and sexual assault. They found that these come from experts, peers, families, and campus publications. As a result, they advocated for better resources that accurately explain the dynamics of sexual violence (Linder & Lacy, 2020).

Race is also a key demographic of interest in the discussion. For example, Baum and Klaus (2005) found that White and Black college students reported higher overall victimization rates than students who fell within what they categorized as the "other" category. This category was made up of Pacific Islanders, Alaska Natives, Asian Americans, and Native Americans. Results indicated that 64.9% of White students, 52.4% of Black students, and 37.2% of those grouped into the other category reported being victimized in the seven years prior to survey administration (Baum & Klaus, 2005). Maffini and Dillard (2022), seeking to further explore the impacts of race, focused on the perceptions of campus safety among Black college students (Maffini & Dillard, 2022). They suggested that Black students tend to experience many risk factors that influence their perception of campus safety. These include microaggressions, racial hostility, and self-segregation. Related to this, Stotzer and Hossellman (2012) found that an

increase in racial diversity in higher education settings has oftentimes been accompanied by increasing racial tensions, which can result in discrimination, violence, threats, and microaggressions. Taken together, it seemed apparent that these factors can affect a Black individual's perception of safety in a campus setting (Stotzer & Hossellman, 2012).

Some work has been directed at understanding Black students' experiences with sexual assault on campus. Krebs et al. (2011) explored rates of sexual assault among Black, female students at Historically Black Colleges and Universities (HBCUs) and non-HBCUs. They found that women attending HBCUs experienced lower incidence of sexual violence than those at non-HBCUs. Krebs et al. (2011) argued that this was the result of less frequent drinking on HBCU campuses, among other factors. A similar study conducted by Maffini and Dillard (2022) compared campus safety experiences of Black/African American students and their White counterparts. They found that Black students as a group felt significantly less safe compared to White students on the campuses being assessed (Maffini & Dillard, 2022).

Further research on race and its relationship to perceptions of safety and security has looked at the experiences of Asian American students. A 2004 study by Cooc and Gee found that Asian Americans were more likely to experience verbal harassment that was specifically race-related than Latino, White, or Black respondents. Further analyzing the data, it was revealed that Asian Americans who were first- or second-generation students were approximately three times more likely to feel unsafe in the campus setting compared to those with an extensive family history of higher education. Of interest, yet another study by Peguero (2009) found that female Asian American Students were less likely to be targeted for violent victimization and were less likely to have safety concerns than their male Asian American counterparts.

The Current Study

Taken together, the previous literature suggests that fear of crime is a significant concern on college campuses. Further, student perceptions of safety and security may differ based on their individual characteristics and other aspects. Finally, it has been established that a number of factors play a role in the college choice process. The current study aims to build upon this body of research by exploring several key research questions. These questions are largely related to the impact that safety and security may play in the school selection process, how students perceive fear, security and safety in the campus setting, and how various spatial factors, forms of victimization and personal characteristics (e.g., demographics) may influence answers to these questions. A total of five research questions were established, each of which is discussed in more detail below.

R1: What impact do crime and safety play in the college selection process?

Though some research (discussed within this chapter) has explored the factors that impact student perceptions of crime and safety, as well as levels of fear, no known research to date has assessed what impact crime and the potential for victimization may play in the college selection process. As such, the current study will explore the degree to which students (and their parents or guardians) focus on crime-related information when deciding which institution to attend.

R2: What levels of fear (related to the potential for victimization) do students have, and do factors related to the physical environment serve to condition them?

As discussed, some research has explored student fear of victimization. However, few studies have focused on institutions located outside of large, urban areas. Thus, it is important to continue this line of research using data from universities located in rural or partially rural communities. This study attempts to do so by exploring overall fear, and fear related to specific

forms of offending, both on campus and in the surrounding community. Further, in line with previous research, it will seek to ascertain whether temporal and spatial factors impact levels of fear (see Kaminski et al., 2010 for an example).

R3: How do students perceive campus safety and security?

As the review of the research literature revealed, there are many factors that relate to a student's perception of safety and security (Bohmer & Parrot, 1993; Crawford, O'Dougherty, & Birchmeier, 2008; Kelly & Torres, 2006). The current study seeks to extend this work in an attempt to determine the generalizability of these findings. Participants will be asked to respond to a series of questions assessing their overall perceptions. In addition, the study will seek to determine which factors may influence those perceptions.

R4: How do students perceive campus public safety offices and the officers employed by them?

Fletcher and Brydon (2007) found that while many students were aware of the services provided by public safety officers, few used them. To build upon this line of research, participants will be asked to respond to questions assessing their perceptions of public safety officers and their overall level of confidence in them.

R5: What role do personal characteristics (i.e., demographics) play in conditioning student responses?

As discussed, several studies have found that demographic characteristics serve to influence fear and perceptions of campus safety and security. The current study takes a similar approach by exploring how these characteristics may impact findings related to research questions one (R1) through four (R4).

Chapter Summary

This chapter provided an overview of the existing literature on fear of crime and perceptions of safety and security on college campuses. Specifically, it covered the various factors that have been found to influence each of these outcomes. The need for additional research on the topic was also stressed. Considering this need, a series of research questions were established to guide the current study. Chapter 3, to follow, will cover the proposed methodology of the work, with a focus on sample selection, the survey document and anticipated plan of analysis.

Chapter 3. Methodology

The previous chapter provided an overview of previous studies focused on fear of crime, perceptions of safety and security, and perceptions of public safety on campus settings. Specifically, it introduced several factors that have been found to relate to student perceptions, ranging from demographic characteristics to those related to the physical setting. The current study seeks to contribute to this body of literature by further examining how perceptions of safety and security relate to enrollment decisions and student characteristics. This chapter will introduce the study's proposed methodology by outlining the sampling strategy, survey instrument, dependent and independent measures, and proposed plan of analysis.

Data

Sample

The participants for the study were drawn from East Tennessee State University (ETSU), a public university located in Johnson City, Tennessee. ETSU offers roughly 140 academic programs at the undergraduate, masters and doctoral levels. These programs are housed across eleven colleges and schools, with a combined enrollment of over 14,000 students. Though many of these students are from the surrounding region, ETSU also hosts a number of international students and scholarship recipients from states across the U.S.

To ensure a suitable sample size, the primary researcher worked with contacts in the Department of Public Safety, ETSU's campus law enforcement office. An administrator in this office agreed to utilize their access to the University's student mailing list in order to forward an email (from the primary researcher) discussing the study and requesting student participation. Those agreeing to participate were directed via a link to the survey, which was hosted on ETSU's Redcap server. Such an approach was appropriate for several reasons. First, it eliminated

potential confidentiality issues since the primary researcher did not have to gain access to student information (including email addresses). Second, since the emails were sent to all students enrolled in the Spring 2022 academic term the final sample should be representative of a variety of academic majors, increasing the validity of the findings. Finally, this presented the opportunity to achieve a sufficient sample size since all 14,000 students were included in the sampling frame.

The survey site remained open for a period of two weeks after the initial email requesting participation was sent. Those who accessed the link and landed on the Redcap server page were provided with an initial screen that discussed informed consent. The goals of the study were discussed, as was how the data is to be utilized. Students were also instructed that all information gathered was anonymous and would not be tied back to them. Those agreeing to participate (after reviewing this information) were asked to agree to a series of statements ensuring that they are eligible to do so: (1) that they are over 18 years of age, (2) that they are currently enrolled as a student at ETSU, (3) currently residing in the United States, and (4) that they agree to provide data for use by the primary researcher. Participants were instructed that the survey would take approximately 10-15 minutes to complete but were allowed to answer questions at their own pace. Ultimately, 515 students attempted to complete the survey, though 85 respondents did not continue until submission. These surveys were not included in the analysis. This left a final sample of 425 participants.

Survey instrument

The survey instrument (see Appendix 1 for the complete document) consisted of five separate sections containing items related to the study's key research questions: (1) demographics, (2) college choice, (3) fear of crime, (4) perception of safety and security and (5)

perception of public safety. The demographics section contained questions that aimed to better understand participant characteristics. These questions (e.g., age, race, college major) were chosen based on the characteristics assessed in previous studies on the topic.

The second section focused on questions related to the respondent's college choice. It contained questions related to applications, offers of admission, and the range of factors (e.g., campus size, cost of attendance, program offerings) that students consider when weighing enrollment decisions. Furthermore, it sought to determine—through a series of Likert-scale items—the impact that concerns related to crime and safety play in this decision-making process (for both students and their parents/guardians). Specific examples of these items included crime rate on campus, security measures on campus, and campus emergency preparedness.

The third section of the survey contained questions focused on fear of crime. It was split into two matrices, both of which will use Likert-style items. The first matrix contained ten items that address factors associated with fear of crime both on- and off-campus. Specifically, it asked respondents to indicate how much fear they attribute to each, with examples including theft, assault, and robbery. The second matrix further explored fear by asking respondents to indicate their level of agreement for a variety of statements, including “I am fearful of being victimized at night” or “I feel safer on-campus than off-campus.”

The fourth section addressed perceptions of safety and security. It began by asking respondents to indicate whether they utilize different defensive behaviors to prevent victimization, such as holding keys defensively, carrying pepper spray, and maintaining constant awareness of their surroundings. Next, a series of Likert-scale items explored how respondents perceived ETSU's efforts as they relate to various security measures. Respondents were asked to

rate their level of satisfaction for items such as “adequate lighting in parking garages,” “availability of surveillance cameras,” and “visibility of public safety officers.”

The last section of the survey focused specifically on perceptions of the public safety department at ETSU. Respondents were first asked whether they have ever interacted with a public safety officer and/or whether they have ever requested assistance from one. Next, they were asked to respond to a series of items (contained within a matrix) related to perceptions of public safety. Specific examples of these items included “ETSU Public Safety does a good job” and “I have a lot of respect for ETSU Public Safety officers.”

Measures

Independent measures

Several independent measures were assessed in this study, the majority of which assessed participant demographics. The first measure, *gender*, was operationalized categorically. The respondents were asked to select one of the following responses: (1) male, (2) female, (3) non-binary, (4) other, and (5) prefer not to respond. The treatment of this measure in the final analysis was dictated by response frequency, with the possibility of creating a dichotomous measure. *Age* was measured at the ratio level due to an expected lack of variation (considering the age distribution of students attending the University). Two measures were used to assess race/ethnicity. Respondents were asked to indicate their *race* as (1) White, (2) Black or African American, (3) Native American, (4) Asian/Pacific Islander, or (5) Other. For *ethnicity*, respondents were asked to indicate if they are of Hispanic or Latino origin. Final treatment of this variable for purposes of analysis was dictated by the distribution of responses.

School classification was measured utilizing the following categories: (1) freshman, (2) sophomore, (3) junior, (4) senior, (5) graduate student, and (6) other. The “other” category was

added in case some respondents are auditing courses or participating in dual enrollment. Those selecting “other” were asked to specify what their current status is in order to determine whether to recode them into one of the other available categories. Three separate questions were designed to assess student background. Specifically, they assessed whether they are a *first-generation student*, *transfer* and/or *international student*. All three were measured dichotomously, with options for no (0) and yes (1). Respondents were also asked about their *enrollment status*, with response options for full-time (12+ credit hours for undergraduate students; 9+ credit hours for graduate students) and part-time (11 or fewer credit hours for undergraduate students; 8 or fewer credit hours for graduate students).

Respondents’ living situations were also explored through a series of items. The first was to determine whether respondents *live on campus* and was categorized dichotomously with options for (0) no and (1) yes. Those indicating that they live off campus were asked whether they live in a *student housing* community (0=No; 1=Yes). They were also asked to indicate their *current living situation* by selecting from several options: (1) live with family, (2) live with friends, (3) live alone, or (4) other. The final two demographic measures focused on the respondent’s hometown and the characteristics of it. *Population size* of the town/city was assessed categorically by asking the respondent to select from the following options: (1) 0-2,500, (2) 2501-10,000, (3) 10,001-25,000, (4) 25,001-50,000, (5) 50,001-75,000, or (6) 75,001+. Proximity to ETSU was explored by asking respondents whether their hometown is located within 50 miles of the University’s Johnson City campus (0=No; 1=Yes).

The final independent variables examined *interaction* with and *assistance* from campus public safety officers, use of *defensive behaviors* on campus, *college applications*, *college acceptance*, and *college first choice*. Respondents were asked if they have ever interacted with a

campus public safety officer (*interaction*), with yes (1) and no (0) answer options. Respondents were also asked whether they have ever sought assistance from campus public safety officers (*assistance*) using the same dichotomous choices. For *defensive behaviors*, respondents were asked to indicate whether they used any defensive behaviors while on campus. Several categories were provided to them, such as carrying pepper spray, carrying a knife and maintaining active surveillance of their surroundings. They were allowed to select all that apply. Respondents were also asked to relay how many universities they applied to (*college applications*), and how many they were accepted by (*college acceptance*). Each of these measures provided the following response options: (1) 1, (2) 2-4, (3) 5-7, or (4) 8+. The final independent measure assessed whether ETSU was the respondent's first choice, with options for (1) yes or (0) no.

Dependent Measures

Several dependent measures were explored in the current study. The first two were designed to assess how campus safety and security may affect college choice for students and their parents/guardians, respectively. Respondents were asked to indicate on a scale of (1) not important at all to (5) very important how much each item mattered. Each of these factors was assessed independently to compare mean scores and identify the most and least important concerns. In addition, they were combined to create two composite measures assessing *student safety choice* and *parent safety choice*. A reliability test (Cronbach's Alpha) was used to ensure that these items form a suitable scale (for both measures).

The third dependent variable examined other factors that play a role in college choice. These factors were drawn from the previous literature and included items such as availability of programs, academic prestige, and financial aid availability. Respondents were asked to indicate the role that each of these factors played in their college choice on a scale of (1) not important at

all to (5) very important. These factors were assessed independently and compared to the mean scores obtained for campus safety and security items in order to determine how safety and security weigh in comparison to more traditional concerns.

The fourth and fifth dependent measures addressed fear of crime both on and off campus. Respondents were provided a series of identical items for each (on and off campus), assessing fear of the following forms of victimization: (1) any type, (2) sexual assault, (3) assault non-sexual assault, (4) robbery and (5) theft. They were asked to indicate their level of fear for each on a scale from (1) not afraid at all to (5) very afraid. Each of these factors was examined independently to determine the forms and locations that students were most concerned about. They were then combined to create two scales assessing *fear on campus* and *fear off campus*. Cronbach's Alpha was employed to ensure scale suitability for each.

For the sixth dependent measure, respondents were asked to indicate their level of agreement with five statements related to *general fear of crime* on a scale from (1) strongly disagree to (5) strongly agree. These items included the following: (1) I am fearful of being victimized at night, (2) I am fearful of being victimized during the day, (3) I feel safer on-campus than off-campus, (4) I feel comfortable walking on campus by myself during the day, and (5) I feel comfortable walking on campus by myself at night. These statements were assessed independently via a comparison of mean scores.

The seventh dependent measure examined perceptions of safety and security on campus. Respondents were asked to indicate their level of satisfaction with various security measures (10 in total) employed by ETSU, including lighting, emergency boxes, notification systems and surveillance cameras. Response options were in Likert-format, ranging from (1) not satisfied at all to (5) highly satisfied. These factors were first assessed independently to determine where

students were the least and most satisfied. Additionally, a single *safety and security satisfaction* measure was explored by combining these items (Cronbach's Alpha will be assessed to ensure appropriateness of doing so).

The eighth and final dependent measure examined respondents' perception of ETSU Public Safety, and the officers employed by the Department. Respondents were asked to indicate their level of agreement with nine items on a scale of (1) strongly disagree to (5) strongly agree. Items were partially drawn from the work of Edwards (2007) and included examples such as *ETSU Public Safety does a good job*, and *I am comfortable asking an ETSU Public Safety officer for assistance*. These factors were assessed independently through a comparison of mean scores and then combined to create a single *public safety perception* measure, Cronbach's Alpha was once again used to determine the feasibility of doing so.

Plan of Analysis

The analysis of data for the current study occurred in a series of stages. The first stage involved exploring the descriptive statistics for the independent variables. This provided a detailed overview of the sample characteristics. The second stage consisted of assessing the descriptive statistics for each of the items to be included in the dependent measures, which allowed for a comparison of mean scores. This was followed by a series of reliability tests and the creation of the previously discussed composite measures. Finally, a series of linear (OLS) regression models were used to answer the study's key research questions.

Chapter Summary

The current chapter provided an overview of the study's methodology and how it allowed for exploration of the various research questions. The chapter began by detailing the population of interest, the proposed sampling strategy, and the survey instrument to be used in data

collection. This was followed by a discussion of independent and dependent measures. Finally, the plan of analysis and how it assisted in answering the study's research questions was covered. The next chapter will discuss the results of these analyses.

Chapter 4. Results

This chapter seeks to address the results of the statistical analyses that were outlined in the previous chapter. It will begin by providing an overview of the descriptive statistics for the independent measures. This will allow for a better understanding of the sample and its characteristics. Next, attention will be directed toward the dependent measures. A comparison of means for factors associated with college choice, fear of crime, safety and security, and perceptions of ETSU Public Safety will be provided. This will be followed by the creation of a series of scales that were utilized as dependent measures in this study (with an accompanying focus on suitability of creation through Cronbach's alpha). Following this will be the presentation of the results of a paired t-test and the multivariate linear regression models.

Descriptive Statistics

As previously mentioned, frequencies for the various independent measures were calculated in order to gain a better understanding of the sample characteristics. As depicted in Table 1, data revealed that in relation to *gender*, 72.0% of the respondents were female, while 24.0% were male (with the remainder selecting other or non-binary). Further, 85.9% were White and 12.9% were non-White. Respondents ranged from 18 to 71 years of age, with the mean age of respondents being 26.9 (with a mode of 22). When asked to identify their *student status*, 84.0% of the students indicated that they attended ETSU as full-time students, while 15.8% indicated that they were part-time students. Additionally, respondents were asked to indicate their *class rank*. Freshman made up 11.1% of the sample, sophomores 12.0%, juniors 15.3%, and seniors 22.6%. Graduate students comprised the remaining 37.4% of respondents.

Table 1*Frequencies for Gender, Age, Race, School Classification, and Student Status*

Variable	Frequency	Percent
Gender		
Male	102	24.0%
Female	203	72.0%
Other	17	4.0%
Race		
White	365	85.9%
Non-White	55	12.9%
Other	5	1.2%
School Classification		
Freshman	47	11.1%
Sophomore	51	12.0%
Junior	65	15.3%
Senior	96	22.6%
Graduate Student	159	37.4%
Other	7	1.6%
Student Status		
Part-time	67	15.8%
Full-time	357	84.0%
Other	1	0.2%

The next set of independent measures focused on respondent's *first-generation status*, *transfer* and *international student status*, *college applications*, *acceptance*, *first choice*, *living situation*, and *town population* (see Table 2 for a full summary). The majority of respondents were not first-generation college students (67.1%), had not transferred to ETSU (69.9%) and were not international students (95.5%). Further, 78.6% of respondents lived off-campus while the remaining 21.4% lived in on-campus housing. The respondents were also asked to indicate if the town/city they grew up in was within 50 miles of ETSU's Johnson City campus. The majority (60.2%) indicated that their town/city was not within 50 miles, while the balance (39.8%) indicated that theirs was. Most respondents reported that the population of the town/city they grew up in was between 2,501 and 10,000 people. Data indicated that 73.6% of respondents indicated that ETSU was their first choice when applying to colleges/universities, while 26.4%

indicated the opposite. In relation to *admission*, 49.4% indicated that they applied to two-to-four colleges/universities, while 49.6% reported being accepted to two-to-four institutions (constituting the mode for each measure).

Table 2
Frequencies for First-generation, Transfer, International, Applications, Acceptance, First Choice, Living Situation, and Town Population

Variable	Frequency	Percent
First-generation Student		
Yes	285	67.1%
No	139	32.7%
Other	1	0.2%
Transfer Student		
Yes	297	69.9%
No	125	29.4%
Other	3	0.7%
International Student		
Yes	406	95.5%
No	14	3.3%
Other	5	1.2%
ETSU First Choice		
Yes	112	26.4%
No	313	73.6%
Other	0	0%
College Applications		
1	161	37.9%
2-4	210	49.4%
5-7	37	8.7%
8 or more	16	3.8%
Other	1	0.2%
College Acceptance		
1	173	40.7%
2-4	211	49.6%
5-7	33	7.8%
8 or more	8	1.9%
Other	0	0%
Living Situation		
Off-Campus	334	78.6%
On-Campus	91	21.4%
Other	0	0%
Town/City Population		
0-2,500	49	11.5%
2,501-10,000	98	23.1%

(continued)

Table 2. (continued)

10,001-25,000	57	13.4%
25,001-50,000	55	13.9%
50,001-75,000	77	18.1%
75,001+	86	20.2%
Other	3	0.7%

The final independent measures assessed in the study pertained to the use of defensive behaviors, interaction with ETSU Public Safety officers, and assistance from them (see Table 3). Responses for *defensive measures* varied, though the most common response was for those who reported practicing three defense measures (regularly) while on campus (23.5%). In relation to interaction with a Public Safety officer (*interaction*), 45.6% of respondents indicated that they had interacted with one, while 53.9% indicated that they had not. Finally, those that indicated that they had previously requested assistance from an ETSU Public Safety officer (at least once during their time at the University) accounted for 17.4% of the respondents (while 82.4% had not requested assistance).

Table 3

Frequencies for Defensive Behaviors, Interactions with, and Assistance from ETSU Public Safety

Variable	Frequency	Percent
Defensive Behaviors		
0	24	5.6%
1	73	17.2%
2	92	21.6%
3	100	23.5%
4	84	19.8%
5	36	8.5%
6	15	2.5%
7	1	0.2%
Other	0	0%
Interactions with Public Safety		
No	229	53.9%
Yes	194	45.6%
Other	2	0.5%
Assistance from Public Safety		
No	350	82.4%

(continued)

Table 3. (continued)

Yes	74	17.4%
Other	1	0.2%

Dependent Measures and Creation of Scales

College Choice

As discussed in the previous chapter, respondents were asked to indicate (using two Likert scale matrices) the importance of campus safety and security for themselves (*student crime*) and their parent/guardian (*parent crime*) when making their college choice. Each item included in the matrices was assessed on a scale ranging from one (not at all important) to five (very important). Examining the descriptive statistics for the specific items that make up the *student crime* scale revealed that many of the respondents stated that each of the factors were somewhat important when choosing a college or university (see Table #4 for a complete list of the *student crime* and *parent crime* scale statistics). The *availability of crime and safety information on college/university websites* was the one factor that deviated from this. This was deemed the least important of the factors by respondents ($\bar{x} = 3.16$). Conversely, the most important factor was *security measures on campus (e.g., emergency boxes, public safety patrols)*, which featured a mean score of 3.49.

Examining the *parent crime* items revealed slightly more diversity in responses. Findings showed that *crime rate on campus* was the factor that mattered most to parents/guardians when looking at college choices ($\bar{x} = 3.68$). Similar to student concerns, the least important factor for parents/guardians was *availability of crime and safety information on college/university websites* ($\bar{x} = 3.35$).

Table 4*Safety and Security Scale Descriptive Statistics for Respondents and Their Parents/guardians*

	Minimum	Maximum	Mean
<i>Student crime</i>			
Crime rate in campus	1.00	5.00	3.43
Crime rate in surrounding community	1.00	5.00	3.40
Security measures on campus (e.g., emergency boxes, public safety patrols)	1.00	5.00	3.49
Campus emergency preparedness (e.g., emergency notification system)	1.00	5.00	3.41
Availability of crime and safety information on college/university website	1.00	5.00	3.16
<i>Parent crime</i>			
Crime rate in campus	1.00	5.00	3.68
Crime rate in surrounding community	1.00	5.00	3.66
Security measures on campus (e.g., emergency boxes, public safety patrols)	1.00	5.00	3.56
Campus emergency preparedness (e.g., emergency notification system)	1.00	5.00	3.49
Availability of crime and safety information on college/university website	1.00	5.00	3.35

Items contained within the two matrices were utilized to create two scales that could be employed in the multivariate analysis to assess the impact of various independent measures on them. A reliability test via Cronbach's alpha was conducted to determine the consistency of the scales. The values for the *student crime* and *parent crime* scale, 0.95 and 0.97, respectively, were above the reliability score (0.70) deemed sufficient in previous research (Field, 2016). This indicated that both scales were a reliable method of assessing the importance of campus safety and security in college choice for the respondents and their parents. Mean scores for *student crime* (3.38) and *parent crime* (3.54) suggested that these factors were moderately important in the school selection process (see Table 5).

Table 5*Safety and Security Scale Scores for Respondents and Their Parents/guardians*

	Minimum	Maximum	Mean
<i>Student crime</i>	1.00	5.00	3.38
<i>Parent crime</i>	1.00	5.00	3.54

Fear of Crime

Respondents were asked to indicate (using two Likert scale matrices) their level of fear as it related to crime on and off campus and general statements about crime. Each item included in the matrices was assessed on a scale ranging from one (strongly disagree) to five (strongly agree). One of the matrices asked respondents to indicate their level of agreement with questions that related to general fear of crime (see Table 6). Data indicated that respondents felt comfortable walking on campus by themselves during the day ($\bar{x} = 4.42$) and walking in the parking garage by themselves during the day ($\bar{x} = 3.89$). Conversely, respondents indicated that they felt the least comfortable walking in the parking garage by themselves at night ($\bar{x} = 2.57$).

Table 6
Descriptive Statistics for General Fear of Crime

	Minimum	Maximum	Mean
I am fearful of being victimized at night.	1.00	5.00	3.58
I am fearful of being victimized during the day.	1.00	5.00	2.60
I feel comfortable walking on campus by myself during the day.	1.00	5.00	4.42
I feel comfortable walking on campus by myself at night.	1.00	5.00	2.97
I feel comfortable walking in the parking garage by myself during the day.	1.00	5.00	3.89
I feel comfortable walking in the parking garage by myself at night.	1.00	5.00	2.57
I feel safer on campus than I do off campus.	1.00	5.00	3.48

When examining the descriptive statistics for the items that made up the measures for *fear on-campus* and *fear off-campus* (see Table 7 for complete results), data reveal that, for *fear on-campus*, respondents were most afraid of *becoming a victim of sexual assault* ($\bar{x} = 2.42$) while they were least afraid of *becoming a victim of robbery (theft by force)* ($\bar{x} = 2.08$). For *fear off-*

campus, respondents were most afraid of *becoming a victim of any type of crime* ($\bar{x} = 2.76$) while they were least afraid of *becoming a victim of assault (non-sexual)* ($\bar{x} = 2.58$).

Table 7
Scale Descriptive Statistics for Fear of Crime On-Campus, and Fear of Crime Off-Campus

	Minimum	Maximum	Mean
<i>Fear On-campus</i>			
Fear of becoming a victim of any type of crime	1.00	5.00	2.31
Fear of becoming a victim of theft	1.00	5.00	2.26
Fear of becoming a victim of robbery (theft by force)	1.00	5.00	2.08
Fear of becoming a victim of assault (non-sexual)	1.00	5.00	2.14
Fear of becoming a victim of sexual assault	1.00	5.00	2.42
<i>Fear Off-campus</i>			
Fear of becoming a victim of any type of crime	1.00	5.00	2.76
Fear of becoming a victim of theft	1.00	5.00	2.70
Fear of becoming a victim of robbery (theft by force)	1.00	5.00	2.61
Fear of becoming a victim of assault (non-sexual)	1.00	5.00	2.58
Fear of becoming a victim of sexual assault	1.00	5.00	2.70

Three scales were created that examined overall fear of crime (*overall fear*), fear of crime on-campus (*fear on-campus*), and fear of crime off-campus (*fear off-campus*) through utilization of the items outlined in Table 7. A reliability test was conducted for each scale. Each had a resulting alpha score that confirmed that the scale was a reliable measure of *overall fear* ($\alpha = 0.95$), *fear on-campus* ($\alpha = 0.92$), and *fear off-campus* ($\alpha = 0.94$). A standardized score was created for each respondent for each of the three scales. This scale ranged from one (1), indicating the least level of fear, to five (5) which indicated the highest level of fear.

The calculated mean for *overall fear* was 2.44, which indicated that the respondents had a moderate overall fear of crime (see Table 8 for a summary of the scale statistics). The calculated

mean for *fear on-campus* was 2.24. This indicated that respondents had a low-to-moderate fear of crime on campus. Finally, the calculated mean for the *fear off-campus* was 2.66. This indicated that respondents had a slightly higher, but still low-to-moderate fear of crime off-campus.

Table 8

Scale Scores for Overall Fear of Crime, Fear of Crime On-Campus, Fear of Crime Off-Campus

	Minimum	Maximum	Mean
Overall Fear of Crime	1.00	5.00	2.44
Fear of Crime On-Campus	1.00	5.00	2.24
Fear of Crime Off-Campus	1.00	5.00	2.66

Using the *fear on-campus* and *fear off-campus* scales, a paired t-test was conducted to determine if the mean difference between the two scales was statistically significant (see Table 9 for the results of this test). There was a statistically significant difference between *fear on-campus* and *fear off-campus* ($t = -11.799$, $p < 0.001$). This indicated that students had a higher fear of crime off campus than they did on campus.

Table 9

Paired T-Test for Fear of Crime On-Campus and Fear of Crime Off-Campus

	Mean	t	Two-Sided p
Scale for fear of crime on campus	-0.424	-11.799	0.001
Scale for fear of crime off campus			

Campus Safety and Security

As discussed in the previous chapter, respondents were asked to indicate (using two Likert scale matrices) their satisfaction with ETSU's efforts to increase campus safety and security. Each item included in the matrices was assessed on a scale ranging from one (not satisfied at all) to five (highly satisfied). Respondents indicated that they were most satisfied with *availability of mass notification systems (e.g., email and/or text notifications)* ($\bar{x} = 3.84$) and *the use of ID cards to restrict access to dormitories and other areas* ($\bar{x} = 3.77$). Areas of concern

for respondents included *availability of surveillance cameras* ($\bar{x} = 3.11$) and *availability of crime prevention information and training* ($\bar{x} = 3.16$). Table 10 contains a complete summary of the item results.

Table 10
Scale Descriptive Statistics for Campus Safety and Security

	Minimum	Maximum	Mean
Adequate lighting in open-air parking lots	1.00	5.00	3.54
Adequate lighting in parking garages	1.00	5.00	3.21
Adequate lighting along walking paths	1.00	5.00	3.37
Availability of emergency boxes/phones	1.00	5.00	3.54
Availability of information regarding crime rates/incidents	1.00	5.00	3.17
Availability of mass notification systems (e.g., email and/or text notifications)	1.00	5.00	3.84
Availability of surveillance cameras			3.11
Visibility of public safety officers on campus	1.00	5.00	3.27
Use of ID cards to restrict access to dormitories and other areas	1.00	5.00	3.77
Availability of crime prevention information and training	1.00	5.00	3.16

The items listed in Table 10 were used to create the sixth scale employed in the study. This scale related to the students' satisfaction with ETSU's effort to increase safety and security on campus. A reliability test was run to determine if *safety/security satisfaction* was a reliable measure. The resulting value for Cronbach's alpha was 0.90, which indicated that it was a reliable measure. Continuing the process of crafting the scale, respondents were given a standardized score that indicated their satisfaction with campus safety and security from a range of one being the lowest level of satisfaction to five being the highest level of satisfaction (see Table 11 for summary statistics). The *safety/security satisfaction* scale featured a mean score of 3.40. This indicated that, overall, students were somewhat satisfied with ETSU's efforts to improve campus safety and security.

Table 11*Campus Safety and Security Scale Scores*

	Minimum	Maximum	Mean
<i>Safety/Security Satisfaction</i>	1.00	5.00	3.38

ETSU Public Safety

The next dependent measure assessed *public safety satisfaction*. Examining the descriptive statistics for the individual items used to create the scale showed that, overall, respondents were *comfortable asking an ETSU Public Safety officer for assistance* ($\bar{x} = 4.01$) and were *comfortable reporting a crime to ETSU Public Safety* ($\bar{x} = 4.00$). These items were followed closely by *I have a lot of respect for ETSU Public Safety officers* ($\bar{x} = 3.98$). Conversely, the item that respondents were least satisfied with was *ETSU Public Safety does a good job of providing students with crime and safety information* ($\bar{x} = 3.51$). See Table 12 for a full summary of the item results.

Table 12*Scale Descriptive Statistics for ETSU Public Safety*

	Minimum	Maximum	Mean
ETSU Public Safety does a good job.	1.00	5.00	3.84
I am comfortable asking an ETSU Public Safety officer for assistance.	1.00	5.00	4.01
I would be comfortable reporting a crime to ETSU Public Safety.	1.00	5.00	4.00
I feel confident in the ability of ETSU Public Safety officers to investigate a reported crime.	1.00	5.00	3.63
I have a lot of respect for ETSU Public Safety officers.	1.00	5.00	3.98
ETSU Public Safety officers care about my wellbeing and safety.	1.00	5.00	3.89
ETSU Public Safety officers make themselves visible and available.	1.00	5.00	3.64
ETSU Public Safety provide services that students want.	1.00	5.00	3.67
ETSU Public Safety does a good job of providing students with crime and safety information.	1.00	5.00	3.51

Similar to the previously discussed measures, a scale was computed utilizing each of these items (Table 13). The alpha value ($\alpha = 0.93$) for the reliability test for *public safety satisfaction* showed that the scale was a reliable measure for this variable. A standardized score from one to five was given to each respondent depending on their level of agreement with statements made about ETSU Public Safety. A score of one indicated a strong disagreement, while a five indicated a strong agreement with the statements made about ETSU Public Safety. The mean score of this scale indicated that respondents had an overall positive opinion of ETSU Public Safety ($\bar{x} = 3.80$).

Table 13
ETSU Public Safety Scale Scores

	Minimum	Maximum	Mean
<i>Public Safety Satisfaction</i>	1.00	5.00	3.80

Multivariate Analysis

Having discussed the various dependent measures and their creation, attention is now turned to the next stage of the analysis. Here, a series of multiple regression models were employed to determine the impact of the previously covered independent measures. Each model focused on a different dependent measure. Results are discussed by the model below.

College Choice

The first two multiple regression models sought to explore the impact of safety and security on college choice for the respondent (Table 14) and their parents/guardians (Table 15), respectively. For the *student crime* model, the combined predictors were shown to explain 6.3% of the variation in the impact of safety and security on college choice. Only one measure, *gender*, emerged as statistically significant ($\beta = 0.206, p < 0.001$). This suggested that females were more

likely to view safety and security as important concerns when selecting an institution than their male counterparts.

Table 14
Student Crime Regression Model

Variable	β	SE	Significance
Gender	0.206**	0.149	0.001
Race/Ethnicity	0.058	0.210	0.289
Age	-0.116	0.008	0.085
Class Rank	-0.111	0.054	0.065
First-generation Student	0.042	0.141	0.430
International Student	0.103	0.452	0.061
Student Status	-0.077	0.208	0.192
Living Situation	0.036	0.182	0.552
Town Population	0.063	0.137	0.232

Note: **p < 0.001

For *parent crime*, the combined predictors were found to explain 15% percent of the variation in the impact of safety and security on college choice for the parents/guardians. Analysis revealed that three measures were statistically significant: *gender* ($\beta = 0.196$; $p < 0.001$), *age* ($\beta = -0.332$; $p < 0.001$) and *living situation* ($\beta = 0.138$; $p < 0.05$). This suggests that females were more likely to have parents that viewed safety and security as an important concern when selecting institutions than males were. Furthermore, younger individuals and individuals that lived on-campus had parents that viewed safety and security as an important concern than older individuals and ones that lived off campus.

Table 15
Parent Crime Regression Model

Variable	β	SE	Significance
Gender	0.196**	0.171	0.001
Race/Ethnicity	0.024	0.244	0.655
Age	-0.332**	0.010	0.001
Class Rank	0.013	0.061	0.826
First-generation Student	0.030	0.160	0.555
International Student	0.067	0.538	0.218
Student Status	-0.108	0.239	0.063
Living Situation	0.138*	0.202	0.019
Town Population	0.038	0.155	0.458

Note: *p < 0.05, **p < 0.001

Overall Fear of Crime

The third regression model sought to examine the impact of the independent measures on *overall fear of crime* (see Table 16). The combined predictors were shown to explain 18.8% of the variation in the dependent measure. Analysis identified two variables as being statistically significant: *gender* ($\beta = 0.318$; $p < 0.001$) and *age* ($\beta = -0.317$; $p < 0.001$). The positive direction of the correlation for *gender* suggested that female students had a higher overall fear of crime than male students. Additionally, younger students featured a higher overall fear of crime than older students.

Table 16
Overall Fear of Crime Regression Model

Variable	β	SE	Significance
Gender	0.318**	0.111	0.001
Race/Ethnicity	0.034	0.155	0.515
Age	-0.317**	0.006	0.001
Class Rank	-0.019	0.041	0.742
First-generation Student	0.015	0.107	0.770
International Student	0.039	0.107	0.431
Student Status	0.099	0.364	0.060
Living Situation	-0.065	0.153	0.250
Town Population	0.052	0.133	0.363
Interaction with Public Safety	-0.035	0.029	0.491

Note: ** $p < 0.001$

Fear of Crime On-Campus

The fourth regression model sought to predict the impact of the independent measures on *fear on-campus* (see Table 17). The combined predictors were shown to explain 19.2% of the variation in the dependent measure. Analysis highlighted four variables, *gender* ($\beta = 0.311$, $p < 0.001$), *age* ($\beta = -0.276$; $p < 0.001$), *international student* ($\beta = 0.125$; $p < 0.05$) and *town population* ($\beta = 0.110$; $p < 0.05$), as being statistically significant. When examining *gender*, the data suggested that females reported higher levels of fear of crime while on-campus than males did. For *age*, younger students reported higher levels of fear of crime while on-campus than

older students did. Thirdly, when examining *international students*, the positive direction of the correlation suggested that international students reported higher levels of fear of crime on-campus than non-international students. Finally, data suggested that students that lived in a town had a higher population number were more likely to report higher levels of fear of crime on-campus than those that lived in a town with a lower population number.

Table 17
Fear On-Campus Regression Model

Variable	β	SE	Significance
Gender	0.311**	0.111	0.001
Race/Ethnicity	0.075	0.155	0.140
Age	-0.276**	0.006	0.001
Class Rank	-0.027	0.041	0.632
First-generation Student	0.035	0.106	0.484
International Student	0.125*	0.354	0.015
Student Status	-0.024	0.155	0.663
Living Situation	0.071	0.135	0.204
Town Population	0.110*	0.102	0.027
Interaction with Public Safety	0.050	0.098	0.301

Note: * $p < 0.05$, ** $p < 0.001$

Fear of Crime Off-Campus

The fifth regression model was associated with the dependent measure for *fear off-campus* (Table 18). Results revealed that the combined predictors explained 15% of the variation in the measure. Only two predictors were found to be significant: *gender* ($\beta = 0.283$; $p < 0.001$) and *age* ($\beta = -0.295$, $p < 0.001$). Based on the positive correlation, the data suggests that females were more likely to report higher levels of fear of crime off-campus than males did. The negative correlation with *age* suggested that younger individuals were more likely to report higher levels of fear of crime off-campus than older individuals.

Table 18
Fear Off-Campus Regression Model

Variable	β	SE	Significance
Gender	0.283**	0.341	0.001

(continued)

Table 18. (continued)

Race/Ethnicity	0.011	0.128	0.829
Age	-0.295**	0.177	0.001
Class Rank	0.000	0.007	0.997
First-generation Student	0.003	0.046	0.949
International Student	0.090	0.121	0.090
Student Status	-0.083	0.420	0.146
Living Situation	0.072	0.174	0.219
Town Population	0.062	0.154	0.233
Interaction with Public Safety	0.051	0.116	0.315

Note: *p < 0.05, **p < 0.001

Campus Safety and Security

The sixth multiple regression model was computed to predict the impact of the independent measures on perceptions of campus safety and security (Table 19). The combined predictors were shown to explain 6% of the variation in *safety/security satisfaction*. Only one variable, *age*, was statistically significant ($\beta = 0.189$; $p < 0.001$). The positive direction of the coefficient suggested that older students were more likely to report higher levels of satisfaction than their younger peers.

Table 19

Safety/Security Satisfaction Regression Model

Variable	β	SE	Significance
Gender	-0.096	0.268	0.071
Race/Ethnicity	0.075	0.099	0.192
Age	0.189*	0.136	0.006
Class Rank	-0.063	0.005	0.306
First-generation Student	0.067	0.035	0.223
International Student	0.084	0.092	0.141
Student Status	-0.042	0.304	0.479
Living Situation	0.028	0.138	0.646
Town Population	-0.009	0.115	0.862
Interaction with Public Safety	-0.081	0.088	0.132

Note: *p < 0.05, **p < 0.001

ETSU Public Safety

The seventh and final multiple regression model served to explore perceptions of ETSU Public Safety (Table 20). The combined predictors were shown to explain only 1.9% of the

variation in the dependent measure. Only one variable, *race/ethnicity*, was statistically significant ($\beta = 0.117, p < 0.05$). This suggested that non-White individuals were more likely to report higher levels of satisfaction than White individuals.

Table 20
Public Safety Satisfaction Regression Model

Variable	β	SE	Significance
Gender	0.057	0.088	0.292
Race/Ethnicity	0.117*	0.121	0.040
Age	0.100	0.005	0.142
Class Rank	-0.014	0.031	0.823
First-generation Student	0.008	0.083	0.893
International Student	0.048	0.270	0.404
Student Status	-0.023	0.124	0.699
Living Situation	0.107	0.106	0.087
Town Population	0.083	0.080	0.134
Interaction with Public Safety	0.093	0.077	0.089

Note: * $p < 0.05$, ** $p < 0.001$

Chapter Summary

This chapter provided a detailed explanation of the results of the multiple statistical analyses that were conducted for the current study. First, descriptive statistics and frequencies were used to explain the characteristics of the sample. Next, a discussion of the descriptive statistics for the dependent measures was provided. Finally, multiple regression models were calculated to address the impact of the independent measures on the outcomes associated with the study's research questions. The final chapter will further examine these results and discuss the findings of importance, as well as address the limitations of this study and directions for potential future research.

Chapter 5. Discussion

The current study aimed to identify and evaluate students' perceptions of safety and security on campus and the impact of perceptions of safety on enrollment. More specifically, it focused on factors that were hypothesized to affect college choice, fear of crime, perception of safety and security, and perception of public safety. The previous chapter presented the results of the statistical models that were used to explore the research questions of the current study. The current chapter seeks to elaborate on those results and discuss their relevance and meaning to the topic at hand. This will be followed by a discussion of the limitations of the study, implications for policy, and potential directions for future research.

The initial research question sought to explore the impact that crime and safety plays in the college selection process. Much of the previous literature on selection of higher education institutions has focused on factors related to academics, financial aid, and student life (e.g., athletics, social clubs). While important considerations, these studies have not sought to also explore the impact that perceptions of safety may play and whether this is of equal concern to students and/or their parents/guardians. The current study sought to fill this gap in the literature, utilizing various items related to the concept and then combining them into scales. Results indicated that for both students and parents/guardians, safety and security were moderately important in the school selection process.

The most important safety-related factor for students when choosing a college was the presence of security measures on campus ($\bar{x} = 3.49$). This included things like emergency boxes and public safety patrols. Students were shown to be less likely to care about the availability of information pertaining to crime and safety on college/university websites ($\bar{x} = 3.16$). However, this factor was still deemed to be somewhat important, as were all others assessed within the

scale. This suggests that crime- and safety-related factors may be important when choosing a college or university. As such, it points to the need for other researchers to include it as an item when assessing student selection (alongside more traditional options).

For parents/guardians, the on-campus crime rate was the most important factor in college/university choice for their child (as perceived by the student respondents) ($\bar{x} = 3.68$). Like students, it was perceived that they viewed the availability of crime and safety information on college/university websites as the least important consideration ($\bar{x} = 3.35$). As with the student responses, the scale created for parent crime using these and other related items showed that crime and safety played a somewhat important role in choosing a college/university. When comparing students and their perceptions of parents/guardians concerns, data indicated that parents viewed crime and safety as a slightly more important factor in college/university selection.

To further explore these topics, two regression models were employed. These were designed to explore how various factors may influence the importance of crime and safety to both students and their parents/guardians. Results of these models revealed that they may be impacted by demographic characteristics. For example, younger students were more likely to view crime and safety as important when choosing a college/university. This could possibly be explained by the fact that some older students are non-traditional and as such do not spend as much time in the campus setting (thus lessening their perceived risk of victimization). Alternatively, older students may have different life experiences, or a better grasp of victimization risk.

For the model assessing perceived importance of safety and security for parents/guardians, results indicated that gender, age, and living situation were impactful.

Parents/guardians of female students were perceived to be more likely to view crime and safety as an important factor. This could be related to the argument that females have a higher fear of crime as supported in previous research (Kaminski et al., 2010, Tomsich et al., 2011). As such, parents or guardians may be more concerned for their female child's safety than the safety of their male child. Alternatively, much of the media and scholarly attention on college victimization has focused on sexual offenses (Day, 1994). Female students are at higher risk of being victimized in this manner, which may also prompt added concern on the part of parents/guardians (Tomsich et al., 2011).

Parents/guardians of younger students were also perceived to view crime and safety as an important factor (as compared to their older counterparts). This could be the result of older students applying for college without input from their parents/guardians, or simply lacking an understanding of how they might feel due to less communication on the topic. Finally, parents/guardians of students who lived on-campus were perceived to view crime and safety as a more important concern than those with students who lived off-campus. It could be argued that students who live on-campus might be perceived to be at greater risk of victimization due to their heightened exposure to potentially motivated offenders. Alternatively, those living off-campus, especially if younger in age, are more likely to live with their parents/guardians or another family member. As such, parents/guardians may be less concerned about their safety due to the added opportunity to monitor their actions and locations. With that said, further research is needed on the impact of crime and safety on college/university choice to make accurate assumptions for both students and parents/guardians since little previous research has been conducted on the topic.

The second research question examined the level of fear that students had and sought to determine if factors related to the physical environment served to condition them. Regarding general crime, students were asked about factors that research has shown to be influential in conditioning fear of crime: namely the impact of time of day and specific areas (Kaminski et al., 2010). Results indicated that, on average, students had a higher fear of being victimized at night than during the day. This echoed the findings of previous students, such as the work of del Carmen et al. (2000), who identified that 68% of their sample was fearful of being victimized at night. Previous research has also indicated that students are more fearful of walking on campus at night (McConnell, 1997). This finding was supported by the results of the current study, as respondents indicated that they felt less comfortable walking alone on campus at night than during the day.

Specific locations in the campus setting have been identified by researchers as being of added concern to students (Brantingham & Brantingham, 1994; Fisher & Nasar, 1992; del Carmen et al., 2000) For example, it has been found that parking areas (namely garages) are oftentimes viewed as most threatening to safety and security. The current study offers added support for these findings. Results indicated that respondents did not feel comfortable walking in the parking garages on campus by themselves at night. With that said, the study did find that, overall, students felt safer on-campus than they did off-campus. This was supported by the creation of scales that examined fear of crime on-campus and off-campus separately, and comparison of those scales via a paired samples t-test.

It should be noted that perceptions differed somewhat based upon the type of victimization in question. Fear of sexual assault and being a victim of any crime were areas where students had the most fear for both on-campus and off-campus. This was followed by theft

for both as well. This trend deviated when looking at becoming a victim of robbery or non-sexual assault. Students were more fearful of non-sexual assault on-campus, whereas they were most fearful of robbery in off-campus locations.

To further explore the topic, a series of regression models were employed to examine how various factors may relate to fear of crime overall, and both on- and off-campus. For overall fear of crime, both gender and age emerged as statistically significant predictors. Females and younger students were shown to have a higher overall fear of crime. This was consistent with previous research conducted by Kaminski et al. (2010), which discussed the prevalence of higher levels of fear among females, minorities and younger students. They found that female students reported higher levels of fear when asked about being a victim of crime and their overall fear of crime than male students.

Related to fear of crime on campus, gender, age, international student status, and town population emerged as statistically significant. In line with the findings of previous research (Kaminski et al., 2010; Tomsich et al., 2001), both females and younger students were found to have a higher fear of crime on-campus than males. The impact of international status and town population has not been identified in research to date. As such, the current study offers a new line of inquiry for those seeking to better understand the factors that may influence student fear.

International students were found to perceive higher levels of fear than their non-international counterparts. These international students come from a variety of countries and cultures. However, all share their journey to a new country (and area within it). As such, it is likely that they feature a general feeling of anxiety, especially early on in their college career due to the culture shock that they experience or the influence of media (Shi, 2021; Xiong & Smyrniotis, 2013). This anxiety appears to extend to fear of victimization. Students that grew up

in larger towns/cities were also found to have higher levels of fear. This finding is likely explained by the higher levels of crime seen in larger urban areas (U.S. Office of Justice Programs, 2017). As such, it is possible that these students were accustomed to harboring fear of crime throughout their developmental years. It appears that this fear may not lessen once arriving on campus.

The third regression model for fear of crime assessed levels of fear off-campus (in the surrounding community). Female students were found to be more likely to have a higher level of fear off-campus than males. Younger students also reported higher levels of fear in this setting. These results were consistent with the work of Kaminski et al. (2010) and others and add further support for the impact of these characteristics.

The third research question examined students' perceptions of campus safety and security. Overall, students were found to be somewhat satisfied with ETSU's efforts in this area. With that said, some differences did emerge when exploring the various items related to safety and security. Students were most satisfied with mass notification systems and the use of ID cards to enter dormitories and other areas. Alternatively, they perceived a greater need for improvement in the availability of surveillance cameras, the availability of crime prevention information and training, and the availability of information regarding crime rates/incidents.

Research has suggested that improving perceptions of safety and security may require a focus on specific areas of the campus community (Johnson, 2009; Loukaitou-Sideris & Fink, 2009; Owusu et al., 2016). The current study assessed this possibility by asking students to indicate their satisfaction with specific areas on campus. For example, they were queried regarding lighting in open-air parking lots, parking garages, and along walking paths. Students were less satisfied with the available lighting in the parking garage than the other two areas.

They also indicated that better visibility of public safety officers on campus was needed. As such, it appears that efforts in these areas may have the potential to both increase confidence in ETSU's efforts and decrease overall fear of victimization.

Similar to the previously discussed research questions, a regression model was computed to examine whether any factors may serve to influence perceptions of campus safety and security. Only one measure (age) emerged as statistically significant in this model. It was found that older students were more likely to report higher levels of satisfaction than their younger counterparts. Explanations for this are likely similar to those for fear of crime (where it was found that older students featured lower levels of fear). Further, it could be argued that the two go together to some degree, as greater confidence in the security apparatus leads to lower levels of overall fear.

The fourth research question sought to identify how students perceived ETSU Public Safety and its officers. The current study identified that students were comfortable asking for assistance from these officers and reporting a crime to them. On the contrary, they felt that ETSU Public Safety could do a better job providing students with crime and safety information and lacked confidence in the officers' ability to investigate a reported crime. This revelation is consistent with the finding of Wada et al. (2010), who indicated that students had low levels of faith in campus police officers' ability to solve their problems. Increasing student confidence in public safety is important. For example, Griffith et al. (2004) suggested that by increasing the students' confidence in public safety's ability to solve problems, there is the potential to increase levels of satisfaction with the officers.

A regression model was computed to identify whether any of the assessed measures impacted perceptions of ETSU Public Safety. Only one variable, race/ethnicity, emerged as

statistically significant. Though this is consistent with previous research, the direction of the relationship diverged from much of the literature (Maffini & Dillard, 2022). Specifically, it was found that non-White individuals were more likely to report higher levels of satisfaction than their White peers.

Rationalizing this finding requires a deeper understanding of the sample characteristics. Non-White respondents in the sample were disproportionately older and more likely to identify as graduate students. As such, it is possible that these factors may influence perceptions, as older students tend to put more trust in campus police, as do graduate students who are more knowledgeable of their efforts. Living situation could also play a role in this finding, as approximately 80% of non-White respondents reported living off-campus. This may make them less likely to interact with campus police—and less likely to regularly need their services. This lack of need may lead to a default confidence in their ability and actions. Regardless of rationale, much more work is needed in this area to further understand the impact of race/ethnicity on perceptions. The utilization of interaction terms in future research may be of much benefit in this regard.

Implications

There are multiple recommendations for policy based on this research. Areas of note include fear of crime, perceptions of safety and security, and perception of public safety. Much of the recommendations for each of the areas overlap. The biggest areas of concern appear to include time of day and campus location, as students indicated greater fear at night and within the campus parking garage. Improving the lighting and patrols in the parking garages during nighttime hours could be beneficial to lessening students' fear of crime. Additionally, improving

the availability of surveillance cameras on campus could provide deterrence for offenders and make students feel safer, while also providing them with more confidence in ETSU's efforts.

It is also recommended that the campus increase the presence of crime prevention information and training, as this was noted to be a concern of many respondents. Measures could include providing workshops for students in areas such as self-defense, sexual assault/harassment prevention and counseling, and general crime reporting. The ETSU "app" is an important aspect for consideration in this area. One idea to increase the usefulness of the app would be for ETSU Public Safety to collaborate with the Information Technology Department to create a function on the app that can request a safe voyage ride without having to make a phone call. Alternatively, creating a dedicated phone line maintained by ETSU Public Safety that allows students to contact via text messaging may offer the same result.

Another potential area for improvement relates to the visibility of public safety officers. One suggestion to increase this visibility is to potentially hire more patrol officers and utilize bike patrols. Using bike patrols provides the ability for officers to better patrol areas on campus that do not allow for easy access of cars or other patrol vehicles. This also gives the opportunity for the officers to interact with the student population and foster better relations with students. This can work to increase public safety perceptions and in turn decrease overall fear of crime in the campus setting.

Limitations

Although the current study provided new insight into how safety and security influence college choice, student fear of crime, and perceptions of safety and security, there are several limitations that must be addressed. First, the results of this study, specifically related to college choice, may not be representative of student populations at all colleges/universities. This is the

result of the data being collected from a single institution. However, no known study to date has explored the impact of these factors on university/college selection. As such, the current study—in spite of the limitation—offers a path forward for future researchers.

Second, though all ETSU students received a link to the survey, the overall response rate constituted less than 5% of the University population. As such, results may not be generalizable to all students at ETSU. It is possible that those choosing not to participate held different views regarding fear of crime and perceptions of campus safety. Third, ETSU is primarily considered a commuter institution, so much of its student population does not live on campus. This was supported by the responses to the survey, as most reported living at home or in their own apartment outside of campus. This may impact results due to the fact that some students may not spend a good deal of time on campus, and therefore do not regularly interact with ETSU Public Safety or have a sound understanding of ETSU's efforts in the safety realm. Related, online students were included in the sample. It is possible that these students rarely venture to the campus setting, and as such, their responses may not be representative of their non-online counterparts.

Third, when examining the impact that crime rates have on parents/guardians' consideration for colleges/universities, one limitation to take into consideration is that students were asked to indicate their perception of how crime rates effected their parents/guardians' decisions. These might not accurately represent their parents/guardians' opinions. Therefore, these might not be generalizable for all parents/guardians.

Fourth, the year 2020 impacted individuals across the world. A worldwide pandemic prompted many schools to close and move strictly online where they did not reopen until 2021. This meant that students were facing challenges that research has not seen when seeking to

choose a college/university. These students did not have the normal college choice experience as well as traditional beginning to their college experience. This could have an impact on the results in this study.

Finally, it should be noted that the primary researcher was a tuition scholar within the ETSU Department of Criminal Justice and Criminology. It is thus possible that familiarity with them may have led to an oversampling of Department majors/minors. This may have skewed the findings, as previous research has indicated that criminal justice majors feature lower overall levels of fear and hold more favorable views of campus safety and public safety officers (del Carmen et al., 2000; Wu, 2010).

Directions for Future Research

Future researchers should build upon the findings of this study by further exploring topics related to campus safety and security. Further, they should attempt to design their studies in a manner that overcomes the limitations discussed above. One possible avenue of research is to explore additional independent measures that were not considered in the current study. Two such factors include college major and whether the student is enrolled in a wholly online program. It is likely that these may influence the various outcomes in question and controlling for them would provide more confidence in the impact of other assessed variables. In addition, increasing the number of respondents, if possible, could provide better validity, as could taking steps to ensure a more diverse sample (such as through stratified random sampling).

Researchers should also attempt to conduct surveys at other colleges/universities in order to determine how generalizable the current study's finding may be. Ideally, these studies should include colleges and universities of varying sizes and locations. It is possible that size/location may impact students' level of fear and satisfaction with safety and security measures, something

that was unable to be accounted for in the current study. This would also provide researchers with the ability to examine how rural colleges and universities may differ from those located in suburban and urban areas.

Finally, further research should be conducted on how colleges and universities can increase student confidence in safety and security. As discussed, doing so may have a direct impact on fear of crime and ease student concerns regarding victimization. While the current study shed some light on the topics, it did not allow for an understanding of the effectiveness of various programs. Experimental or quasi-experimental research may offer much in this field.

Conclusion

Even with the limitations associated with the current study, the results have aided in filling the gap within the research literature surrounding the impact of crime and safety on college enrollment, fear of crime, perceptions of campus safety and security, and perceptions of public safety. Much research has been conducted on the topics; however, it has largely neglected to examine the effects of crime and safety on college enrollment and student fear of crime in rural or partially rural communities. The results of this study could aid post-secondary institutions in implementing new workshops to increase student understanding of victimization risk and how to adequately protect themselves, increasing public safety efforts to increase safety and security, and implementing technology upgrades to better support students. Additionally, the results of the current study should prompt further research into the topic—as much remains to be understood.

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APPENDIX: SURVEY INSTRUMENT

Demographics

The following section will ask you basic demographic questions.

1. What gender do identify with? (Please select one)
 - a. Male
 - b. Female
 - c. Non-Binary
 - d. Other (please specify): _____
 - e. Prefer not to answer
2. What is your race? (Please select one)
 - a. White
 - b. Black or African American
 - c. Native American
 - d. Asian/ Pacific Islander
 - e. Other (please specify): _____
3. Are you of Hispanic or Latino origin? (Please select one)
 - a. Yes
 - b. No
 - c. Prefer not to answer
4. What is your age? _____
5. What is your class rank? (Please select one)
 - a. Freshman
 - b. Sophomore
 - c. Junior
 - d. Senior
 - e. Graduate Student
 - f. Other (please specify): _____
6. Are you a first-generation college student?
 - a. Yes
 - b. No
7. Did you transfer to ETSU from another institution?
 - a. Yes
 - b. No
8. Are you an international student?
 - a. Yes
 - b. No
9. What is your current student status? (Please select one)
 - a. Full-time (12+ credit hours per semester for undergraduate; 9+ credit hours per semester for graduate)
 - b. Part-time (11 or fewer credit hours per semester or for undergraduate; 8 or fewer credit hours per semester for graduate)

10. Which of the following best describes your current living situation?
- On-campus (e.g., dormitory; fraternity/sorority housing)
 - Off-campus by myself
 - Off-campus with roommates
 - Off-campus with family
 - Other (please specify): _____
11. What is the population (approximate) of the town/city that you grew up in?
- 0-2,500
 - 2,501-10,000
 - 10,001-25,000
 - 25,001-50,000
 - 50,001-75,000
 - 75,001+
12. Is the town/city that you grew up in within 50 miles of ETSU's Johnson City campus?
- Yes
 - No

College Choice

This section will ask you about your college choice.

13. How many colleges/universities did you apply to for admission?
- 1
 - 2-4
 - 5-7
 - 8 or more
14. How many colleges/universities accepted you?
- 1
 - 2-4
 - 5-7
 - 8 or more
15. Was ETSU your first choice?
- Yes
 - No
16. The following are common factors that play a role in college choice. Please indicate how much each played a role in your decision to attend ETSU by selecting the most appropriate option (from not important at all to very important)
- Location of campus
 - Size of campus
 - Layout/Accessibility of campus
 - Number of students
 - Reputation of University
 - Quality of academic programs
 - Availability of specific major(s)
 - Availability of student clubs/organizations

- i. Input from family
 - j. Input from friends
 - k. Input from teachers and/or counselors
 - l. Cost of attendance
 - m. Financial aid/Scholarship availability
 - n. Athletics
17. The following items are related to campus safety and security. Please indicate how important each of these factors were **for you** when deciding which college/university to attend (from not at all important to highly important)
- a. Crime rate on campus
 - b. Crime rate in surrounding community
 - c. Security measures on campus (e.g., emergency boxes, public safety patrols)
 - d. Campus emergency preparedness (e.g., emergency notification system)
 - e. Availability of crime and safety information on college/university website
18. The following items are related to campus safety and security. Please indicate how important each of these factors were **for your parent/guardian** when deciding which college/university to attend (from not at all important to highly important)
- a. Crime rate on campus
 - b. Crime rate in surrounding community
 - c. Security measures on campus (e.g., emergency boxes, public safety patrols)
 - d. Campus emergency preparedness (e.g., emergency notification system)
 - e. Availability of crime and safety information on college/university website

Fear of Crime

This section will ask questions related to fear of crime.

19. The following matrix contains items related to fear of crime on and off campus. Please indicate the level of fear that you associate with each, on a scale from not afraid at all to very afraid.
- a. Fear of becoming a victim of any type of crime **on campus**
 - b. Fear of becoming a victim of theft **on campus**
 - c. Fear of becoming a victim of robbery (theft by force) **on campus**
 - d. Fear of becoming a victim of assault (non-sexual) **on campus**
 - e. Fear of becoming a victim of sexual assault **on campus**
 - f. Fear of becoming a victim of any type of crime **off campus**
 - g. Fear of becoming a victim of theft **off campus**
 - h. Fear of becoming a victim of robbery (theft by force) **off campus**
 - i. Fear of becoming a victim of assault (non-sexual) **off campus**
 - j. Fear of becoming a victim of sexual assault **off campus**
20. Please indicate your level of agreement for the following statements (on a scale from strongly disagree to strongly agree):
- a. I am fearful of being victimized at night
 - b. I am fearful of being victimized during the day
 - c. I feel comfortable walking on campus by myself during the day

- d. I feel comfortable walking on campus by myself at night
- e. I feel comfortable walking in the parking garage by myself during the day
- f. I feel comfortable walking in the parking garage by myself at night
- g. I feel safer on campus than I do off campus

Perception of Safety and Security

This section will ask you about your current perceptions of safety and security.

21. Do you practice any of the following defensive behaviors when walking on campus? (Please select all that apply)
- a. Carry pepper spray
 - b. Hold keys in a defensive manor
 - c. Carry a knife
 - d. Avoid certain locations during the day
 - e. Avoid certain locations at night
 - f. Maintain awareness of surroundings
 - g. Only walk with companions
22. The following matrix contains factors designed to increase safety and security on campus. For each, please indicate your level of satisfaction with ETSU's efforts on a scale from not satisfied at all to highly satisfied.
- a. Adequate lighting in open-air parking lots
 - b. Adequate lighting in parking garages
 - c. Adequate lighting along walking paths
 - d. Availability of emergency boxes/phones
 - e. Availability of information regarding crime rates/incidents
 - f. Availability of mass notification systems (e.g., email and/or text notifications)
 - g. Availability of surveillance cameras
 - h. Visibility of public safety officers on campus
 - i. Use of ID cards to restrict access to dormitories and other areas
 - j. Availability of crime prevention information and training

Perception of Campus Public Safety

The final section will ask you about your perception of the ETSU Public Safety Department and its services.

23. Have you ever interacted with an ETSU Public Safety officer?
- a. Yes
 - b. No
24. Have you ever requested assistance from an ETSU Public Safety officer?
- a. Yes
 - b. No
25. Please indicate your level of agreement with the following statements on a scale from strongly disagree to strongly agree
- a. ETSU Public Safety does a good job

- b. I am comfortable asking an ETSU Public Safety officer for assistance
- c. I would be comfortable reporting a crime to ETSU Public Safety
- d. I feel confident in the ability of ETSU Public Safety Officer's to investigate a reported crime
- e. I have a lot of respect for ETSU public safety officers
- f. ETSU Public Safety provides services that students want
- g. ETSU Public Safety officers care about my wellbeing and safety
- h. ETSU Public Safety officers make themselves visible and available
- i. ETSU Public Safety does a good job of providing students with crime and safety information

Thank you for completing the survey!

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