

CAMPUS CRIME ALERTS AND THEIR RELATIONSHIP TO PERCEIVED RISK OF
VICTIMIZATION AND FEAR OF CRIME

By

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DEDICATION

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ABSTRACT

For several decades, campus crime, fear of crime, victimization, and the perception of victimization have all been principal concerns for campus administrators and have piqued the interest of the research community. A deep understanding of the nature of campus crime and victimization, as well as addressing the issues of fear of crime and perceptions of risk, have been made available by different studies. With the passage of the Clery Act of 1998, institutions of higher learning were mandated to make the campus community aware of both the different campus prevention programs offered and timely information/alerts on crimes on campus, as a means of risk reduction on the individual level. However, no research investigates the relationships between these crime prevention efforts, specifically, the campus crime alerts, on perceived risk of victimization and fear of crime, and in turn, these associations on efforts to take protective action. This study begins to fill this void by examining responses to web-based surveys administered to convenience samples of students enrolled at a large southwestern university. Findings from this study add to the literature on campus crime by determining what relationship campus crime alerts have with the perception of victimization and fear of crime of the campus community as well as the measures individuals take to protect their own safety. Limitations of this study, directions for future research, and related policy implications for universities are also discussed.

I. INTRODUCTION

Fear of crime has received considerable research attention in the past decades (Doran & Lee, 2005; Moore & Shepherd, 2007; Rader, 2004; Renauer, 2007; Sutton & Farrell, 2005; Torres & Vogel, 2001; Vilalta, 2012; Zhao, Schneider, & Thurman, 2002). Studies have found both individual and neighborhood factors influencing levels of fear. There is consensus in the empirical literature that fewer crimes occur on university and college campuses than in the broader community, and that college campuses tend to be relatively safe spaces (Barton, Jensen, & Kaufman, 2010; Gregory & Janosik, 2002; Robinson & Mullen, 2001; Volkwein, Szelest, & Lizotte, 1995). As a result, studies examining the correlates of the crime that does occur on college campuses is somewhat rare. The bulk of these research studies focus on students' fear of crime and the factors that might place female students at risk for (sexual) victimization (e.g. Dobbs, Waid, & Shelley, 2009; Fisher & Sloan, 2003; Hilinski, 2009, 2010; Reid & Konrad, 2004; Wilcox, Jordan, & Pritchard, 2006, 2007; Woolnough, 2009).

Much of the research on campus safety followed the passage of the Clery Act, which mandated colleges and universities to report their crime statistics to the United States Department of Education using the terms and definitions set out by the Uniform Crime Reports (UCR). This data has focused on how students alter their behaviors to lower their risk of victimization (Gregory & Janosik, 2003), largely overlooking what the institutions themselves have done to make their students safer. This is especially interesting when considering that the Clery Act had two purposes in its overall intent to improve safety on campus. First, the Act sought to change the behaviors of institutions of higher education by requiring them to disseminate information about the crime

prevention programs they offer, as well as mandating them to report information about crime, to the campus community and prospective students. Second, the Act aimed to change levels of individual risk by better informing members of the university community about the threats that exist on campus (Gregory & Janosik, 2002). Crisis communication on campuses is considered successful if sent in a timely manner with accurate messages, so as not to be misleading, incorrect, or insignificant (Hoover and Lipka, 2007; Zdziarski, Dunkel & Rollo, 2007). The Net generation, comprising traditional-aged college students, expects so much from their campus community, especially the feeling of safety and security. This generation, which grew up in the wake of the Columbine High School mass killings and the September 11, 2001 terrorist attack, have heightened expectations of safety for both students and their parents upon admission to an institution of higher learning (Junco & Mastrodicasa, 2007). Meanwhile, technology advances in electronic communications since the turn of the 21st century have facilitated rapid, real-time notification of campus communities in times of emergency. Emergency notification systems became an integral part of campus security measures following the 2007 Virginia Tech shooting in the United States (Foster, 2007).

Although some universities may have delayed acting on incorporating emergency notifications into their security measures, these systems provide unquestionable life-saving potential (Sherrieb, Norris, & Galea, 2010). Additionally, the emergency notification system offers effective and consistent communication, which is integral in alerting the campus community in times of emergency (Sherrieb, Norris, & Galea, 2010). However, effective mass notification systems require full implementation by various higher institutions. There are so many challenges faced by emergency notifications on

campuses, which include, but are not limited to, many campus buildings lacking cellphone reception, students not providing schools with their cellphone numbers, and classes requiring students to turn off their cellphones (Fox & Savage, 2009).

Only a few studies have provided evaluative data on campus emergency notification systems. One study was an evaluation of two system tests of the emergency notification system, which had a low confirmation rate of 51% and 58% respectively. This low confirmation rate resulted from students not responding to the alert or having provided incorrect contact information, which registered in the system (Gulum & Murray, 2009). Moreover, an evaluation of the emergency response system of the University of Maryland found that even though there were negative perceptions about the University's emergency response system among participants, they still acknowledged that the emergency notification system had potential safety benefits (Wu, 2009). In their study which utilized three specific questions in examining faculty and staff perceptions about emergency notification systems, Elsass, McKenna, and Schildkraut, (2016) sought to evaluate the perceptions of faculty and staff about emergency notification systems and found that both faculty and staff were overall satisfied with the emergency notification system utilized by the university. They also expressed satisfaction with the number of notifications being transmitted, and thereafter, indicated the need for specific information regarding how to respond in times of emergencies. Finally, Schildkraut, McKenna, and Elsass (2017) found that in conjunction with their previous research, students were overall satisfied with the current emergency notification system of the university. They also found that students expressed satisfaction with the number of messages sent out and

indicated the need for more information to be embedded in the messages sent out by the university, such as how to respond in times of emergencies (Schildkraut et al., 2017).

Generally, information disseminated through the alerts and warning systems are designed to enable at-risk individuals to make informed decisions and take protective measures (Sorensen, 2000). Research has shown that an individual's perception of risk as communicated by the emergency notification system is likely to lead to taking adequate protective measures, but they are unlikely to take protective actions in response to the emergency notification system if they do not feel at risk (Dash & Gladwin, 2007). For individuals to make decisions, they first evaluate the threat and assess the potential risk to themselves and their self-efficacy in the situation (Perry & Lindell, 1991); if they believe the warning to be invalid, they tend to be very unlikely to adhere to the warnings (Dash & Gladwin, 2007). People tend to ignore or disregard certain types of warnings, such as tornado warnings, due to the normalcy bias, especially when such warnings are common (Donner, Rodriguez & Diaz, 2007). An individual's experiences are also factors that determine belief in the validity of warning messages (Donner et al., 2007). Furthermore, a single warning source is likely an ineffective means of reaching the anticipated population; therefore, multiple or multimodal channels become necessary to communicate warnings (Freberg, 2012).

Because the use of emergency notifications by universities and colleges has been in existence for only 5 to 10 years, few researchers have evaluated its effectiveness in times of actual crisis (Gulum & Murray, 2009; Wu, 2009); no research, moreover, has investigated the relationship between these emergency notification systems and fear of crime. Consequently, this study focuses on how frequency and multimodal campus crime

alerts affect student's fear of crime and perception of risk for victimization, and ultimately self-protective measures, at a public university in the United States.

II. VICTIMIZATION AND FEAR OF CRIME ON CAMPUS

A plethora of research has in the past focused on fear of crime in various communities (Bunton-Smith & Sturgis, 2011; DuBow, McCabe, & Kaplan 1979; Kodellas, Papastavron, Giannakouloupoulos, & Koutsompolis, 2014; Kort-Butler & Hartshorn, 2011; Moore & Shephard, 2007; Rader, 2004; Rader, Cossman, & Porter, 2012; Renauer, 2007; Roh, Kwak, & Kim, 2013; Vieno, Roccato, & Ruso, 2013; Vilalta, 2012; Williamson, Ashby, & Webber, 2006). However, there is far less research on fear of crime on college campuses (Brantingham, Brantingham, & Seagrave, 1995; Cabbage & Smith, 2009; Fisher, 1995; Fisher, Sloan, & Wilkins, 1995; Fisher & Smith, 2009; Jennings, Gover, & Pudrzynska, 2007; Stretesky & Hogan, 2001; Woolnough, 2009). This limited research on fear of crime on college campuses may be because of the longstanding belief that colleges and universities, as citadels of learning for students and as sanctuaries for civic, cultural, and diverse events, are immune to criminal activity (Addington, 2009; Dinkes, Kemp, Baum, & Snyder, 2009; Gumprecht, 2007). The belief persists that students are more likely to become victims, particularly of violent crime, outside of campus than they are while on campus.

High-profile cases over the past 30 years have resulted in escalating concerns about crime on college and university campuses, as well as college students' victimization (Flowers, 2009; Sloan & Fisher, 2011). Due to incidences of violence and school shootings, fear of crime and victimization has become a regular norm among students (Fisher, Daigle, & Cullen, 2010). Thus, campus security issues have attracted national attention and elicited public appeals and concerns. There have been several mass shootings in American history, and some have occurred on campuses and claimed the

lives of both students and faculty alike, while others have occurred in businesses, churches, and other random places (Blair, Nichols, Burns & Snyder, 2016). The disastrous shooting that occurred on April 16, 2007 at the Virginia Tech Campus sent shock waves throughout the world, and the school's safety measures were intensively scrutinized. In this shooting, named at the time the deadliest school shooting in American history, 32 students and faculty were killed, and 17 others were wounded (Virginia Tech Review Panel, 2007). On February 14, 2008, barely ten months later, another mass shooting occurred on the Northern Illinois University campus, killing five and wounding eighteen.

Because of these shootings, other institutions of higher learning were persuaded by constituents to critically examine the emergency response measures of their campuses and to ensure that campuses remained safe havens for students. These events led researchers, lawmakers, and administrators to dissect the nature of the problem and devise means of preventing such catastrophes in the future or reducing lethality when they do occur. Governor Tim Kaine of Virginia contracted an independent review panel to study details of the April 16 incident and provide a report.

The report from the Virginia Tech Review Panel provided a compendium of other fatal school shootings in various colleges and universities in the United States for the years of 1966 through 2007. At the University of Texas, during a 96-minute rampage on August 1, 1966, the shooter shot and killed 16 people and wounded 31 others. The report also chronicled the killing at California State University, Fullerton, known as the "Fullerton Library Massacre", where a custodian killed seven fellow employees and wounded two others in 1976. Other events included a physics student from China who

was reportedly upset because he was denied an academic honor, shooting and killing five University of Iowa employees, wounding two others, and then killing himself in 1991. At Rock College of Bard in Massachusetts a student who was ostracized by others because his extreme conservative views were perceived as racist, homophobic, and anti-Semitic, killed one student and one professor in 1992. A graduate student in engineering at San Diego State University shot and killed three professors in 1996 while defending a thesis. Another graduate student of the Appalachian School of Law murdered a dean, one professor, and another student in 2002 after being dismissed from the school. In the same year a failing student at the University of Arizona Nursing College and Gulf War veteran killed three of his instructors and then himself. An additional campus shooting occurred at Shepherd University in September 2006, when a man killed his two sons while visiting the school. Two weeks after that, five basketball players from Duquesne University were shot and wounded on campus after a school dance event.

The panel included details of other school shootings that occurred in primary and secondary schools across the country. Other high-profile campus deaths not reported by the panel include the Chicago Massacre of 1966, which claimed the lives of eight nursing students; the National Guard-Kent State killings of four students in 1970; the serial killing of two sorority sisters at Florida State University in 1978; and finally, the ruthless killing of the Lehigh University student Jeanne Clery, which led to the establishment of the Clery Act. The 1986 rape and murder of Jeanne Clery, a 19- year-old college student at Lehigh University in Pennsylvania, who was attacked brutally in her sleep by a student she had never met before, forever changed the way all institutions of higher learning report campus crime (Fisher & Sloan, 2013; Gregory & Janosik, 2002; Katel, 2011; Sloan

& Fisher, 2011). This incident led Congress to pass the Student Right-to Know and Campus Security Act in 1990. The Crime Awareness and Campus Security Act, which is a section of the legislation, required all colleges and universities whose students apply for financial aid under the Title IV to report crime data annually and also provide all necessary information on the security policies of the school through an annual campus security report (Fisher, Daigle, & Cullen, 2010; Fisher, Hartman, Cullen, & Turner, 2002; Katel, 2011; Kiss, 2013; Sloan & Fisher, 2011). Congress amended the Campus Security Act in 1998, and this required that colleges and universities immediately inform its community of the occurrence and location of any violent incidents on campus and publicly avail its crime logs for easy accessibility. The amended legislation was thereafter renamed the Jeanne Clery Disclosure of Campus Security Policy and Campus Crime Statistics Act of 1998, or popularly, the Clery Act, in memory of Jeanne Ann Clery (Fisher, Cullen, & Turner, 2000; Fisher et al., 2002; Gregory & Janosik, 2002; Jennings et al., 2007; Sloan & Fisher, 2011).

The authors of the U.S Department of Justice's *Crime in Schools and Colleges* report (Noonan & Vavra, 2007) offered a rationale for the report by positing that schools are essential in both the stability and development of youths by enhancing and solidifying their future. They then concluded that it is crucial to uncover the various crime issues affecting schools and devise adequate measures to mitigate repeated incidences. In conjunction with the Departments of Education and Justice, data collected by the Centers for Disease Control and Prevention (CDCP, 2007) revealed that warning signals had been present in 50% of violent perpetrators of school homicides. In their study, the National Center for Education Statistics (NCES) stated that throughout the 3-year duration of their

survey (1991, 1992, and 1993), approximately 10,000 institutions reported the occurrence of violent crimes (NCES, 1997). Summarily, these institutions reported the occurrence of 20 murders, 3,100 robberies, 5,100 aggravated assaults, and 1,300 forcible sexual assaults. They also reported to have had 9,000 vehicle thefts and 28,800 burglaries.

Prior to enactment of the Clery Act, some researchers had studied campus crime. Fox and Hellman (1985) who studied campus crime qualitatively, found that college campuses were safe environments, and were even safer than the cities and communities in which these institutions were situated (see also Bromley, 1995; Sloan, 1994; Volkwein et al., 1995). Baum and Klaus (2005) found college students to have been victims of violent crimes at a rate of 61 per 1,000 students between 1995 and 2002. This represented a minor decrease from the 1994 study conducted by NCES (1997), which also showed that strangers perpetrated 58% of the violent victimization of college students, 93% of occurrences are off-campus, and 72% of these off-campus crimes occur at night. Between the years 1995 and 2002, about 7.9 million students ages 18 to 24 were estimated to be enrolled in different colleges and universities as either part-time or full-time students. About 479,150 of these students were victims of violent crimes, out of which 30,110 were raped or sexually assaulted, 38,280 were robbed and 409,760 were assaulted (Baum & Klaus, 2005; Carr, 2005); there was the presence of a weapon or serious injury in 128,120 of these crimes (Hart, 2003). Simple assault was the most common, accounting for 63% of college students' violent victimization (Baum & Klaus, 2005). Some researchers also found that the most common type of campus crime are property crimes, whereas violent crimes are the least common (Bromley, 1995; Sloan, 1994; Volkwein et al., 1995).

Campus Victimization

Several academic frameworks provide the basis for understanding patterns of campus crime. Routine activities theory describes three distinct ways or patterns of student victimization: exposure to criminal behaviors and activities, proximity of potential victims to offenders, and lack of capable guardianship (Fisher, Sloan, Cullen, and & Lu 1997). Institutions of higher learning create such proximities of victims to offenders, as many strangers live, study, and work close to one another. Students' exposure to crime is heightened by the unrestricted lifestyle they lead, which often involves night-time activities and social events (Fisher et al., 1997). As colleges are densely populated, so also are students' properties, and the criminally minded very quickly identify those who spend more, thus targeting them as victims (Fisher et al., 1997). Despite the security measures different campuses provide, it is still nearly impossible to monitor and screen the entirety of individuals who either work at, take classes, reside, or just visit the campus (Paulson & Scherer 2007).

Although most studies of campus crime focus on the general vulnerability or propensity to crime, there also exist studies that center on the risk factors that lead to campus victimization. One of these factors is the campus environment. McPheters (1978) states that the unemployment rate of an urban location where students live (both on and off-campus) is a strong predictor of the increase of campus crime rates. However, Fisher et al. (1997) differed in their findings, as they discovered that institutions where students lived on-campus had a lower victimization rate than those where students lived off-campus. In addition, other researchers found that there is no relationship between crime rate and campus location (Fox & Hellman, 1985; Morriss, 1993), though Fox and

Hellman (1985) did find higher rates of violent crimes in urban campus locations. When comparing crime rates in public and private universities, some researchers found higher crime rates in private universities (Reaves 2008; Wright & Limke 2001) whereas other researchers found higher crime rates in public universities (Volkwein et al., 1995).

Behavioral and opportunity patterns, in conjunction with routine activities theory, have been found to increase students' risk of victimization. According to Fisher et al. (1997) younger and male students, when compared to their older and female counterparts, were at a higher risk of property victimization. They also found that students who resided in an all-male or co-ed dormitories and who spent more time on campus (e.g., as full-time students) were at greater risk of property victimization than off campus or all-female residents and part-time students. It has also been found that students who spent recklessly and regularly on unimportant things, and who regularly took recreational drugs, were at a greater risk of both personal and property victimization (Fisher & Wilkes, 2003). There have been studies comparing crime rates in both traditional and urban campuses, and they have demonstrated that variations do exist. Hummer (2004) examined crime rates that occurred on campuses in 1994 using the Bureau of Justice Statistics' Law Enforcement Management and Administrative Statistics (LEMAS) program data. Results from his urban sample showed the average crime rate was 26.52%, and violent and property crimes were 0.6% and 26.05%, respectively.

Fear of Crime on Campus

Factors such as physical elements lead to crime perpetration and these physical elements currently exist within campuses. Following the Virginia Tech and National

Illinois University shootings, Kaminski, Koons-Witt, Thompson, & Weiss (2010) in their examination of fear of crime found female students to be more fearful of crime than their male counterparts. They found that these school shootings significantly increased their fears and the students' demographics were the primary predictors of their fear of crime (Kaminski et al., 2010). There is belief that fear of crime has become a larger social dilemma than crime itself, with reports of fear of crime and perceived victimization risk on the rise (Crowl, 2013).

Fear of Crime and Perception of Risk on Campus

In his extensive review of the research on fear of crime, Warr (2000) suggests that:

“Fear is a natural and commonplace emotion. Under many circumstances, it is a beneficial, even life-saving emotion. Under the wrong circumstances, it is an emotion that can unnecessarily constrain behavior, restrict freedom and personal opportunity, and threaten the foundation of communities.” (p. 482)

Most college-focused fear of crime studies are concerned with on-campus crime activities (Epstein, 2002; Schwartz, DeKeseredy, Tait, & Alvi, 2001; Nicoletti & Spencer-Thomas, 2010). Other studies pay more attention to the physical environments within the campus and how they contribute to criminal activities (Nasar, Fisher, & Grannis 1993). In their study, Nasar and colleagues (1993) found fear of crime on campus to be precipitated by the physical environment and stated that college campuses are responsible when the environment causes crime to occur. Another study by Nasar (2000), who examined crime in specific locations, found that refuge (the hiding place of possible offenders), prospect

(openness), and escape (the chances for the potential victim to flee) were associated with the feeling of safety in certain types of locations. They further stated that the diverse nature of college campuses' staff and student body, and the unlimited mobility associated with universities, gives a potential offender a diverse victim pool and refuge, as the likelihood for being caught is relatively slim (Nasar, 2000).

Sociodemographic Influences on Fear of Crime

College students are so fearful of crime on campus that most report moderate-to-high levels of fear, and their perception of safety is influenced by numerous factors (Alper and Chappell, 2012). This supports the statement by Brantingham and Brantingham (1994) that “fear of crime may constitute as big a problem for universities as the actual crimes that occur on campus. Thus, high levels of fear can drive away promising students and valuable faculty” (p. 160). Some researchers have found that fear of victimization varies by age, gender, and race, with gender (being female) as the strongest predictor (Fisher & Sloan 2003; Ferraro, 1995, 1996; Haynie, 1998; Riger & Gordon, 1981; Rountree & Land, 1996a; Rountree 1998; Sloan, Lanier, & Beer, 2000). Men are the most likely victims of campus crime, except for sexual assault and domestic violence (Catalano, 2005; Jennings et al. 2007; Tjaden & Thoennes, 2000), highlighting the paradox that higher levels of fear of crime are associated with women and not men. The implication is that women's fear of crime is somewhat irrational and borne out of the perception of being likely victims of crime (Gordon, Riger, LeBailly, & Heath, 1980; Madriz, 1997b; Pain, 1997b; Warr, 1984).

Some researchers have proposed that although men have a greater tendency than women to be victims of crime, women seem more vulnerable to victimization, hence their heightened fear of crime (Rountree, 1998). Other researchers, nonetheless, suggest that the type of crime explains the difference in the fear of crime among men and women (Ferraro, 1995, 1996; Reid & Konrad, 2004). For instance, there was no significant difference in the level of fear of burglary among men and women (Ferraro, 1995, 1996; Fisher & Sloan, 2003; Reid & Konrad, 2004; Tulloch, 2000). Additionally, women report more fear of being sexually assaulted by a stranger than an acquaintance (Hickman & Muehlenhard, 1997; Mesch, 2000b; Pain, 1995; Wilcox et al., 2006), even when research has shown that they are more likely to be sexually assaulted by an acquaintance than a stranger (Catalano, 2005; Tjaden & Thoennes, 2000).

Research has also shown that younger women, those between the ages of 18 and 24, are more fearful of being sexually assaulted than older women, those between the ages of 65 and 74 (Ferraro, 1996; Tulloch, 2000; Warr, 1985), and fear of rape is greater than the fear of murder among most females (Ferraro 1995, 1996; Hickman & Muehlenhard, 1997). McCreedy and Dennis (1996), in their research on college students' fear of crime, found that 86% of students reported high levels of fear of victimization. College men reported lower levels of fear of crime while alone on campus or when passing strangers compared to their female counterparts, whereas both genders stated a feeling of fear when passing groups of men versus groups of females (McCormick, Nadeau, Provost, Gaeddert, & Sabo, 1996). Similarly, Turner and Torres (2006) reported that students' belief of being blamed for their victimization instills more fear in them. Also, research examining students' fearfulness of crime after dark (Sloan et al., 2000),

and the effects of gender (Brantingham & Brantingham 1994) found women to report the highest level of fear after dark. Generally, fear across both genders may be influenced by sociodemographic factors, and the most constant predictor of fear of crime is gender (Stanko, 1993).

Other sociodemographic variables such as age and race are also predictors of fear of crime but are not as predictive as gender. Focusing on age, some researchers found younger respondents more likely to report being fearful of victimization and being at risk of crime than their older counterparts (Ferraro, 1995; Ferraro & LaGrange, 1992; Lane & Meeker, 2003; Parker, 2001; Rountree & Land, 1996a, 1996b; Rountree, 1998; Tulloch, 2000; Ziegler & Mitchell, 2003). This is because young people often participate in lifestyle activities that increase the likelihood of their victimization, even when research has shown they are less physically vulnerable (Rountree, 1998). Some studies, however, have shown that older adults are more fearful of crime (Baker et al., 1983; Haynie, 1998; Riger & Gordon, 1981; Weinrath & Gartell, 1996), and other studies have shown fear of crime as having a curvilinear relationship, (i.e., fear of crime is high among younger people, declining in adulthood and increasing as respondents grow older) (Ferraro, 1995).

Similarly, although race has been found to also predict fear of crime, there have been some inconsistencies in the research (Chiricos, Hogan, & Gertz, 1997; Fisher, 1995; Fox et al., 2009; Garofalo, 1979; Parker, 1988; Skogan & Maxfield, 1981). Some researchers found that, although non-whites report greater fear of crime than whites do, they are less likely to experience victimization (Haynie, 1998; Parker, 2001; Rountree & Land, 1996a, 1996b; Truman, 2005). However, other researchers found that there are no significant differences in how race affects fear of crime (Reid & Konrad, 2004; Rountree,

1998). Some researchers have also found that non-whites are more fearful of crime than whites are (Ferraro, 1995; Garofalo, 1979; Hale, 1996; Haynie, 1998; Parker, 1988; Skogan & Maxfield, 1981; Truman, 2005). An example is Parker's (1988) study of 185 Mississippi residents where he examined how race influenced fear of crime. He found fear of crime to be significantly influenced by race. Compared to whites, non-whites were more fearful of crime. He therefore concluded that this difference might be because non-whites are exposed to higher crime rates than whites. Aggregate crime data also demonstrate a significant effect of race on fear of crime (Chiricos et al., 1997; Pickett, Chiricos, Golden, & Gertz, 2012). In addition, social scientists have theoretically studied racial minorities' tendency to be more fearful of crime than whites have, and they found most of their explanations to be based on the vulnerability perspective (Ferraro, 1995; Gibson et al., 2002; Kaufman et al., 2008; Reid & Konrad, 2004; Vanderveen, 2002). Given the mixed evidence, there is some research that shows that the measurement of variables in a study has a significant impact on the racial differences in the fear of crime (Lane, Rader, Henson, Fisher, & May, 2014; Lane & Fox, 2012).

Prior Victimization and Fear of Crime

The perception of fear of crime may vary depending on prior victimization, and various studies have supported this notion (Myers & Chung, 1998; Rountree & Land, 1996a; Smith & Hill, 1991) even in student populations (Johnson & Kercher, 2009; Swartz, Reyns, Henson, & Wilcox, 2011). Research has shown that prior victimization is a predictor of perceived fear of crime victimization, as individuals who have previously been victims of crimes, as well as vicarious victims (people who know others who have

been victims of crime), may perceive crimes differently than the non-victimized others, which may affect their perception of fear and risk of crime (Gordon & Riger, 1989, 1991; Ferraro 1995, 1996; Myers & Chung, 1998; Rountree & Land, 1996a; Smith & Hill, 1991). Numerous researchers have conducted studies that demonstrate prior victimization experiences result in increased fear of crime (Akers, LaGreca, Sellers, & Cochran, 1987; Balkin, 1979; Box, Hale, & Andrews, 1988; Culbertson, Vik, & Kooiman, 2001; Hough, 1985; Karakus, McGarrell, & Basibuyuk, 2010; Lawton & Yaffe, 1980; Lee, 1983; Lurigio, 1987; McConnell, 1997; Ollenberger, 1981; Scott, 2003; Skogan, 1987; Skogan & Maxfield, 1981; Smith, 1988; Smith & Hill, 1991; Wilcox, Rountree, & Land, 1996).

Studies have shown that there are also variations in fear of crime by type of victimization, as fear of crime increases with violent victimization whereas there is no significant relationship between fear of crime and nonviolent victimization (Rountree, 1998). Reid and Konrad (2004) found that prior victimization led to an increased fear of certain crimes such as sexual assault, burglary, and robbery. Another study (Cates, Dian, & Schnepf, 2003) shows prior victimization to result in a higher tendency of perceived vulnerability to crime. Generally, some studies have shown that higher levels of victimization lead to increased fear of crime (Smith & Hill, 1991). Other studies, however, are inconclusive as to whether prior victimization leads to fear of crime, or whether the fear of crime may be influenced by demographic or situational variables. Gibson et al. (2002) in their study of prior victimization and fear of crime in three cities, found that only one city showed prior victimization as resulting in a greater likelihood of fear of crime. Another study found prior victimization to result in higher fear of crime in white respondents than in their black counterparts (Chiricos et al., 1997). Also, Jaycox

(1978) found that victims of stalking reported higher levels of fear of crime during the day whereas victims of sexual assault reported being less fearful of crime during the day and more fearful of crime at night. Some researchers, however, have disputed the prior victimization-fear of crime relationship. For example, Jaycox (1978) in his Florida sample found that actual victimization levels explained the fear levels of the older adult sample. Other researchers found no significant relationship between victimization in general and fear of crime (Fisher & Nasar, 1992; Gates & Rohe, 1987; Liska et al., 1988; May, 2001; Mesch, 2000; Sloan, Fisher, & Wilkins, 1996; Wilcox et al., 2007). Previous research has established that prior victimization has different relationships with fear of crime, although some studies have failed to establish a conclusive relationship.

Vicarious Victimization and Fear of Crime

Researchers of fear of crime have differentiated between the impacts of direct and vicarious victimization. Some individuals do not experience victimization personally, but rather through exposure to people who have experienced victimization either by personal contacts, such as family, friends or acquaintances, or through media exposure to publicized victims. The vicarious or indirect victimization model therefore deduces that individuals who have not experienced victimization personally may still be conscious of potential victimization. Even with the mixed support the vicarious victimization model has received, there has been abundant literature that supports the model, thereby suggesting that there is a relationship (although mixed) between fear of crime and awareness of crime victimization (Ferraro, 1996; Skogan & Maxfield, 1981).

Fear of crime and victimization scholars have examined the effects of vicarious victimization on fear. Skogan and Maxfield (1981) posited that knowing of another's victimization increases or influences the fear of victimization, whereas Akers et al. (1987) found knowledge of crime in one's neighborhood to be only modestly associated with higher levels of fear of crime. Also, Box et al. (1988) found vicarious victimization to result in increased fear of crime, and Ferraro (1996) found that compared to those who have not experienced vicarious victimization, experiencing vicarious victimization resulted in higher levels of fear of violent crime (non-property crime). Although the relationship between vicarious victimization and fear of crime is supported by some studies, other studies have found no such relationship, thereby concluding that any individual can be fearful of crime irrespective of their vicarious victimization (Fisher et al., 1995; Fox et al., 2009; Kirk, 1988; Mesch, 2000). Lee and Ulmer (2000) conducted a study on the effects of vicarious victimization on the fear of both violent and property crimes among Korean Americans in Chicago; they found no relationship between vicarious victimization and fear of both crimes. There has been no direct conclusion on the relationship between vicarious victimization and fear, especially fear across different crime types. Very few studies have examined how vicarious victimization affects property crime separately, and contradictory results have been posited so far (Ferraro, 1996; Lee & Ulmer, 2000). Therefore, there is need for the continued examination of the effects of vicarious victimization on fear of crime because of this contentious issue.

Perceived Risk and Fear of Crime

Perceived risk depends on an individual's perception of the likelihood of victimization. Ferraro (1995) posited that in perceived risk of victimization, cognitive judgment is involved, while fear of crime represents an emotional response. Today, perceived risk has been thought of as a cognitive or rational component, which strongly correlates with fear of crime. Several researchers who considered the cognitive judgment and emotional response to fear of crime separately, concluded that there is a relationship between these two constructs, and advised that both be included in studies that try to understand this phenomenon (Ferraro, 1995; Ferraro & LaGrange, 1987; Mesch, 2000; Rader, 2004; Warr, 2000). Several studies have suggested that one of the most consistent predictors of fear of crime is the perception of the likelihood of being victimized (Box et al., 1988; Ortega & Myles, 1987). General fear of crime has been studied by some researchers (May, 2001; Mesch, 2000), whereas others have specifically studied fear of property crime (Ferraro, 1996; LaGrange & Ferraro, 1989; Lee & Ulmer, 2000), and these studies have supported the idea that perception of victimization risk results in higher levels of fear of crime.

Annual surveys of the American public are conducted by the Gallup organization to understand their perceived likelihood of victimization. When asked how likely they felt they would be victims of burglary and car theft, they stated that (a) their homes are more likely to be burglarized when they are not there and (b) they are more likely to have their cars broken into or stolen (Maguire & Pastore 2003). Fewer than one in five stated their fear of being victims of rape and murder (Maguire & Pastore 2003). Warr and Stafford (1983) found perceived risk by itself to be a weak predictor of fear of both

property and violent crime. They instead found that perceived seriousness of crime increased perceived risk, which then predicts fear of crime. They also found that in ascertaining level of fear, the respondents in their research considered both the likelihood of victimization and the severity of the crime (Warr & Stafford, 1983).

Several other studies sought to determine if there exists a relationship between perceived risk and gender. While looking at gender, they found that even though women had higher levels of fear of crime, their fear was unwarranted because they were less likely at risk of most victimization types (Wilcox et al., 2006). Reid and Konrad (2004) found that the relationship between perceived risk and gender depended on the specific offense. They further posited that while men had higher perceived risk of robbery, women had higher perceived risk of both burglary and sexual assault. Following these findings, some researchers hypothesized that women make decisions based on their perceived risk of sexual assault on college campuses (Fisher & Sloan, 2003; Wilcox et al., 2006).

In general, research has been ambiguous about the relationship between perceived risk of victimization and fear of crime. Numerous prior studies on fear of crime have made futile efforts to differentiate between the emotional response to risk or fear of crime and the mental assessment of victimization risk (Jennings et al., 2007). Other studies examining public crime rate estimates found a difference in individuals' perceived probability of victimization and the actual risk of being victimized (Hughes, Marshall, & Sherrill, 2003). Research has also shown that people have the tendency to overestimate the rate and incidence of rare crimes but underestimate the rate and frequency of minor or common crimes (Warr, 1980).

Contextual Factors and Fear of Crime

Previous studies on contextual factors and fear of crime among both students and faculty have found that fear of crime varies by time of day and by certain areas on campus (Brantingham & Brantingham, 1994; del Carmen, Polk, Segal & Bing III, 2000; Fisher & Nasar, 1992; McConnell, 1997; McCreedy & Dennis, 1996). In their study, del Carmen et al. (2000) found time of day to be a significant predictor of fear of crime as most students (68%) reported being fearful of violent victimization at night versus daytime (16%). McConnell (1997) found 20% of his survey respondents reported the feeling of fear while walking alone on campus at daytime, whereas 66% reported their fear was mostly at night. In addition, Brantingham and Brantingham (1994) found 98% of respondents reported the feeling of safety in daytime hours whereas 33% said they felt unsafe while on campus at nighttime. The results of their research also revealed gender differences, as 88% of males reported feeling safer on campus at nighttime compared to 52% of females who felt the campus was safe at night. Some researchers examined if there were campus location differences in students' fear of crime. Del Carmen et al. (2000) found that 38% of surveyed students reported that they avoided certain campus areas for fear of being victimized. Some of these areas include parking lots and areas with low visibility at night. Brantingham and Brantingham (1994) found modes of transportation to and from specific campus areas to be connected to fear of crime among male students during certain times of the day. The results from this study show that male commuter students felt unsafe on campus at night compared to their counterparts who rode the bus.

According to Brantingham and Brantingham (1994) the difference in the feeling of safety among male students may be because of “the role males might be expected to play in parking lot confrontations” (p. 168). The results from this study reinforced the prospect, refuge, and escape model posited by Fisher and Nasar (1992), as there is limited visibility and possible refuge for criminal assailants in parking lots. Their research shows that areas such as parking garages, which have greater refuge for potential offenders and low prospect levels for potential victims, led to increased fear of crime. In analyzing crime in relation to fear of crime, Brantingham and Brantingham (1994) found students to have increased fear of crime, low victimization levels, and few reported violent crimes on campus. They therefore concluded that the increased fear levels among students were due to potential hiding spaces in parking garages, remote campus location, and inadequate security measures.

The Media’s Influence on Fear of Crime

Another factor that influences fear of crime is the media, especially television (Gerbner & Gross, 1976). The media sometimes disseminate one-sided information about criminals and the crimes they commit, and this in turn is likely to affect the fear of crime of its viewers (Dowler, 2003). Some studies have revealed higher television viewing as significantly associated with perception of risk of crime (Heath & Petraitis, 1987). Others, however, found that longer hours of television viewing have no significant association with fear of crime (Dowler, 2003; Eschholz, Chiricos, & Gertz, 2003). Chiricos and colleagues (1997) and Truman (2005) examined both the number of hours of television viewing and the type of programming and concluded that watching news

channels on television leads to increased fear of crime. In addition to television viewing, Lane and Meeker (2003) examined newspaper as a media source and found that compared to those who used television as a primary media source, newspaper readers reported having lower fear of crime. Other studies, however, found that individuals who read newspapers with large crime coverage reported greater fear of crime levels (Liska & Baccaglini, 1990). Some studies also show no relationship between fear of crime and newspaper reading (Chiricos et al., 1997). As Chiricos and colleagues (1997), Eschholz and colleagues (2003) and Lane and Meeker (2003) also stated, when determining the relationship between fear of crime and the media, it is necessary to take demographics into consideration, as gender, age, race, education, socioeconomic status, and victimization could be moderating factors that affect the relationship.

The Shadow of Sexual Assault and Fear of Crime

Women have the tendency to view safety in both physical and sexual terms (Stanko, 1990); thus, their interpretation of victimization is different from men. Various researchers have focused primarily on women's fear of crime specifically resulting from the fear of sexual assault and rape (Ferraro, 1996; Fisher & Sloan, 2003; Gordon & Riger, 1981, 1989/1991; Hickman & Muehlenhard, 1997), which is somewhat justifiable as women's rape and sexual assault rates are much higher than that of their male counterparts (Catalano, 2005; Tjaden & Thoennes, 2000). Research has shown that women, compared to men, are at an increased risk of being raped or sexually assaulted during their college years (Fisher et al., 2000), and some researchers have also suggested that when women experience any form of victimization, there is always a chance of such

victimization leading to either rape or sexual assault (Ferraro, 1995, 1996). Warr (1984, 1985) posited that there are concurrent offenses that people may associate with other victimization types, for which rape qualifies, and which is also unique to female victimization (Ferraro, 1995, 1996; Warr, 1985).

Ferraro (1995) proposes that “sexual assault which may be construed as a master offense may ‘shadow’ other types of victimization among women” (p. 87), thus resulting in the increased fear of other offenses. Furthermore, Ferraro (1996) advanced her ideas into what she called the “shadow thesis”, which states that “fear of rape influences other victimization fears, and the degree of the effect is associated with personal contact and seriousness of the offense” (p. 686). In conducting this study, Ferraro (1995;1996) also found a strong positive association between women’s fear of rape and fear of other forms of victimization when direct contact was involved. Ferraro’s (1995; 1996) shadow of sexual assault thesis both within the larger population and among college students has empirical support. The shadow of sexual assault thesis posits that before the fear of general crime among women is affected, the fear of rape and sexual assault must first be addressed (Ferraro, 1995; 1996; Fisher & Sloan, 2003; Schafer, Huebner & Bynum, 2006).

In their attempt to extend Ferraro’s (1995; 1996) research on the shadow of sexual assault hypothesis to a more nationally representative sample of college and university students, Fisher and Sloan (2003) address two deficits. They argued that Ferrero overlooked the temporal situation when fear of crime was measured and failed to use a domain-specific analysis in addressing the shadow of sexual assault thesis. After clarifying these limitations, Fisher and Sloan (2003) found that across temporal

situations, the shadow of sexual assault hypothesis still had support among women in different colleges and universities in the United States; specifically, they found that the fear of sexual assault shadowed the college and university women's fear of nonsexual crimes. The suggestion made by Fisher and Sloan (2003) to examine the shadow of sexual assault hypothesis while considering the victim-offender relationship in crime-specific fear of college and university women was undertaken by Wilcox et al. in 2006. Their results showed support for the shadow of sexual assault hypothesis while considering victim-offender relationship. Specifically, they found that irrespective of the relationship between victim and offender, women's fear of nonsexual crimes surpassed their fear of sexual assault.

III. CAMPUS CRIME ALERTS

Violence on campus is likely to be the defining moment when the life of that institution is changed forever (LaBanc, Krepel, Johnson, & Hermann, 2010). To mitigate crime on campuses, the campus crime alerts system was developed to warn the campus community about impending danger. As enrollments increased, criminal activity invaded the campus setting as more students from all walks of life attended different colleges and universities. The prevalence of actual crime occurrences on college and university campuses raised concerns on the need to enhance safety on campus. With the increase in media coverage of campus violence, as well as actual and vicarious victimization, college students' fear of crime and perception of victimization increased. Actual crimes and perceptions of risk and fear prompted calls to action and for legislation to enhance campus safety. One result of the legislation and calls to action was the implementation of campus crime alerts, which on a broader level, are alerts and warning systems designed to give crime information to the general campus community so that informed decisions can be made, and protective actions taken (Sorensen, 2000).

In the years prior to the late 1960s and early 1970s, universities and colleges handled criminal issues privately due to a legal agreement, which saw college administrators as protectors of students (Fisher, 1995). Thus, campus crime statistics and criminal reports were deemed private educational records protected by the schools. Successions of court decisions, however, compelled colleges and universities to prevent predictable crime and to provide campus security. Additionally, the public's need to understand crime occurrences on campus led to their demand for clarity and understanding, and this became law following the enactment of the Jeanne Clery

Disclosure of Campus Security Policy and Campus Crime Statistics Act, often known as the Clery Act (Fisher 1995; Noonan & Vavra, 2007). The reasons for the Clery legislation were to guarantee that students and their parents had access to accurate statistics on the occurrence of crime on campus. Another reason was for colleges and universities to become financially motivated to lower the crime rates on their campuses and devise effective security measures, which in turn would attract students to their campuses (Fisher et al., 2002). The Clery Act mandated colleges and universities to report their crime statistics to the United States Department of Education using the terms and definitions set out by the Uniform Crime Reports (UCR). Although the Jeanne Clery Act was signed into law in 1990 and has been amended several times, there still exist some inconsistencies in interpreting and translating school crime statistics. In addition, due to the timing of the reports and high rates of underreporting, schools and colleges' crime history, patterns of victimization, and trends still cannot be fully determined.

According to the NCVS data studied by Blaum and Klaus (2005), "only about 35% of college students' victimization was reported to the police" (p. 6). Carr (2005) randomly sampled 3,400 selected students from 12 different colleges and universities and found that across all offenses only 25% were reported to any authority. More specifically, he found that only 22% of all rapes, 18% of all sexual assaults, 50% of all aggravated assaults, and 25% of all burglaries were reported to the authorities; none of the robberies were reported (Carr, 2005).

The aftermath of the Virginia Tech and Northern Illinois University shootings led to the emergence of various federal and state task forces aimed at addressing safety and security issues on college and university campuses (Campus Security Task Force, 2008;

Randazzo & Plummer, 2009; Virginia Tech Review Panel, 2007). Their main duties were the analysis of current safety and security issues and posing recommendations to improve these policies and procedures, thereby addressing the lack of security on college and university campuses. In Illinois for example, the Campus Security Task Force (2008) recommended an all-hazard approach in planning for emergency response situations. Every institution of higher learning has also been advised to enact campus alert systems to inform faculty, staff, students, and their parents about emergencies on campus. They are also required to publicize campus security and safety information to faculty, staff, students, and parents, and increase police presence and visibility on campus (Campus Security Task Force, 2008; Chancellor's Task Force on Critical Incident Management, 2007; Davis, 2008; Gubernatorial Task Force for University Campus Safety, 2007; Leavitt, Spellings, & Gonzales, 2007; Northern Illinois University, n.d.; Report of the Review Panel, 2007).

Campus Crime Mandatory Notifications

One mandatory requirement of colleges and universities as stated in the United States federal law is to “immediately notify the campus community upon the confirmation of a significant emergency or dangerous situation involving an immediate threat to the health or safety of students or staff occurring on the campus” (Jeanne Clery Disclosure of Campus Security Policy and Campus Crime Statistics Act, Public Law 110-315; U.S. Department of Education, 2008). The Clery Act requires all colleges and universities to issue timely warnings of crimes, make their security policies and crime information public (Hunter, 2005), and make public the “procedures for students and

others to report criminal actions or other emergencies occurring on campus” (U.S. Department of Education, Office of Postsecondary Education, 2005, p. 18). The statistics and disclosure are made available in annual reports, which are supplied to both current and prospective students either through the Internet or by paper copy, thereby allowing both students and parents to gain insights on crime in the “ivory tower” (Mancini, 2016). Research has shown that rape and date rape on campuses continue to intensify, and women who are at a greater risk of rape or other forms of sexual assault are a part of the college and university communities (Fisher et al., 2000). There are approximately 6,400 public and private Title IV institutions of post-secondary education eligible to receive financial aid in the United States (Hoover, 2005), which serve 15 million students and millions of faculty, staff, and visitors (Office for Domestic Preparedness, 2005). These institutions are mandated to report criminal offenses, and one way to circulate this information is through the college or university’s alert system.

Current events across the country (e.g., active shooter events at Marjory Stoneman Douglas High School in Parkland, Florida, Marshall County High School in Benton, Kentucky, Santa Fe High School in Texas, and Central Michigan University) highlight the extreme importance of alerting students, faculty, and staff promptly so adequate protective measures are taken as the incident unfolds. Thus, colleges and universities must take adequate measures to promptly alert the campus community to any emergency.

Fox and Savage (2009) stated that certain members of the campus community might view these pre-crisis trainings as evidence of increased levels of violent behavior. According to Mileti and O’Brien (1992), effective warning messages must do the

following: (a) describe the situation clearly so that people understand the danger, (b) be issued by a credible source, (c) include specific information indicating the location and time of the event, and (d) state protective actions (see also; Mileti & Peek, 2000).

Adequate details about the situation must be embedded in the alerts for the recipient to perceive a threat, have trust and confidence in the message source, and follow prescribed or intuitive recommendations. Several individual characteristics such as gender, age, self-efficacy, disaster experience, and locus of control influence the likelihood of perceiving the situation as an emergency and taking appropriate protective action (Mileti & Peek, 2000; Riad, Norris, & Ruback, 1999; Sjoberg, 2000). For instance, low self-efficacy may affect an individual's confidence and subsequently their ability to take preventive actions (Lindell & Perry, 2004). Also, compared to individuals with external locus of control (fatalistic beliefs), those with internal locus of control (the belief that the individual can control what happens to him or her) tend to take adequate preventive measures when needed (Sattler, Kaiser, & Hittner, 2000). Community involvement and the behavior of people in the same situation may influence risk perception (Lindell & Perry, 2004; Peek & Mileti, 2002). In crisis management, the swiftness of broadcasting critical information is essential to an effective reaction (Rollo & Zdziarski, 2007). A good communication plan must include a well-thought-out means of disseminating the information as quickly, thoroughly, and efficiently as possible (Lawson, 2007; Lipka, 2007). Adding to the immediate safety needs of instant information, there is the expectancy from the Net generation that in using technology the sharing of information should be as swift as possible (Junco & Mastrodicasa, 2007).

The introduction of more sophisticated means of communication has created new ways of reaching out to students, and these methods constantly evolve depending on user preference. The use of emails is one of the forms of communication used on college and university campuses, but the assumption is that the recipients routinely check and read their emails. Also, the use of a single method of emergency notification is very unlikely to reach the target population; therefore, multiple modes of communication, including social media, have been used to communicate warnings (Freberg, 2012). In her study of participant preferences between personal contacts and official university sources of emergency notification, where participants were asked what resources helped confirm campus crisis information, Anderson (2017) found participant responses to be as follows: 68.1% preferred social media, 54.8% relied on friends and family, 53.5% preferred university websites, 67.5% preferred the website link in the text alert, and 21 4.6% said other. In analyzing the “other” selection of participants, Anderson (2017) found that the majority of participants listed the university alert text message system as a preference, while other participants listed the university emails and local news websites as their preferences respectively. The results also showed that 33.48% of respondents preferred the use of personal contacts, 66.52% of respondents preferred the use of official university contacts, and 4.59% of the respondents listed other, as preferences in times of emergencies.

Text messaging, as Junco and Mastrodicasa (2007) described, is the use of cellphones or other hand-held devices that are cellular-enabled to send and receive short messages. According to studies by Frank (2007), Junco & Mastrodicasa (2007), and Mastrodicasa & Kepic (2005), an enormous number of students own cellphones, and

about 99 percent of students reported receiving text messages on their cell phones, while a little over 30 percent of the sample reported being signed up to receive emergency alerts through text message (Schildkraut et al., 2017). The researchers posited this to be a little over the 25 percent of the total number of students registered for the text message notification. They further attributed the finding to be partly due to the earlier finding where students stated their lack of awareness of how to register for the notification system. Colleges and universities searching for more effective and efficient means of communicating information to their campus communities in times of crisis and emergencies found text messaging to be an efficient means (Foster, 2007; Frank, 2007; Junco & Mastrodicasa, 2007; Salaway et al., 2007). Text messaging provides school administrators the ability to instantly notify the campus community who may not have access to computers to check emails. Colleges and universities have made plans to integrate new technology into their crisis plans (Foster, 2007; Rivera, 2007; Sink, 2007), and while some campuses choose to develop this new technology internally, many choose to collaborate with already existing technology companies to provide such services on campus. Post Virginia Tech in 2007, several colleges began devising their own emergency alert systems that could be used in response to any public crisis that may arise (Kopel, Sims, & Chin, 2014). Many universities have begun their very own emergency preparedness departments that aim at preparing students in the best ways to respond to on-campus incidents (Thompson & Schlehofer, 2014). These emergency preparedness departments use warning channels such as voice calls, text messages, social media posts, and announcements posted on the schools' official websites to alert the campus communities of emergencies (Horton, 2012; Romano, 2013).

Studies have also found increased voluntary participation by the Net generation who share their phone numbers for emergency notification and safety purposes (Foster, 2007; Frank, 2007). Due to incidents of the Columbine era and 9/11, students willingly sign up for voluntary emergency notifications with the aim of being informed of incidents that occur on campus (Junco & Mastrodicasa, 2007). For example, Frank (2007) found that in one week in April 2007, 6,200 Penn State university students signed up for the voluntary text messaging service. Rivera (2007) also found that there are over 10,000 subscribed cellphones at the University of Delaware.

Social networking sites are another means of communicating emergencies in colleges and universities, although their role in crises is still evolving. Some campuses have succeeded in using social networking sites to notify the campus community in times of crisis (Duggan, Ellison, Lampe, Lenhart, Madden, 2015; Han, Ada, Sharman, Gray, & Simha, 2014). As their text messaging system was far from ready to use, the University of Wisconsin-Madison posted fliers on Facebook alerting the campus community of the presence of a gunman on campus, and although there were 50,000 campus network members, this post attracted 40,000 views (Rivera, 2007). Although this is an effective means of communication, in times of crisis it is advisable to use every means of communication to alert the campus community of the imminent danger to their lives.

The Present Study

Challenges in risk management and crisis communication in colleges and universities emerging from episodes of mass violence and natural disasters, which poses a risk to public safety on campus, are noteworthy. Some events such as the University of Alabama-Huntsville, Virginia Tech, and Northern Illinois University mass shootings, and the Hurricane Katrina evacuations of college campuses, among others, have revealed loopholes in even the most sophisticated and well-developed campus communication plans (Catullo, Walker, & Floyd, 2009). The literature is replete with studies focused on campus crime, fear of crime, and perceptions of fear and safety on college campuses. The literature describing the impact of campus crime alerts on perceptions of victimization, actual victimization, and the many consequences thereof, has yet to develop. This study will seek to fill this gap in the research and begin a needed inquiry into whether crime alerts impact student's perception of risk for victimization, and if so, how that affects individuals' use of self-protective measures.

The Clery Act provides no specifics on the exact information to be included in the warning, nor does it specify the appropriate communication tool. A recommendation given by the Department of Education's (2005) *Handbook for Campus Crime Reporting* relayed that relevant information that has the likelihood of preventing similar related incidents should be included in the information. In addition, in one of the recommendations given by Stephens, Ford, Barrett, & Mahometa (2014) as a means of using technology to communicate to the campus community, they stated that campuses should first seek to understand how potential users would like to receive emergency notification, as this will ensure that all students are adequately accommodated. Colleges

and universities have flexibility regarding the information included in the Clery campus crime alerts. This flexibility can be geared towards improving the effectiveness of their crisis communication system and style.

Colleges and universities report the feeling of preparedness in handling crises that may arise on campus (Catullo et al., 2009), but an increasing amount of media attention has focused on how colleges and universities respond to crises. Many articles published in major periodicals including *The Chronicle of Higher Education* and *Inside Higher Ed* concentrate on the effects that crisis situations have had on college and university campuses. The integrity of institutions of higher learning and their administrators can be tarnished with the proportion of violence, sexual assaults, and natural disasters they experience. They must therefore employ preemptive measures not only when responding to crises on campus, but also when communicating crises. Bearing in mind that the physical and virtual community of colleges and universities are made up of students, faculty, staff, alumni, parents, visitors, and other stakeholders, it is imperative that in crises, these institutions act and communicate messages in ways that aim to minimize risk to both the people and the physical campus. Most colleges and universities utilize multimodal means to communicate crises. One of the issues being assessed in this study the effectiveness of the multimodal means of communicating crises to the campus community.

The major research objective is to determine whether and how the use of multiple modes of crisis communication lead to students' increased perception of risk and their fear of crime, and ultimately to their use of self-protective measures. With this objective in mind, the major research questions around which this study was framed are: *Do*

multiple modes of crisis communication increase students' perceived risk of victimization and fear of crime? Does the frequency of crisis communication increase students' perceived risk of victimization and fear of crime? How do multiple modes of crisis communication and frequency of alerts influence protective measures: Are students more likely to take protective measures when fear of crime and perception of victimization are also present? By proffering answers to these questions, this study seeks to provide practical guidance to college and university administrators tasked with crisis management responsibilities to inform best practices.

The hypotheses for this study are:

H₁: Students who report receiving multiple modes of emergency notifications will report increased fear of crime.

H₂: Students who report receiving multiple modes of emergency notifications will report increased perceived risk of victimization.

H₃: Students who report receiving more frequent emergency notifications will report increased fear of crime.

H₄: Students who report receiving more frequent emergency notifications will report increased perceived risk of victimization.

H₅: Students who report increased fear of crime will report increased use of protective measures.

H₆: Students who report increased perceived risk of victimization will report increased use of protective measures.

H₇: Students who report receiving multiple modes of emergency notifications will report increased use of protective measures.

H₈: Students who report receiving more frequent emergency notifications will report increased use of protective measures.

H₉: The relationship between multiple modes of emergency notifications and protective measures will be mediated by fear of crime.

H₁₀: The relationship between frequency of emergency notifications and protective measures will be mediated by fear of crime.

H₁₁: The relationship between multiple modes of emergency notifications and protective measures will be mediated by perceived risk of victimization.

H₁₂: The relationship between frequency of emergency notifications and protective measures will be mediated by perceived risk of victimization.

IV. METHODOLOGY

This study utilized a quantitative approach, which is the predominant methodology in the study of fear of crime (Ferguson & Mindel, 2007; Meško et al., 2008). Although large scale surveys are popular in social sciences (Pauwels & Pleysier, 2008), survey methodologies in the fear of crime field have expanded rapidly since the late 1960s (Meško et al., 2008).

Sample and Procedures

This study used data collected from a large southwestern public university in the United States in 2018 with the approval of the Institutional Review Board. The researcher utilized a convenience-sampling approach to select the students for participation in the study. However, necessary efforts were taken to obtain a sample that represented the demographic composition of the student population at the university. Respondents were randomly selected to receive a web-based survey using Qualtrics, an online survey software package that ensures anonymity. To ensure anonymity and prevent Qualtrics from tracking the IP addresses of participants, the researcher disabled the feature by enabling the option to "Anonymize Responses". All data collected using Qualtrics were secured and encrypted. Respondents received reminder emails once to maximize participation. The researcher kept track of the survey to determine how many people had taken it, and as Kaye and Johnson (1999) suggested, one might use a "counter that keeps track of the number of times that a site has been accessed". This will be identical to how the response rate for this survey will be calculated, as Qualtrics might show the number of times the survey was accessed (p. 326). Incentives such as money,

gifts, etc., were not offered for participation. The researcher ensured respondents that participation was voluntary, and they could withdraw from the study at any time or skip any questions they wanted. An informed consent page and a recruitment email were included to ensure students were fully aware of what the study entailed before continuing with the survey (Please see Appendices A, B, and C for IRB form, informed consent form, and recruitment email, respectively).

Sample Description

As noted earlier, the present study aimed to investigate the effects of campus crime alerts on students' fear of crime, perception of victimization, and self-protective actions. In accordance with this research objective, the researcher utilized convenience sampling. The target population for this study was the diverse population of students in a single university, both undergraduate and graduate, from various disciplines, who were provided with the URL and asked to voluntarily participate in the survey (please see Appendix D for survey). The university allows each researcher to send out surveys to only 10% of the student population; therefore, upon IRB approval, the survey was sent to a random sample of 3709 students, which makes up 10% of the population of students at this large Southwestern University. Of the 3709 students receiving the emails, only 132 completed the survey, for a response rate of only 3.5%. This low response rate necessitates extreme caution in interpreting results. The sample consists of 23.8% (31) males and 76.2% (99) females. Table 1 presents the frequency and percentage distributions of male and female sociodemographic characteristics. Approximately 56.4% of the sample were whites. The remaining respondents from various ethnic groups

(African-American, Hispanic, Asian, Other) were recoded as non-whites (43.8%). Age of respondents ranged from 18-55 years with a mean of 23 years and a standard deviation of 6.9 for the total sample. The school classification is almost evenly distributed, except the 2% who indicated “other”, specifically post-baccalaureate students. A moderate percentage of students (24.6%) indicated living on campus while others stated they lived off campus. Of the respondents who indicated living off campus, the majority lived with someone, either roommates, partner, spouse etc., whereas very few lived alone. The gender and racial composition of the sample used in this study is different from that of the entire university population; specifically, non-whites make up most of the university population (54.69%), while whites are the minorities (45.31%). Furthermore, the gender composition of the sample is highly skewed toward females, whereas the gender composition of the entire student body is 58.5% female. Consequently, the results of the analysis may not be generalizable to the entire university.

Table 1: Sociodemographic Characteristics of Sample

Variable	N	Percent (%)
Gender		
Male	31	23.8
Female	99	76.2
Race/Ethnicity		
Nonwhite	57	43.8
White	73	56.2
Classification		
Freshman	27	20.3
Sophomore	21	16.2
Junior	22	16.9
Senior	38	29.2
Graduate Student	20	15.4
Other	2	1.5
Residence		
On Campus	32	24.6
Off Campus-Alone	13	10.0
Off Campus-Not Alone	85	65.4

Measures

Dependent Variables

Three dependent variables were used in this research: fear of crime (property and violent crimes), perceived risk of victimization of (property and violent crimes), and protective actions. Fear of crime was measured using a 10-point Likert scale ranging from (not at all afraid=1 to very afraid=10) with eleven items asking respondents to indicate how afraid they are of: being approached on the street by a beggar or panhandler, being cheated, conned, or swindled out of your money, having someone break into your home while you are away, having someone break into your home while you are there, being physically assaulted by a stranger, being physically assaulted by an acquaintance, being murdered, being attacked by someone with a weapon, having your car stolen, being robbed or mugged on the street, and having your property damaged by vandals (Ferraro, 1995). This scale had high reliability ($\alpha = .950$), which was consistent with the literature (Chadee, 2003; Ferraro, 1995). As shown in Table 2, females had higher mean levels of fear of crime than males. Specifically, females were most fearful of being physically assaulted, having their car broken into, and being attacked by someone with a weapon. They were least fearful of being approached on the street by a beggar or panhandler. Males however, were most fearful of having someone break into their residence while they are away and being attacked by someone with a weapon. Just like the females, they also were least afraid of being approached on the street by a beggar or panhandler.

Table 2: Descriptive Statistics for Fear of Crime, Total and by Sex

	Total		Male		Female		Z-Scores
	(M)	(SD)	(M)	(SD)	(M)	(SD)	
Fear of crime							
Being approached on the street by a beggar or panhandler	3.62	2.65	3.03	2.42	3.81	2.71	-1.52
Being cheated, conned or swindled out of your money	3.93	3.06	3.06	2.34	4.20	3.15	-2.16
Having someone break into your residence while you are away	5.13	3.05	4.23	2.84	5.41	3.07	-1.97
Having someone break into your residence while you are present	5.03	3.43	3.65	2.96	5.46	3.46	-2.84
Being physically assaulted	5.76	3.14	3.32	2.56	6.53	2.92	-5.88
Being murdered	4.57	3.52	3.35	3.39	4.96	3.48	-2.29
Being attacked by someone with a weapon	5.60	3.38	4.06	3.29	6.08	3.28	-2.98
Having your car broken into	5.58	3.00	3.97	2.97	6.09	2.85	-3.50
Having your car stolen	4.63	3.13	3.52	2.96	4.98	3.11	-2.36
Being forced to give up your money or property	4.88	3.13	3.52	2.77	5.31	3.14	-3.03
Having your property damaged by vandals	4.75	3.03	3.74	2.84	5.06	3.03	-2.22
Overall Fear of Crime	53.56	28.20	39.45	24.49	57.84	27.95	-3.52

Measured on a ten-point Likert scale (1=Not at all Afraid, 10=Very Afraid).

Perceived risk of victimization was measured using the same eleven items from the fear of crime questions adapted from Ferraro (1995). This time, respondents were asked to rate the chance that any of those specific crimes will happen to them in the coming year, and their responses were based on a 10-point Likert scale ranging from not at all likely=1 to very likely=10. The scale's reliability was ($\alpha = .943$) which was consistent with the literature (Chadee, 2003; Ditton & Chadee, 2006; Ferraro, 1995). Mean and standard deviation results are presented in Table 3. The Z-score tests for difference in means suggest that there are no gender differences in perceived risk of victimization, with the single exception that females more than males believe they are at risk of being physically assaulted. Among women, however, physical assault and auto burglary were perceived as higher risk, and being murdered, being cheated, conned or swindled out of their money, and being approached on the street by a beggar or panhandler were rated as least likely to happen to them. Males, in contrast, believe they are at a greater risk of being approached on the street by a beggar or panhandler, have their car broken into, and have their property damaged by vandals. They also believed they were at the least risk of being murdered, being cheated, conned or swindled out of their money, and having someone break into their residence while they are present.

Table 3: Descriptive Statistics for Perceived Risk of Victimization, Total and by Sex

	Total		Male		Female		Z-Scores
	(M)	(SD)	(M)	(SD)	(M)	(SD)	
Risk of victimization							
Being approached on the street by a beggar or panhandler	3.09	2.43	3.48	2.82	2.97	2.30	0.91
Being cheated, conned or swindled out of your money	2.78	2.15	2.29	1.55	2.94	2.29	-1.79
Having someone break into your residence while you are away	3.34	2.49	3.03	2.07	3.43	2.54	-0.88
Having someone break into your residence while you are present	3.05	2.40	2.61	2.26	3.19	2.44	-1.22
Being physically assaulted	3.81	2.65	2.45	2.23	4.23	2.64	-3.70
Being murdered	2.56	2.40	2.26	2.40	2.66	2.41	-0.80
Being attacked by someone with a weapon	3.45	2.59	2.84	2.66	3.64	2.55	-1.47
Having your car broken into	4.02	2.57	3.39	2.33	4.21	2.67	-1.64
Having your car stolen	3.06	2.45	2.77	2.41	3.15	2.47	-0.76
Being forced to give up your money or property	3.11	2.31	2.77	2.09	3.21	2.38	-0.98
Having your property damaged by vandals	3.56	2.49	3.29	2.50	3.65	2.50	-0.69
Overall Perceived Risk of Victimization	35.80	21.62	31.19	19.57	37.25	22.12	-1.45

Measured on a ten-point Likert scale (1=Not at all Likely, 10=Very Likely).

Protective actions were measured using five questions asking respondents to indicate what kinds of self-protective devices and measures they use and take while on campus during the day, at night, or in their cars and they were requested to check every option that applied. Three of the five questions asked respondents to indicate the kinds of self-protective devices (gun, knife, mace, pepper spray, club, and other) they carry on their person during the day, at night, and in their cars. The fourth question asked respondents to indicate other kinds of self-protective measures they have taken while on campus including: avoid areas on campus with poor lighting, avoid areas on campus with few or no people around, avoid areas on campus with lots of shrubbery, avoid taking night classes, avoid going to the Library, Rec Center, or other campus activity centers at night, and took a self-defense class or course, (with the requirement to check all that applied). Table 4 shows the percent of males and females that took at least one of the listed protective actions. The results indicate that more males than females took protective actions during the day, at night, and in their cars. Males were neither more nor less likely than females to report avoidance behaviors and taking self-defense classes.

Table 4: Descriptive Statistics for Protective measures, Total and by Sex

Protective Measures	Total (%)	Male (%)	Female (%)	Z-Scores
Protect Day	66.1	69.0	65.0	2.1
Protect Night	57.3	64.3	54.7	3.6
Protect Car	66.3	77.3	63.2	4.8
Avoidance Behavior	51.1	57.9	46.4	0.6
Self-defense class	4.3	5.3	3.6	0

Independent and Control Variables

Several measures of crime alerts were used in this study. See Appendix D for the precise wording of the survey questions used here. To address the effects of campus crime alerts on students' fear of crime and risk of victimization, questions regarding multimodal/diversity of alerts and frequency of alerts were employed. To measure *Multimodal/diversity of alerts*, respondents were asked to check all that applied to questions asking them to indicate where they are signed up to receive emergency alerts. The responses ranged from Texas State University campus (official University email account, personal email account, mobile phone texts, mobile phone voicemails, landline phone voicemails, and other). There were also questions asking if they signed up to receive emergency alerts from other organizations (such as places of employment or children's schools), and where they signed up to receive these other non-university organization emergency notifications. The results in Table 5 show that there are no gender differences in the multiple modes of alerts respondents signed up to receive.

Frequency of Alerts was measured using a 10-point Likert scale (never=1 to very frequently=10) where respondents were asked to indicate how frequently they received emergency alerts in the past 12 months from the Texas State University email, other non-university organization, personal email, mobile phone text, mobile phone voicemail and landline phone voicemail. As shown in Table 5, there are no gender differences in frequency of emergency alerts.

Four control variables were used in this analysis, sex, race, prior victimization, and vicarious victimization. *Sex* was measured as male = 0 and female = 1; those indicating "gender non-binary" on the survey were recoded as "missing" for purposes of

statistical analysis. Race was also recoded as 0= Nonwhites and 1= Whites. *Prior victimization* was measured by two property crime items (theft and vandalism) and one violent crime measure (physical assault), where respondents indicated whether these things had ever happened to them (no = 0 and yes = 1). *Vicarious victimization* was measured by two property crime items (theft and vandalism) and one violent crime measure (physical assault), where respondents indicated whether these things had ever happened to someone they know well (no = 0 and yes = 1). From the results presented in Table 5, it is shown that there are no gender differences in the prior and vicarious victimization of respondents.

Table 5: Descriptive Statistics for Independent and Control Variables, Total and by sex.

INDEPENDENT VARIABLES							
	Total		Male		Female		Z-Scores
	(M)	(SD)	(M)	(SD)	(M)	(SD)	
Mean Number of Alert Modes	1.44	.854	1.36	.830	1.50	.881	-0.80
Mean Frequency of Alerts	14.6	6.94	15.4	10.1	14.1	4.55	0.69
CONTROL VARIABLES							
	Total		Male		Female		Z-Scores
	(M)	(SD)	(M)	(SD)	(M)	(SD)	
Mean Prior Victimization	4.38	1.78	4.15	1.46	4.53	1.99	-1.15
Mean Vicarious Victimization	5.30	1.78	5.16	1.79	5.39	1.81	-0.62

Analytic Strategy

Pearson's correlations were used to analyze the effects of multimodal/diversity of alerts and frequency of alerts on fear of crime, perceived risk of victimization, and protective actions. This analysis provided preliminary insights into the direction and strength of association between the variables. Additionally, OLS regression analysis was used to assess the effects of multimodal /diversity of alerts and frequency of alerts on fear of crime, perceived risk of victimization, and protective actions, while controlling for prior victimization, vicarious victimization, sex, and race. Prior to statistical analysis, data were checked for entry accuracy, missing values, outliers, and for violations of multivariate statistical assumptions including the test of normality.

Quality and Ethics

To conduct this study, the researcher got an approval from the Institutional Review Board (Belhi and Nolan, 1995). This study incorporated a sample of the diverse student population of the institution. One of the ethical issues that arose was recruitment of participants younger than 18 (Morrow, 2008) This study assessed college students of different age groups, making the likelihood of involving students younger than the legal age possible; therefore, students who were younger than 18 were intentionally excluded from the study. Qualtrics did not track emails. To prevent Qualtrics from tracking the IP addresses of participants, the feature was turned off by enabling the option to "Anonymize Responses". Therefore, the survey was completely anonymous with absolutely no identifiers as this ensured minimal risk to students. Participation was voluntary, and confidentiality was ensured. Although the survey questions focused only on perceived risk of victimization, notwithstanding, participants were encouraged to

make use of available counselling resources, which was provided to all subjects if the questions triggered a bad memory. Non-response bias and exaggeration, which arises due to the use of questionnaires, was a foreseen issue. Therefore, in cognizance of Edwards, Roberts, Clarke, DiGuseppi, Pratap, Wentz (2002)'s suggestion on how to minimize non-response bias, an explanation of how this study will benefit institutions of higher learning was given.

IV. FINDINGS

Bivariate Correlations

To answer the research question assessing whether multiple modes of emergency alerts increased student's fear of crime and perceived risk of victimization, a bivariate correlation was performed. The bivariate results for these analyses are presented in Table 6. The relationship between multiple alerts and fear of crime was statistically non-significant. Likewise, multiple alerts was unrelated to perceived risk of victimization.

To address the second research question examining whether frequency of emergency alerts increases students' fear of crime and perceived risk of victimization, Pearson's bivariate correlation was also performed as shown in Table 6. The results of the analyses indicate that there was a statistically significant moderate positive relationship between frequency of emergency alerts and fear of crime. The results also show that the relationship between frequency of emergency alerts and perceived risk of victimization is statistically non-significant.

To answer the third research question assessing whether multiple modes of emergency alerts and frequency of emergency alerts influenced protective actions, a bivariate correlation was again performed. The bivariate results for these analyses are presented in Table 6. The relationship between multiple alerts and protective measures taken during the day, protective measures taken at night, protective measures taken in the car, and avoidance behaviors were all statistically non-significant. The results also show that the relationship between frequency of emergency alerts and protective measures

taken during the day, protective measures taken at night, protective measures taken in the car, and avoidance behaviors are statistically non-significant.

To address the fourth research question examining whether students are likely to take protective actions when fear of crime and perceived risk of victimization are present, Pearson's bivariate correlation was also performed as shown in Table 6. The relationship between protective measures taken during the day and fear of crime, avoidance behavior and fear of crime and protective measures taken at night and fear of crime were non-significant. Protective actions taken in the car and fear of crime was also statistically non-significant. The results also show the relationships between protective measures taken during the day and perceived risk of victimization, protective actions taken at night and perceived risk of victimization, and protective actions taken in the car and perceived risk of victimization were non-significant. The relationship between avoidance behaviors and perceived risk of victimization was also non-significant.

Among the control variables used in the analysis, fear of crime was correlated with being non-white, and prior victimization was positively correlated with vicarious victimization.

Table 6: Bivariate Correlations among Variables

	1	2	3	4	5	6	7	8	9	10	11
1. Fear of Crime	.										
2. Perceived Risk	.208**	.									
3. Protect day	-.004	.027	.								
4. Protect Night	.035	.030	1.000**	.							
5. Protect car	.171	.261	.373*	.324	.						
6. Avoidance Behavior	-.041	-.079	-.257	-.257	.062	.					
7. Multiple modes of Alerts	-.069	.139	.069	.090	.075	-.036	.				
8. Frequency of Alerts	.416**	.175	.122	.136	.265	.059	.005	.			
9. Prior Victimization	.007	.077	.080	.060	.220	.140	.184	.088	.		
10. Vicarious Victimization	.047	.300*	-.095	-.128	.001	.066	.153	.063	.424**	.	
11. Female	.286	.232	-.048	-.048	-.141	-.133	.076	-.085	.105	.062	.
12. White	-.362*	-.249	-.035	.005	-.100	-.122	.146	-.221	.200	-.038	-.006

**Correlation is significant at the 0.01 level (2-tailed)

* Correlation is significant at the 0.05 level (2-tailed)

Multiple Regression Analyses

Multiple Modes of Emergency Notification, Frequency of Alerts, and Fear of Crime

To test the hypothesis that students who report receiving multiple modes of emergency notification and frequent emergency alerts will report increased fear of crime, an ordinary least squares (OLS) linear regression analysis was conducted. The model fit the data well, ($F(6, 35) = 2.67$, $p=.03$, adjusted $R^2 = .20$). However, as shown in Table 7, receiving multiple modes of alerts was not statistically significantly related to fear of

Table 7: OLS Regression Analysis for Fear of Crime

Variables	b	β	SE (b)	p
Multiple Modes of Alerts	-2.552	-.078	4.767	.596
Frequency of Alerts	1.536	.387	.579	.012
Prior Victimization	.159	.011	2.385	.947
Vicarious Victimization	.195	0.13	2.429	.936
Female	16.513	.288	8.188	.051
White	-15.319	-.268	8.468	.079
R^2	.314			

crime when other variables were controlled for in the model. However, greater frequency of alerts was associated with increased fear of crime, and the model accounted for 31.4% of the variation in fear of crime in the sample.

Multiple Modes of Emergency Notification, Frequency of Alerts, and Perceived Risk of Victimization

To test the hypothesis that students who report receiving multiple modes of emergency notification and frequent emergency alerts will report increased perceived risk of victimization, a linear regression analysis was conducted. The results as shown in Table 8 indicate that multiple modes of emergency notification and frequency of alerts

Table 8: OLS Regression Analysis for Perceived Risk of Victimization

Variables	b	β	SE (b)	p
Multiple Modes of Alerts	2.677	.105	3.960	.503
Frequency of Alerts	.387	.125	.481	.426
Prior Victimization	-.737	-.064	1.981	.712
Vicarious Victimization	3.475	.293	2.017	.094
Female	8.606	.193	6.802	.214
White	-9.759	-.219	7.034	.174
R ²	.217			

were not statistically significantly associated with perceived risk of victimization. The model does not fit the data well ($F(6, 35) = 1.62, p=.17, \text{adjusted } R^2 = .08$) and none of the predictor variables were associated with perceived risk of victimization.

Multiple Modes of Emergency Notification, Frequency of Alerts, and Protective Measures at Daytime

A regression analysis was conducted to test the hypothesis that receiving multiple modes of emergency notification and frequent emergency alerts will result in increased use of protective measures during the day. The results shown in Table 9 indicate that multiple modes of emergency notification and frequency of alerts were not statistically significantly associated with protective actions during the day. The model does not fit the data well ($F(6, 31) = .509, p=.80, \text{adjusted } R^2 = -.09$) and none of the predictors were statistically significant.

Table 9: OLS Regression Analysis for Protect Day

Variables	b	β	SE (b)	p
Multiple Modes of Alerts	.063	.109	.471	.541
Frequency of Alerts	.010	.145	.102	.437
Prior Victimization	0.51	.198	.013	.335
Vicarious Victimization	-.067	-.248	.052	.212
Female	.019	.018	.184	.918
White	-.022	-.022	.192	.908
R^2	.090			

Multiple Modes of Emergency Notification, Frequency of Alerts, and Protective Measures at Night

To test the hypothesis that students who report receiving multiple modes of emergency notification and frequent emergency alerts will report increased use of protective measures at night, a regression analysis was conducted. The results as shown in Table 10 indicate that multiple modes of emergency notification and frequency of alerts were not statistically significantly associated with protective actions at night. Hence, the model does not fit the data well ($F(6, 31) = .667, p=.68, \text{adjusted } R^2 = -.06$) and none of the predictors were statistically significant.

Table 10: OLS Regression Analysis for Protect Night

Variables	b	β	SE (b)	p
Multiple Modes of Alerts	.083	.145	.100	.412
Frequency of Alerts	.013	.183	.013	.318
Prior Victimization	.043	.169	.051	.401
Vicarious Victimization	-.078	-.285	.052	.147
Female	.024	.024	.180	.893
White	.051	.049	.192	.791
R^2	.114			

Multiple Modes of Emergency Notification, Frequency of Alerts, and Protective Measures in the Car

A regression analysis was conducted to test the hypothesis that receiving multiple modes of emergency notification and frequent emergency alerts will result in increased use of protective measures taken in the car. The results shown in Table 11 indicate that multiple modes of emergency notification and frequency of alerts were not statistically significantly associated with protective actions taken in the car. The model does not fit the data well ($F(6, 25) = .676$, $p=.67$, adjusted $R^2 = -.07$) and none of the predictors were statistically significant.

Table 11: OLS Regression Analysis for Protect Car

Variables	b	β	SE (b)	p
Multiple Modes of Alerts	.039	.072	.105	.713
Frequency of Alerts	.007	.109	.015	.622
Prior Victimization	.096	.339	.062	.136
Vicarious Victimization	-.049	-.175	.057	.395
Female	-.056	-.052	.220	.801
White	-.189	-.181	.234	.426
R^2	.140			

Multiple Modes of Emergency Notification, Frequency of Alerts, and Protective Measures (Avoidance Behavior)

To test the hypothesis that students who report receiving multiple modes of emergency notification and frequent emergency alerts will report increased use of protective measures (avoidance behavior) a regression analysis was conducted. The results as shown in Table 12 indicate that multiple modes of emergency notification and frequency of alerts were not statistically significantly associated with protective actions (avoidance behavior) at night. Hence, the model does not fit the data well ($F(6, 35) = .502, p=.680, \text{adjusted } R^2 = -.08$) and none of the predictors were statistically significant.

Table 12: OLS Regression Analysis for Avoidance Behavior

Variables	b	β	SE (b)	p
Multiple Modes of Alerts	-.032	-.053	.102	.754
Frequency of Alerts	-.033	-.041	.012	.809
Prior Victimization	.044	.163	.051	.392
Vicarious Victimization	-.003	-.010	.052	.956
Female	-.185	-.175	.175	.297
White	-.210	-.198	.181	.255
R^2	.079			

V. DISCUSSION AND CONCLUSION

There is plethora of research examining fear of crime, prevalence of victimization, crime prevention strategies, and perceptions of crime occurrences on college and university campuses. None, however, has looked at the relationship between crime prevention strategies (campus crime alerts) and college students' fear of crime and perceived risk of victimization. This study quantitatively examines the associations between campus crime alerts and fear of crime, perceived risk of victimization, and protective measures. Second, it sought to ascertain if students gravitate towards taking protective measures when fear of crime and perceived risk are present, and if the relationship between multiple modes of emergency notifications, frequency of emergency notifications, and protective measures are mediated by either fear of crime and perceived risk of victimization. The present study adds to the literature on emergency notifications on campus, campus crime, fear of crime, and perceived risk of victimization. This study first compared mean scores on fear of crime, perceived risk of victimization, and protective actions to determine if gender differences existed. The results showed that female students had higher mean scores than males in fear of physical assault, which is consistent with prior research (see Schreck 1999). However, no significant gender difference was found for perceived risk of victimization.

Findings from prior research have argued that there are gender differences in fear of crime, perceived risk of victimization, and protective actions (Fisher 1995; Gottfredson 1986; Hindelang 1976; Hindelang, Gottfredson; Garofalo 1978; Laub 1990; Schreck 1999); however, this was not consistent with my findings on gender differences

in fear of crime, with the exception of fear of physical assault. When considering fear of crime, it is important to note and anticipate that researchers and research participants may have varied understanding of questions and thus, respond accordingly (Pain, 2000). In his reference to other studies, like that of Valentine (1989) Stanko (1990), and Pain (1997), Pain theorized that each person's level of fear is a direct result of their adaptation to the spatial, temporal, and social situations they might have encountered. He argued, "We move in and out of shades of fear" (p. 368) during our lifetime.

Previous research has shown that gender (i.e., being female) is the most significant predictor of heightened perceived risk of victimization (Warr, 2000). College women have been found to believe they are at a greater risk than men of being a victim of crime on campus (Fisher, 1995). More than twice the number of women than men have been found to report being fearful of campus victimization (Walsh et al. 2000). In the current study, however, no such gender difference emerged.

This study found that there were gender differences in protective actions, with males reporting more protective actions than females. These findings, though counterintuitive, were statistically significant, except for avoidance behavior. Ferraro (1995) suggested that females are more motivated than males to take protective actions because of their general fear of rape, but this was not tested in the present research. The finding that male students used more protective measures than female students may be due to the type of protective measures specified in the survey, as men may be more likely to carry weapons such as knives and guns. Previous research on protective measures included additional protective devices such as keys and asking someone to be an escort for reasons of safety (Fisher and Sloan 2003), but these items were not included in the

survey used in this research. It is also possible that women do not necessarily carry protective devices because they may be in the constant company of people (perhaps mostly men) who do. The lack of gender difference in avoidance behaviors found in this study may be because both sexes believe that the campus fails to provide a safe environment for them. The use of protective measures and engagement in avoidance behaviors by students have been linked to the use of drugs and alcohol, as Tewksbury and Mustaine (2003) in their research found that students who did not use other types of drugs or alcohol, but used crack, were more likely to use self-protective measures. In addition, the World Drug Report (2006) found males use more poly-drugs (e.g., crack and marijuana) than females do. Tewksbury and Mustaine (2003) also found in their research that students who were alcohol and drug users (except for crack) perceived the need to take protective actions to avoid being likely victims of crime than students who were not drug or alcohol users. However, the present study did not ask about alcohol and drug use among these students.

Personal safety concern is another factor in determining if a person will engage in avoidance behaviors (Bachman, Saltzman, Thomson & Carmody, 2002; Hughes et al. 2003). Some individuals believe that having certain protective devices on them or taking self-defense classes helps them maintain a certain level of control over any fear of crime they may have (Adams and Serpe 2000). Extensive research has also shown that the primary reason why people engage in avoidance behaviors is to remove risks of victimization and make up for prior victimization (Kleck, Kovandzic, Saber, & Hauser, 2011; Lab & Stanich, 1994; Luxenburg, Cullen, Langworthy, Kopache, 1994; Smith & Uchida, 1988).

There was also a statistically significant relationship between vicarious victimization and perceived risk of victimization. This finding was consistent with prior research by Skogan and Maxfield (1981), who found that knowledge of others victimization, resulted in increased personal fear of crime, and Box et al., (1988)'s finding suggests that knowing someone who had been victimized led to higher fear of crime levels than those who knew no one who had been victimized.

The results from the regression analyses refuted the hypotheses that receiving multiple alerts results in increased fear of crime and perceived risk of victimization. The lack of direct relationship between receiving multiple modes of emergency alerts, fear of crime, and perceived risk of victimization suggests the possibility that the cognitive aspect of fear of crime outshines the emotional component. For example, receiving multiple modes of alerts will not change the fact that some individuals are aware of the possibility of crime and the risk of victimization, and are already taking protective actions or necessary precautions. However, the bivariate correlation results supported the hypothesis that frequency of alerts are associated with increased fear of crime but refuted that of increased perceived risk of victimization while controlling for other variables. The results show that the more frequently the university sends out emergency alerts, the higher the fear of crime. The frequency of alerts may give respondents the cue that crime may be on the rise in the university and its environs, hence the increased fear of crime. Suggestions from this significant finding is that policies and practices by university administrators aimed at keeping students safe may have adverse effects on students; therefore, caution should be taken to avoid these.

When trying to assess if increased fear of crime levels and increased perceived risk of victimization resulted in use of protective measures, the bivariate results were not statistically significant. This is inconsistent with prior research by Hughes et al. (2003) who found that concern for personal safety influences one's behavior and informs the decision to use protective measures. In determining if there is a relationship between receiving multiple modes of emergency notifications and increased protective actions, as well as frequency of emergency notifications and increased use of protective measures, multivariate linear regression analyses were conducted which showed no relationship between both predictor variables and increased use of protective measures while controlling for other variables. In addition, the bivariate correlation for multiple modes of alerts and increased protective measures was also not statistically significant.

The researcher intended to perform a mediation analysis to assess if fear of crime and perceived risk of victimization were mediating factors in the relationship between multiple modes of emergency notification and increased protective measures, as well as frequency of emergency notifications and increased protective measures as suggested by Preacher and Hayes (2004). This proved impossible because the results of the initial analyses indicated that very little to no relationship existed between the predictor variables (multiple modes of emergency notification and frequency of emergency notification) and the dependent/mediating variables (fear of crime and perceived risk of victimization). Thus, a mediation analysis was impossible to conduct.

Some explanations can be proffered to explain the weak predictive effects of the study. Existing studies on perceived risk of victimization, fear of crime, and personal

victimization on college campuses would propose that the predictor and control variables should have explained much more variation in the dependent variable than that which was observed. However, strong explanatory outcomes were not observed in the context of whether or not multiple modes of emergency notification and frequency of alerts resulted in increased fear of crime and perceived risk of victimization. This might be due to other unmeasured independent variables, which might account for some variations in the dependent variables. For example, students are perhaps already fearful of crime and perceive themselves to be at risk of victimization, and already taking protective actions to offset the risk, which means that receiving multiple emergency notifications and frequent emergency alerts might make no difference to them. Alternatively, students might think less of campus security measures (e.g., emergency notifications) than presumed. While statistically significant relationships exist between fear of crime and perceived risk of victimization, in practicality, students might give little to no consideration or attention to these concepts. This, however, is somewhat expected, as according to Ferraro (2005), the fear of crime youths exhibit is sometimes not proportionate to their actual risk of victimization.

Limitations and Future Research

When assessing how crime alerts impact fear of crime and perceived risk of victimization, some variables such as proximity measures (both social proximity and geographic proximity of disorder) described by the routine activities' theory were not incorporated, and this in turn, may have affected the prediction of crime alerts leading to fear of crime and perception of victimization. Future research should incorporate social

and geographic proximity of disorder and lifestyle behaviors, as this will give an in-depth understanding to preceptors of student's fear of crime. This study used a survey method, which resulted in a low response rate and the impossibility of knowing the number of students that had access to the survey but opted not to participate. Future research should utilize a mixed methods approach, such as combining quantitative survey methods and randomized controlled trial methods. This mixed method approach combined with effective recruitment strategies (van Wonderen, et al, 2007) and incentives, will likely result in higher participation rates. There were gender differences in response to the survey (e.g., greater response of females than males) which was problematic in determining actual gender effects, so the exploration of gender effects was cautious and incomplete at best. Moreover, this was a cross-sectional study, so students' attitudes towards multiple modes of emergency notification and frequency of emergency alerts over a period could not be determined. It was also impossible to know the directionality of the supposed causal relationship.

Using a convenience sample of students presents an external validity issue and having a very small sample size presented a limitation of not having enough data to ascertain the directionality of the relationships between variables. In addition, since this study was conducted at a single university, the study cannot be generalized to other universities across the country. Future research should use a comprehensive sample drawn from various campuses, incorporating schools in different locations, including urban and rural universities with varied emergency notification systems to compare similarities and differences in findings. It should also include samples from other

university community members who receive these emergency alerts, e.g., parents, as this will give a unique perspective of non-student perceptions of campus crime alerts.

Despite these limitations, the study does provide some insight into the connections among emergency notifications, fear of crime and perceived risk, and the use of protective actions. By addressing methodological limitations in future research, a clearer picture of the relationships among these factors may emerge to guide the best practices for informing college campus communities about crime.

APPENDIX SECTION

APPENDIX A

In future correspondence, please refer to 5808

September 24, 2018

Adaeze Therese Edwards Texas State University 601 University Dr.

San Marcos,

TX 78666 Dear

Adaeze

Edwards:

Your application titled, "Campus Crime Alerts and Their Effects on Perceived Risk of Victimization and Fear of Crime" was reviewed by the Texas State University IRB and approved. It was determined there are: (1) research procedures consistent with a sound research design and they did not expose the subjects to unnecessary risk. (2) benefits to subjects are considered along with the importance of the topic and that outcomes are reasonable; (3) selection of subjects are equitable; and (4) the purposes of the research and the research setting are amenable to subjects' welfare and produced desired outcomes; indications of coercion or prejudice are absent, and participation is clearly voluntary.

1. In addition, the IRB found you will orient participants as follows: (1) informed consent is required; (2) Provision is made for collecting, using and storing data in a manner that protects the safety and privacy of the subjects and the confidentiality of the data; (3) Appropriate safeguards are included to protect the rights and welfare of the subjects. (4) Compensation will not be provided for participation.

This project was approved at the Expedited Review Level until August 31, 2019

2. Please note that the institution is not responsible for any actions regarding this protocol before approval. If you expand the project at a later date to use other instruments, please re-apply. Copies of your request for human subjects review, your application, and this approval, are maintained in the Office of Research Integrity and Compliance.

Report any changes to this approved protocol to this office. Notify the IRB of any unanticipated events, serious adverse events, and breach of confidentiality within 3 days.

Sincerely,



Monica Gonzales
IRB Regulatory Manager
Office of Research Integrity and
Compliance Texas State University
CC: Dr. Christine Sellers

OFFICE OF THE ASSOCIATE VICE PRESIDENT FOR RESEARCH

601 University Drive | JCK #489 | San Marcos, Texas 78666-4616

Phone: 512.245.2314 | fax: 512.245.3847 | WWW.TXSTATE.EDU

This letter is an electronic communication from Texas State University-San Marcos, a member of The Texas State University System.

IRB approved application # 5808

Page 1 of 2

Version

APPENDIX B

RECRUITMENT EMAIL

Study Title: Campus Crime Alerts

This email message is an approved request for participation in research that has been approved by the Texas State Institutional Review Board (IRB).

Adaeze Edwards, a graduate student at Texas State University, is conducting a research study to ascertain the effects of campus crime alerts on student's perceptions and behaviors. You are being asked to complete this survey because the study is interested in the entire student population.

Your participation is completely voluntary. The survey will take approximately 10 minutes or less to complete. You must be at least 18 years old to take this survey. Although we do not anticipate any severe risks associated with participation in this study, we do ask questions about whether you have ever been the victim of a crime. Recalling such events might make you uncomfortable. If you feel you need to contact a professional, you should contact the University Health Services for counseling services at 512.245.2208, located at 5-4.1 LBJ Student Center.

We ask that you try to answer all questions; however, if there are any items that make you uncomfortable or that you would prefer to skip, please leave the answer blank. Participants have the right to leave the survey at any time. Your responses are anonymous.

If any questions or concerns arise, please feel free to contact Adaeze Edwards at ame100@txstate.edu or her faculty advisor Dr. Christine Sellers at css100@txstate.edu.

**Adaeze Edwards, Graduate Student
Professor School of Criminal Justice
Justice**

(512)245-3341
ame@txstate.edu

**Dr. Christine Sellers,
School of Criminal**

(512)245-3341
css@txstate.edu

This project 5808 was approved by the Texas State IRB on September 24, 2018. Pertinent questions or concerns about the research, research participants' rights, and/or research-related injuries to participants should be directed to the IRB chair, Dr. Denise Gobert, 512-716-2652, dgobert@txstate.edu or to Monica Gonzales, IRB Regulatory Manager 512-245-2334 - meg201@txstate.edu

If you would prefer not to participate, please do not fill out the survey. If you consent to participate, please complete the survey by **clicking on the following link:** https://txstate.co1.qualtrics.com/jfe/form/SV_02H5XbGHpsfIZxX

APPENDIX C

INFORMED CONSENT

Study Title: Campus Crime Alerts

Principal Investigator: Adaeze Edwards
Email: ame100@txstate.edu
Phone: 713-340-8499 or

Faculty Advisor: Dr. Christine Sellers
Email: css100@txstate.edu
Phone: 512-245-334

With this consent form, the information needed to understand the reason for this research study and why you are invited to participate will be made clear and concise. A thorough description of the following will be included: requirements for participation as well as inconveniences or discomforts and known risks that may be encountered during participation. We strongly advise that any questions you may have during this survey be addressed to ame100@txstate.edu. Your continued participation in this survey will serve as a record of your voluntary participation.

PURPOSE AND BACKGROUND

Your invitation to participate in this research study is to gain an insight of your view regarding the effects of campus crime alerts on perceived risk of victimization and fear of crime. The gathered information will help us better understand the effects of the campus alert system. Being part of the Texas State University community, your participation and opinion are highly needed

PROCEDURES

If you are willing to participate in this study, you will be asked to answer brief survey questions. These questions will last approximately 10 minutes or less. This survey requires that you answer the specified questions on how it relates to your experience. This will be neither audio or video recorded.

RISKS/DISCOMFORTS

Because Texas State University prides itself with a diverse population of students, a section requesting your demographic information will be required. Your answers to these cannot be associated with you, as there will be no identifiers in the questions. Notwithstanding, if you by any means feel uncomfortable answering any of these questions, please feel free to stop at any time.

If you are a student of Texas State University and for any reason you feel offended, upset or uncomfortable with your participation in this survey, you may contact the University Health Services for counseling services at 512.245.2208, located at 5-4.1 LBJ Student Center.

BENEFITS/ALTERNATIVES

There will be no incentive earned from your participation in this study. However, the information that you provide will be helpful to school administrators to better disseminate the crime alert information.

EXTENT OF CONFIDENTIALITY

There will be no identifiers in this survey; however, any identifiable information discovered in the demography, will be disclosed only with your permission or as required by law. The Texas State University Office of Research Compliance (ORC) may access the data. The ORC monitors research studies to protect the rights and welfare of research participants.

Data will be analyzed only at the aggregate (group) level and this will make individual identification very difficult. Data will be kept for three years (per federal regulations) after the study is completed and then destroyed. that data will be analyzed at the group level.

PAYMENT/COMPENSATION

There will be no payment or compensation for participation in this study.

PARTICIPATION IS VOLUNTARY

Participation in this study is voluntary, and so you can decline participation in this study if you feel uncomfortable or decide not to continue. You may also refrain from answering any question you feel you cannot answer. If you volunteer to be in this study, you may withdraw from it at any time without consequences of any kind or loss of benefits to which you may be otherwise entitled.

QUESTIONS

Any questions or concerns regarding your participation in this study can be directed to the Principal Investigator, Adaeze Edwards: 713-340-8499 or ame100@txstate.edu
This project was approved by the Texas State IRB on September 24, 2018. Pertinent questions or concerns about the research, research participants' rights, and/or research-related injuries to participants should be directed to the IRB Chair, Dr. Denise Gobert, 512-716-2652, dgobert@txstate.edu or to Monica Gonzales, IRB Regulatory Manager 512-245-2314 - meg201@txstate.edu.

DOCUMENTATION OF CONSENT

By clicking “I agree” below, you are indicating that you have read and understood this consent form and agree to participate in this research study.

I Agree.

I Do Not Agree. (Please exit survey)

IRB approved application # 5808 Page 2 of 2
Version # 1
APPROVED:
9/24/2018Expedited Review



APPENDIX D
SURVEY QUESTIONS

Age Compliance Screener

What is your age?

(a) 17 or younger

Disqualify

(b) **18 years and above**

1. How knowledgeable are you of the Texas State University Campus Crime Alert System used to notify you in case of an emergency?

- 0 Not at all knowledgeable
- 1 Somewhat knowledgeable
- 2 Knowledgeable
- 3 Very knowledgeable

2. Are you signed up to receive emergency alerts from the **Texas State University campus?**

- 1 Yes
- 0 No (**IF NO, SKIP TO QUESTION 4**)

3. If yes, where are you signed up to receive emergency alerts from the **Texas State University campus?** (CHECK ALL THAT APPLY)

- a. Texas State email account
- b. Personal email account
- c. Mobile phone texts
- d. Mobile phone voicemails
- e. Landline phone voicemails
- f. Other (Please specify) _____

4. Are you signed up to receive emergency alerts from **other organizations?**

- 1 Yes
- 0 No (**IF NO, SKIP TO QUESTION 6**)

5. If yes, where are you signed up to receive **other non-University organizations?** (CHECK ALL THAT APPLY)

- a. Other non-University organization email account
- b. Personal email account
- c. Mobile phone texts
- d. Mobile phone voicemails
- e. Landline phone voicemails
- f. Other (Please specify) _____

6. Have you ever seen a Texas State University emergency message appear on a screen or computer while on campus?

- 1 Yes
- 0 No

7. Have you ever heard the emergency/severe weather sirens go off on campus?

- 1 Yes
- 0 No

8. Please indicate on a scale of 1 to 10 how frequently you have received emergency alerts from the following sources in the past 12 months, where 1 means *Never* and 10 means *Very frequently*.

	Ne ver										Very frequently
a. Texas State University email	1	2	3	4	5	6	7	8	9	10	
b. Other non-university organization email	1	2	3	4	5	6	7	8	9	10	
c. Personal email	1	2	3	4	5	6	7	8	9	10	
d. Mobile phone text	1	2	3	4	5	6	7	8	9	10	
e. Mobile phone voicemail	1	2	3	4	5	6	7	8	9	10	
f. Landline phone voicemail	1	2	3	4	5	6	7	8	9	10	

9. Please rate your agreement with the following statements from *Strongly Disagree* (1) to *Strongly Agree* (4).

	Strongly Disagree	Disagree	Agree	Strongly Agree
a. The university sends out too many messages through the emergency notification system.	1	2	3	4
b. The messages that are sent through the emergency notification system are vague.	1	2	3	4
c. If fewer messages were sent, I would be more interested in what the messages say.	1	2	3	4
d. More information is needed in the messages about how I should respond.	1	2	3	4
e. I know what to do in the event of an emergency on campus.	1	2	3	4
f. I feel safe on campus.	1	2	3	4
g. I never think about my safety on	1	2	3	4

campus.

10. Please indicate on a scale of 1 to 10 how afraid you are of being a victim of the following crimes while on campus, where 1 means *you are not at all afraid* and 10 means you are *very afraid*.

	Not at all afraid										Very afraid
a. Being approached on the street by a beggar or panhandler	1	2	3	4	5	6	7	8	9	10	
b. Being cheated, conned, or swindled out of your money	1	2	3	4	5	6	7	8	9	10	
c. Having someone break into your residence while you are away	1	2	3	4	5	6	7	8	9	10	
d. Having someone break into your residence while you are there	1	2	3	4	5	6	7	8	9	10	
e. Being physically assaulted	1	2	3	4	5	6	7	8	9	10	
f. Being murdered	1	2	3	4	5	6	7	8	9	10	
g. Being attacked by someone with a weapon	1	2	3	4	5	6	7	8	9	10	
h. Having your car broken into	1	2	3	4	5	6	7	8	9	10	
i. Having your car stolen	1	2	3	4	5	6	7	8	9	10	
j. Being forced to give up your money or property	1	2	3	4	5	6	7	8	9	10	
k. Having your property damaged by vandals	1	2	3	4	5	6	7	8	9	10	

11. Please rate the chance that while on campus a specific thing will happen to you in the coming year on a scale of 1 to 10, where 1 means *not at all likely* and 10 means *very likely*

	Not at all likely	2	3	4	5	6	7	8	9	Very likely
a. Being approached on the street by a beggar or panhandler	1	2	3	4	5	6	7	8	9	10
b. Being cheated, conned, or swindled out of your money	1	2	3	4	5	6	7	8	9	10
c. Having someone break into your residence while you are away	1	2	3	4	5	6	7	8	9	10
d. Having someone break into your residence while you are there	1	2	3	4	5	6	7	8	9	10
e. Being physically assaulted	1	2	3	4	5	6	7	8	9	10
f. Being murdered	1	2	3	4	5	6	7	8	9	10
g. Being attacked by someone with a weapon	1	2	3	4	5	6	7	8	9	10
h. Having your car broken into	1	2	3	4	5	6	7	8	9	10
i. Having your car stolen	1	2	3	4	5	6	7	8	9	10
j. Being forced to give up your money or property	1	2	3	4	5	6	7	8	9	10
k. Having your property damaged by vandals	1	2	3	4	5	6	7	8	9	10

12. What kind of self-protection devices do you carry on your person **while on campus in the daytime**? (CHECK ALL THAT APPLY)
- a. None
 - b. Gun
 - c. Knife
 - d. Mace
 - e. Pepper Spray
 - f. Club
 - g. Other (Please specify) _____
 - h. I am not on campus in the daytime
13. What kind of self-protection devices do you carry on your person **while on campus at night**? (CHECK ALL THAT APPLY)
- a. None
 - b. Gun
 - c. Knife
 - d. Mace
 - e. Pepper Spray
 - f. Club
 - g. Other (Please specify) _____
 - h. I am not on campus at night
14. What kind of self-protection devices do you carry in your car? (CHECK ALL THAT APPLY)
- a. None
 - b. Gun
 - c. Knife
 - d. Mace
 - e. Pepper Spray
 - f. Club
 - g. Other (Please specify) _____
 - h. I don't have a car
15. What other kinds of self-protective measures have you taken while on campus? (CHECK ALL THAT APPLY)
- a. None
 - b. Avoid areas on campus with poor lighting
 - c. Avoid areas on campus with few or no people around
 - d. Avoid areas on campus with lots of shrubbery
 - e. Avoid taking night classes
 - f. Avoid going to the Library, Rec Center, or other campus activity centers at night
 - g. Took a self-defense class or course
 - h. Other (Please specify) _____

16. How safe do you feel . . .	Very safe	Somewhat safe	Somewhat unsafe	Very unsafe
a. outside alone on campus during the day?	1	2	3	4
b. outside alone on campus at night?	1	2	3	4
c. inside a campus building during the day?	1	2	3	4
d. inside a campus building during the night?	1	2	3	4
e. inside your residence during the day?	1	2	3	4
f. inside your residence during the night?	1	2	3	4

17. Have any of the following things have happened to <u>you while on campus</u> :	No, Never	Yes, in the Past Year	Yes, but NOT in the Past Year
a. Someone stole something from me	0	1	2
b. Someone damaged my property	0	1	2
c. Someone physically harmed me	0	1	2

18. Have any of the following things NOT in the Past Year happened to <u>someone you know well while on campus</u> :	No, Never	Yes, in the Past Year	Yes, but NOT in the Past Year
a. Someone stole something from them	0	1	2
b. Someone damaged their property	0	1	2
c. Someone physically harmed them	0	1	2

19. How often do you . . .	Never	Once or Twice a Week	3-5 Times a Week	Nightly or Almost Nightly
a. avoid walking on campus at night?	0	1	2	3
b. ask a friend to walk on campus with you at night?	0	1	2	3
c. request Bobcat Bobbies to escort you on campus at night?	0	1	2	3
d. use the Bobcat Guardian mobile app while on campus at night	0	1	2	3

And to conclude, just a few questions for classification purposes.

20. Age at last birthday _____

21. What is your gender?

- 0 Male
- 1 Female
- 2 Gender non-binary

22. With what racial/ethnic category do you identify?

- 1 African American/Black
- 2 Asian
- 3 Hispanic/Latino
- 4 White/Caucasian
- 5 Multiracial
- 6 Other (please specify) _____

23. Classification at Texas State:

- 1 Freshman
- 2 Sophomore
- 3 Junior
- 4 Senior
- 5 Graduate student (Masters or Doctoral)
- 6 Other (please explain) _____

24. Do you live on campus?

- 1 Yes (**IF YES, SKIP TO END OF SURVEY**)
- 0 No

25. If you live off campus, with whom do you live?

- 0 Alone
- 1 Roommate(s)
- 2 Fraternity/sorority house
- 3 Immediate family (parents and/or siblings)
- 4 Extended family
- 5 Spouse/partner
- 6 Other (please specify) _____

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