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**UNDERSTANDING THE IMPACT OF RISK COMMUNICATION
BY CAMPUS POLICE ON COLLEGE STUDENTS**

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UNDERSTANDING THE IMPACT OF RISK COMMUNICATION

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THESIS APPROVAL PAGE

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Abstract

Universities nationwide began implementing risk communication strategies after the Virginia Tech shooting in 2007. The degree of exposure to these mass notification messages may increase message recipients' fear of crime and perceived threat of violence. Students were surveyed to determine imminence of crime, fear of crime, and how they engage with or use their university's mass notification system. Results revealed that the cultivation of risk-based communication via SMS is not related to students' fear of crime or imminence of crime. However, students residing more than ten miles from campus exhibited a more unrealistic fear of crime compared to those living on campus. Practical recommendations for continued success are provided based off of student feedback. Future research should explore how students interact with official university social media platforms that disseminate risk-based communication.

Keywords: Cultivation Theory, Risk Communication, Social Mediated Crisis

Communication Model, College Campus Crime, Degree of Exposure, Temporal Distance

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Amidst riots and protests of police brutality on campus and in the surrounding community (Rector & J. Anderson, 2015; Karimi, Berryman & Ford, 2015), Towson University (TU) was ranked the safest campus within the ten University System of Maryland (USM) institutions. The award was bestowed upon the university for its low reports of Part I crimes. Additionally, TU received the Governor's Award for Crime Prevention, an award the university has received for 30 consecutive years (Woods, 2015). In 2016, Towson University reported that Part I on-campus crimes dropped 37 percent from 2015 to 2016 (Gorsuch, 2017). Part I offenses include eight crimes—murder, forcible rape, robbery, arson, larceny-theft, aggravated assault, and motor vehicle theft (Woods, 2015).

These awards create a paradox surrounding whether Towson University is a safe campus. Although Towson University is considered the safest campus in Maryland, students have voiced concerns of feeling unsafe after receiving multiple university-issued alerts about crime near campus (Dacey, 2013). Thus, it is imperative to further understand what variables of the risk-based communications make students feel unsafe. During risk-based situations, Towson University communicates with students using a system known as the Campus Emergency Notification System. With the increase of crime near and on college campuses (M. Anderson, 2015), it is important to consider whether the delivery of risk-based communication via short messaging service (SMS) impacts students' perceptions of safety and their perceived threat of violence on campus. This system also features several other tactics such as email, computer desktop messages, and a loudspeaker.

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Arguably, these communications may influence students to believe the campus and its surrounding areas are an unsafe place. Public policy, specifically the Clery Act, mandates that universities protect their student population by disclosing information about weather, crime, campus closing, and other risk-based factors (Groover, 2005). Although intended to legally require universities to be forthright about campus crime, one might question whether this mandate increases students' perceived threat of violence on campuses or if risk communications transport students into a fictitious world of fear, crime, and violence.

Pew Research Center found that many Americans, especially Millennials, rely on social media as their primary news source (2012; Rosenstiel, Mitchell, Purcell & Rainie, 2011). Understanding these potential influences of risk-based communication may lead lawmakers and university officials to consider whether amendments should be made to The Clery Act to increase the threat level of the crimes reported or the types of crimes publishable. This change would decrease the volume of messages sent to students, thus decreasing the possibility of information overload and/or the potential for a "mean world effect" to occur. This study examined the influence of risk communication messages in conjunction with students' perceptions of crime on campus, perceptions of campus police and feelings regarding campus safety.

Literature Review

To provide context regarding how risk-based communications may affect college campuses, the literature review explored college campus culture including student behaviors, campus safety measures, university police departments and their communication tactics, and the laws that govern university risk communication. Because of the growing reliance on the use of SMS for risk communications, literature on SMS messages used during crises were

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reviewed. This literature provided an understanding of risk communication practices on college campuses and student behaviors in regards to crime-based messages. In order to provide a theoretical underpinning for this research, several media effects theories were reviewed. Cultivation Theory, Mean World Syndrome and Mere Exposure Theory research studies were examined to understand the impact of various types of message exposure, such as repetition and mere exposure. Mean World Syndrome provided an understanding of how the impact of these messages may cause students to view the world, specifically their college campus, as a mean or dangerous place. Existing scales from relevant studies, explained in this review and outlined in the method, will be used to guide the development of the instrument.

Police Communications and College Campus Safety

In 1986, the on-campus rape and murder of Jeanne Clery created a demand for access to campus crime reports (Groover, 2005). At the time, universities were not required to record or publish crime information. Several years later, the Jeanne Clery Disclosure of Campus Security Police and Campus Crime Statistics Act of 1990, also known as the Clery Act, was enacted and required universities that receive federal funding to keep a daily record of crimes (Senat, 2013). The crime log must include the nature of the incident, date of crime and when it was reported, the location of the crime and the deposition and be posted within 48 hours of the crime. Universities may briefly withhold information if there is clear evidence that releasing the information would jeopardize an ongoing investigation or reveal the identity of the victim (Senat, 2013). The Clery Act covers murder, manslaughter, sex offenses, arson, vehicle theft, robbery, burglary and aggravated assault. It does not cover “bias incidents” such as hate crimes (Groover, 2005).

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At Towson University, the Towson University Police Department and other university communications officials publish the content required by the Clery Act. Towson participates in mobile app, SMS message, desktop, loudspeaker and email alerts. These alerts, known as the Campus Emergency Notification System (CENS) are published when a crime on campus or within the city block surrounding the university. Students may opt-in to receive SMS message alerts or download the mobile application voluntarily, but email messages are automatically delivered to students and students may not elect to remove themselves from the distribution list. Loudspeaker and desktop notification alerts occur on campus and are read on every loud speaker or delivered to every university owned desktop computer. Crime logs and a historical account of the CENS alerts are kept in the Campus Safety building, printed in the Towerlight student newspaper and available online.

Research has been conducted on students' perceived threat of violence based on the location of the university, whether the university is in a rural area or in a city, and the university's type of police force (Patton & Gregory, 2014). Therefore, the purpose of Patton and Gregory's study was to determine whether or not a campus' proximity to the crime and city and size affected students' perception of their own safety on college campuses. Patton and Gregory (2014) conducted a survey on 40 different campuses, in which students identified that they perceived themselves most likely to be victims of a robbery followed by a motor vehicle theft. Campus police reports identify the most common crime as motor vehicle theft followed by aggravated assaults. Interestingly students did not believe they were likely to become victims of assault. Results revealed students felt least safe in campus parking garages and unlit areas. Patton and Gregory (2014), however, did not identify how the 40 universities communicated these crimes to students. Determining how crimes were

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communicated to students and how often students received crime notifications are important elements to expand upon these findings.

Kaminski, Koons-Witt, Thompson and Weiss (2009) examined the impact of university shootings on the level of fear students felt related to campus crime. Kaminski et. al, (2009) explained that previous research did not examine the effects of campus mass shootings on students' fear of crime and perceived risk of victimization. To understand this information gap, surveys were administered to South Carolina University students at four different intervals: before and after the Virginia Tech (VT) shooting and before and after the Northern Illinois University (NIU) shooting. The study began as an in-class assignment that required undergraduate students to sample their peers about campus status. After shootings took place, students were offered extra credit to resample their peers to determine how the shooting impacted students. Results revealed that the shootings at VT and NIU increased the fear of being attacked with a weapon or being murdered on campus. The VT shooting increased student fears of walking alone on campus during the day and after dark, but the NIU shooting had no significant impact.

Ferraro and Grange (1987) defined risk perceptions as the "affective response to crime and its situational cues." Ferraro (1995) measured participants' fear of various crimes, such as the fear a participant had of being murdered or approached on the street by a beggar. Perceived risk of victimization is understood as the mental cue that notifies a person of their anxiety, fear or panic (Farrall, Jackson & Gray, 2007; Hale, 1996). Using this foundation of risk perception and fear of crime, Chadee and Ying (2013) developed a scale to measure students' fear of crime and risk perceptions. Individuals were asked to rate how fearful they

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were of walking campus during various situations and to rate how fearful they were of particular crimes occurring during those situations.

Risk Communication

Covello (1992) defined risk communication “as the exchange of information among interested parties about the nature, magnitude, significance, or control of a risk” (p. 359). As a form of risk communication, emergency response programs were designed to help the public understand what protective actions they should take in the event of an emergency (Heath & Palenchar, 2000). Messages should reduce the action risk and perception that individuals are at risk. Heath and Palenchar (2000) recreated Heath and Abel’s 1996 study by conducting phone interviews regarding safety. Results revealed that individuals who distrusted government officials were less likely to succumb to warning alerts or follow safety procedures. Emergency response messages were designed to lessen the likelihood that an individual would leave a safe place or attempt to evacuate an area (Heath & Palenchar, 2000), but students’ lack of trust of campus police may increase the likelihood that individuals ignore the messages and behave unsafely.

According to Sutton, Spiro, Johnson, Fitzhugh, Gibson and Butts (2013), advances in mobile communication offer new ways to send emergency alert messages to the public. Federal, state, and local level emergency management organizations implemented SMS-based systems and social media technologies to communicate with the public (Bean, Sutton, Liu, Madden, Wood & Mileti, 2015). Wireless Emergency Alert (WEA) is a nationwide system used by Federal officials to communicate public warnings. Although many alert systems, such as WEA, are limited to 90 characters, the use of short, text-based messages for public warning has become an increasingly popular form of crisis communication. Pew

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Internet and American Life Project stated that 91 percent of American adults rely on their cellphones as their primary source of communication (2015).

In order for an emergency communication service to be used by campuses, it must meet certain requirements for emergency operation (Bambenek & Klus, 2008). These requirements are defined as high reliability, excellent access control, and high-speed delivery. Although SMS has become a popular mode of communication, it does not meet the requirements. Federal and university officials considered SMS communications insecure and impossible to check the speed of delivery or guaranteed delivery. Although current knowledge and recent research (Bean et. al, 2015) of SMS has largely disproven some of these arguments, Bambenek and Klus (2008) explained the following issues still exist regarding emergency communication on college campuses. Although low in cost, SMS messages do not provide recipients the total confidence that the message is accurate or coming from the intended source. These findings, although outdated, provided evidence that text messages could be falsified. In a heightened threat environment, fake messages may lead students into danger instead of away from the threat. Universities must carefully consider their communication method to ensure it follows necessary security measures to protect the public from receiving false or incomplete messages.

Latimer (2008) expressed similar concerns. At the time of the study, SMS messages had a 160-character limit, which required the sender to send a second message. Emergency communicators faced this problem when they tried to communicate lengthier messages. While sending two messages allowed universities to communicate the full message, it may have caused the communicators to lose the attention of students, created confusion, or increased the likelihood that the message did not deliver. University communicators were

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obligated to select a message-sending system to allow them to send complete messages to students. In emergency alert messaging, universities had to identify themselves as the sender and relay the message to the target audience.

For this reason, many universities branded their emergency communications strategies, such as University of Georgia (UGAlert) (Latimer, 2008). Additionally, if students were in class and expected to refrain from using their cellphones, one might question the likelihood that those students would see the notification. Conversely, with the popularity of text messages, it is likely that students ignore or overlook emergency alert messages amongst the mass of messages they receive on a daily basis. These characteristics may suggest that SMS messages should not be used for emergency communications; however, SMS messages remain a standard communication platform for universities nationwide.

Prior to the research of Bean, Sutton, Liu, Madden, Wood and Mileti (2015), no studies examined mobile warnings in regards to space, place, and time in relation to crisis communication. Findings indicated that improving the effectiveness of warning messages delivered on mobile devices could increase the likelihood that more lives would be saved and harm would be reduced. Researchers suggested public warning messages should contain five information elements—hazard, location, guidance, time, and source (Bean et. al, 2015). Messages that contained these elements increased the probability of motivating an appropriate and timely public reaction. A lack of understanding about how audiences interpret and respond to warning messages could create possibilities for serious error, including loss of life. Future research is needed to understand how public warning messages delivered over mobile devices are perceived and understood by message recipients.

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In regards to the effects of user anxiety generated by crime-based messaging, Xie and Newhagen (2014) sought to understand whether receiving messages desktop, laptop or hand-held increased students' anxiety. Students were sent notifications via email and cell phone, and on-campus computers received pop-up alerts of possible threats. The factorial experiment exposed participants to coverage of the 9/11 and Virginia Tech tragedies using three factors: media platform, crime severity and message content. Participants using hand-held devices, such as smart phones, reported the highest level of anxiety while desktop users reported the lowest level of anxiety. Similarly, Butler and Lafreiner (2010) surveyed college students and faculty on their preference of mass notification. Results revealed that the majority of respondents were in favor of their university implementing a mass notification system and participants reported their preference of text versus email notifications. Approximately 39 percent of students, 62 percent of faculty, and 58 percent of staff would willingly enroll in emergency texts and prefer text messages as the primary mode of emergency communication.

Although campus-alerting systems are capable of issuing campus-wide alerts within minutes, the lack of research regarding SMS risk-based communication and the messages' affect on students and faculty, caused federal and school officials as well as lawmakers to question the effectiveness of the system. Previous studies of this kind focused on the traditional national television and radio broadcasting media alerts, but warning responses in a campus community may differ from those results (Facing hazards and disasters, 2006). To understand this gap in research, Gow, McGee, Townsend, Anderson and Varnhagen (2009) formed the Campus Emergency Messaging Research Group to understand warning responses, policy and legal issues and new technologies related to university campus

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communication practices. A survey was administered to faculty, staff and students of three universities. Researchers anticipated that when individuals received an alert, they would take the necessary precautions to ensure their personal safety, but research findings suggested otherwise. Participants were not inclined to take safety precautions after receiving an emergency communication.

After an active shooter event occurred at University of Texas at Austin, researchers Egnoto, Griffin, Svetieva and Winslow (2010) sought to understand how emergency response messaging could be improved and how individuals communicated and shared information during the crisis. Survey results indicated that physical distance from a threat predicted an individual's perception of message credibility. During the crisis situation, individuals relied on personal and social communication tactics to contact others. Egnoto et al. (2010) used the Mean World Index (Gerbner et. al, 2002) to explain how participants may process information from the crisis and interpret the world as a mean place. Researchers noted that media overemphasized elements of school shooting events and that the disproportionate coverage of the event may skew individual's perceptions of risk. Egnoto et al. (2010) findings suggested that universities deploy emergency communications on a variety of mediums, specifically emerging and social, and that innovators are likely to share these messages with others to warn them about a potential danger or alert loved ones that they are safe.

Social Mediated Crisis Communication Model

Communication practitioners and scholars have been to explore how social media platforms are used to communicate during and about crises (Wetzstein, Grubmüller-Régent, Götsch & Rainer, 2014). Bruns (2014) emphasized that citizens play an important role in

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providing first-hand information. Users act as eyewitness reporters and human sensors providing regular and more frequent updates of crisis scenes than traditional outlets or organizations that have limited resources and personnel. Social media sites are low-cost tools (Wright & Hinson, 2009) that are used to generate and maintain volunteers and donors, attract attention, and educate the public.

In 2010, Jin and Liu developed the social mediated crisis communication (SMCC) model as a framework for the changing trends in risk communication strategies. “The model is divided into two parts that explain (1) how the source and form of crisis information affect organizations’ response options and (2) recommended social-mediated crisis response strategies” (Liu, Austin & Jin, 2011, p. 346). The model depicts the interaction between the organization experiencing the crisis and three types of publics who consume crisis information via traditional media, nontraditional media, and word-of-mouth communication. These publics are 1) influential social media creators, 2) social media followers, and 3) social media inactives. At the center of the model is the organization that experiences the crisis and also acts as a source of crisis information to traditional and nontraditional outlets.

Social media followers and influential social media creators obtain information from the organization, social media and traditional media. Through their posts, the crisis information transfers to social media inactives. Information circulates back and forth to the originator of the information and the organization experiencing a crisis. Publics will experience different levels of acceptance and each organization’s crisis response strategy will be unique to the organization and their crisis. Liu, Austin and Jin (2012) found that crisis form and source affect how successful a crisis strategy will be received. Findings suggest that crisis information form and source influence audiences’ information seeking behaviors across

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various media. Users are indirectly influenced by passively receiving information about crises through checking their social media accounts.

Schultz, Utz and Göritz (2011) suggested social media messages are more easily forwarded than traditional media. The ability to quickly pass or distribute information often exacerbates a crisis. Results indicated that the medium used to communicate was more important than the message or crisis communication strategy. Although publics discuss newspaper articles, social media users were more likely to share the message on multiple channels, thus increasing the potential distribution and impact of the message.

Media Effects—Cultivation Theory and Mean World Syndrome

Cultivation theory proposed that heavy television consumption influenced or contributed to one's beliefs about the real world (Gerbner & Gross, 1976). The more a person is exposed to a particular message, the more his or her assumptions about reality and society increasingly reflect the message. Cultivation theory suggested that heavy exposure to television and other forms of mass media gradually cultivated an unrealistic fear and heightened mistrust of others (Gerbner, Gross, Signorielli, Morgan & Jackson-Beeck, 1979; Gerbner, Gross, Morgan & Signorielli, 1980; Gerbner, Gross, Morgan, Signorielli & Shanahan, 2002; Morgan, Shanahan & Signorielli, 2008).

Repetition provides a unique frame to consider the consequences of overexposure to messages as a result of growing up alongside mass media (Morgan, 2007). In order to bridge the gap between research and current usage trends, cultivation theory can deviate from examining traditional sources, such as television and begin to understand the cultivation of media forms, such as SMS. Although rooted in traditional media, cultivation research has extended to other forms of media such as digital media (Roche, Pickett & Gertz, 2016;

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Williams, 2006). Theorists argue that media exposure cultivates the idea that the real world mirrors that of mass media, characterized by the rise of violent crime and lenient punishment (Roche, Pickett & Gertz, 2016). The most common consensus among researchers is that mass media play a small, but significant contribution in viewers' beliefs about the world. Effects vary based on the viewer's upbringing, social environment, and beliefs. These factors determine whether the viewer is more or less receptive to media messages.

Many scholars have conducted research on message repetition and its effects on message receivers. Jamieson and Romer (2014) suggested that television drama transported viewers into a fictitious world. Television programming increased viewers' perceptions of crime, but did not change their perceptions of a mean world. Results revealed that while national crime rates predicted the participants' perceptions of local crime rates, television violence did not have the same effect. Instead, television violence was directly related to participants' ability to picture themselves as victims. Similarly, Chung (2014) concluded misrepresentations on medical dramas negatively shape viewers' opinions and perceptions related to health by influencing viewers to internalize fatalistic beliefs and affecting their decision to seek medical care. Perhaps similar effects occur with exposure to crime and violence. Heavy consumption of crime-based messages may negatively influence an individual's understanding of crime in the area.

Parrott and Parrott (2015) performed a content analysis on U.S. television shows to determine the relationship between fictional crime shows and the Mean World Syndrome effect on women. The researchers found that females stood a greater chance of victimization and males stood a greater chance at being portrayed as perpetrators. Additionally, white females were most often depicted as victims when compared to white men, black men and

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black females. Females stood the largest chance of becoming victims to crimes of serious harm. Victims of serious physical harm were predominately females. Further, white females were depicted most frequently as victims of rape or assault while their attackers were most frequently portrayed as strangers.

The degree of exposure may be operationalized as how often a person receives a message (Emery, Vera, Huang, Szczypka, 2014). To examine the influence of a multiplatform media message, participants were exposed to information on e-cigarettes on several channels. Results indicated that the higher the degree of exposure to an advertisement, the more likely the participant was to partake in behaviors recommended or avoid behaviors that were recommended against.

In short, cultivation research provided insights about the effects of persistent exposure to crime-based content. Heavy crime consumers may perceive the world as a dangerous place because of the nurtured and stereotypical content constructed by crime shows. In particular, students who watch these shows may perceive female students as the most likely victims of on-campus crime. Although television shows feature plotlines with victim depictions and crime details, universities are legally obligated to withhold victim information from all communications (Groover, 2005). This mandate reduces the possibility of similar findings (i.e. Parrott and Parrott, 2005) from effecting college students. Given that Campus Emergency Notification System SMS messages do not include the victims' demographics, students may be less likely to identify with potential victims of on-campus crime.

In the 1970s, the concept of a mean world created a new area of study for mass media researchers. Mean World Syndrome (MWS) developed from cultivation research and described that repeated exposure of media has minimal, but cumulative effects on recipients'

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beliefs about what the real world is like. MWS describes a tendency for consumers to believe that the world is a more hostile or unfriendly place than it truly is. Individuals with heavy media consumption behaviors are more likely to believe they will become a victim of violent crimes and a display higher level of distrust of others, when compared to less frequent media consumers (Chandler & Bushman, 2007).

Cantor (1998) explained that individuals were more likely to believe in the concept of a mean world because descriptions of violence and crime in the media were more descriptive and vivid than daily news stories. Crime reports were more descriptive than viewers' day-to-day encounters of violence. Individuals recall the first thought that comes to mind, rather than the most accurate thought. Therefore, vivid images, like violence, have a disproportionate influence on individuals (Chandler & Bushman, 2007).

Individuals are more likely to be afraid of crime in a city they reside in versus their own neighborhood (Heath & Petraitis, 1987) because individuals have more firsthand experience with their own neighborhood than they do the surrounding area. An individual who has experienced situations that support the ideas of MWS are likely to believe that messages about violence are an accurate representation of reality (Chandler & Bushman, 2007). Perhaps this suggests that college students may be afraid of the surrounding city, but not their college campus and vice versa. However, students may perceive their student peers as mean or dangerous because of emergency communications about crime on campus or involving other students, as participants (Chandler & Bushman, 2007) believed television crime representations were accurate.

As previously discussed, the cultivation of messages may lead an individual to believe that the world is a mean or unsafe place. Nabi and Sullivan (2001) used cultivation

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theory and theory of reasoned action to explore “the relationships among television viewing, prevalence estimates of criminal activity, perceptions of the world as a mean and dangerous place, intentions to take protective measures, and actual self-behaviors” (p. 803). In the students sampled, females were less likely to believe the world was a mean place, but were more likely to overestimate the amount of crime and more likely to take protective measures. White students compared to non-white students were less likely to overestimate crime prevalence, think the world is a mean place, and take protective action. Freshman and sophomore students, compared to their senior counterparts in class standing, were more likely to overestimate crime prevalence. Students with a direct or indirect past experience with crime victimization were more likely to take protective action.

Nabi and Sullivan (2001) determined that crime prevalence beliefs directly affected an individual’s understanding of a mean world and the intentions of respondents to take protective actions. Results indicated the amount of television viewed by college students was positively related to beliefs about criminal activity, the idea that the world is a mean place, one’s intention to take protective action, and engagement of protective behaviors. Comparable to these findings regarding college students and the repetition of crime-based television messages, students may conclude similar beliefs from the cultivation of Campus Emergency Alert System SMS messages.

Mere Exposure Effect and Message Fatigue

Mere Exposure Effect suggested that exposure to a stimulus object enhanced an individual’s attitude toward it (Zajonc, 1968). Individuals develop a preference for people or things merely because they are familiar with them, an effect also known as the familiarity principle. For example, Zajonc (1968) exposed study participants to Chinese characters

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between one and 25 times and asked them to guess the meaning. The more an individual saw a character, the more positive of a meaning they associated with it. Results suggested that repeated exposure is a sufficient condition of attitude enhancement. When confronted with a novel stimulus, an individual's orienting response enabled him or her to determine if the stimulus created a source of danger. Further, if the function of orienting behavior is to change the novel stimulus into a familiar one, the stimulus object may eventually appear more attractive or less repulsive to the individual as a consequence of exposure. Zajonc (1968) suggested that future research concentrate on the effects of large frequencies of exposure, the duration of the exposure, interexposure intervals, and other parameters of exposure.

Miller (1976) expanded upon Zajonc's (1968) findings and identified that overexposure may result in individuals ignoring a message. Study participants were exposed to messages between one and 200 times. Results indicated that individuals were most persuaded by moderate exposure, estimated between one and times. Overexposure caused individuals to react negatively to the message or ignore the message. If excessive exposure occurred, individuals reacted negatively or ignored the message, thus suggesting the individuals were desensitized to the message. A delayed post-test suggested that the negative evaluation for overexposure improved over time, indicating that the negative impact of overexposure was temporary. This may mean that individuals who are overexposed to a variable, such as students exposed to emergency communications, may experience an impact of the messages for a short period of time.

In support of Mere Exposure Theory, Hovland's (1937) and Osgood's (1949) results implied that the mere repetition of crime prevention campaigns led to the desired improvement in attitudes toward the target behavior and crime prevention tactics, and would

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lead to positive attitude formation toward the non-target behavior. Winkle (1987) sought to further understand how mass media were used for crime prevention. Police departments used public media platforms in attempt to decrease the opportunities of crime on campus. In these communications, victims were encouraged to take safety precautions and bystanders were encouraged to intervene. Findings indicated that crime prevention public campaigns via mass media were ineffective in encouraging the public to take safety measures. The mere exposure of the crime prevention messages had no immediate reaction on public response.

Overexposure to a particular message or series of messages may lead to message fatigue. Rogers and Agarwala-Rogers (1975) defined information overload as the state in which an individual cannot process or use information presented to them. Hiltz and Turoff (1985) found that when individuals responded to information overload via email, they failed to respond to certain inputs; responded less accurately; responded incorrectly; stored messages and read or responded to them later; systematically ignored or filtered out the messages; and in extreme cases, quit reading messages all together. Similarly, Jones, Ravid and Rafaeli (2004) found that as message overload increased, individuals were more likely to respond to simpler messages, stop active participation or generate simpler responses. These cases of information overload suggest that overexposure of crime-based messages might cause students to experience message fatigue. This form of unconsciousness may lead students to disregard their university's risk communication strategies and react unsafely in a crisis situation.

Research Question

After completing a comprehensive review of literature related to media effects and campus emergency or risk communications, this study sought to identify how students

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perceive their personal safety on campus as a result of the crime-based messages sent by TUPD. Research (Zajonc, 1968) suggested that the overexposure of messages might desensitize the receiver to the impacts of messages; thus, participants were asked questions related to the frequency of crime-based messaging. Participants were asked how the risk communications made them feel and whether or not they impacted their daily campus activity or behaviors. To understand students' perceptions of Towson University's Campus Emergency Notification System, this study explored the following:

RQ: What variables influence students' fear of crime on campus?

Method and Materials

This study used a quantitative approach for the purposes of understanding Towson University students' perceptions of fear caused by and/ or associated with the Towson University Campus Emergency Notification System. Specifically, this study was designed to determine whether temporal distance and repetition are factors that increase students' fears and perceptions of crime on campus. Surveys, a widely used instrument by quantitative communication researchers, are often used for quantitative measures of opinion through which one can understand the degree of media effects, media penetration and perceptions, or, by looking for a pattern in correlations (Jensen, 2002). This instrument allowed the researcher to obtain sensitive information while protecting students' identity and allowing them to speak freely without the fear of scrutiny or concerns that this research may be associated with the university or university officials in any manner.

Working with the Provost's Office, a randomized list of 4,000 Towson University students was obtained to serve as prospective participants for this study. Institutional Review Board (IRB) approval, Appendix A, was received. Students were sent an email, Appendix B,

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containing details of the study with a unique Qualtrics link to access the survey. Three days after the initial survey was distributed, a reminder email was sent. A second reminder email was sent six days after the initial email. The survey remained open for nine consecutive days. After the data collection window ended, the survey link was invalidated to prevent participant responses from being received outside of the collection period.

The survey received an 11.25 percent response rate, with 450 responses. The most common respondent was a 21-year-old white female from the senior class in the College of Liberal Arts. The majority of students lived off campus, more than 10 miles away, and was involved in one or more clubs or groups on campus. For a full list of demographic information, see Table 1 in the results section.

Students were asked to respond to Likert-type, descriptive, open-ended and semantic differential items. Questions were posed to provide insight on student opinions about the Campus Emergency Notification System and student perceptions of campus safety by focusing on two independent variables, degree of exposure and temporal distance and one dependent variable, impact of messages. These variables may affect the way students interpret or subconsciously remember the crime-based messages. Other dependent variables tested include: students' fear of crime, negative feelings associated with the Campus Emergency Notification System messages, and the impact of the Campus Emergency Notification System messages. Independent variables tested include: participant gender, victimhood, and the number of platforms participants subscribed to.

Additionally, participants were asked descriptive questions regarding how they learn about risk-based factors and situations that occur on campus. Questions of this nature were posed to identify whether or not students felt the Campus Emergency Notification System

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was an important or useful communication tool. Students were provided an opportunity to offer suggestions and make recommendations for increased student usage and performance of the Campus Emergency Notification System.

Based on the findings of Xie and Newhagen (2014) and Kaminski, Koons- Witt, Thompson and Weiss (2009), this study examined students' degree of exposure to risk-based communication. Emery, Vera, Huang and Szczyпка (2014) operationalized the degree of exposure as how often a person receives a message. If a student is exposed to a message multiple times, they may be inclined to believe the threat is greater than it actually may be. Conversely, individuals may also become desensitized to the messages and start to ignore the notifications. Thus, it is important to determine how the cultivation of messages may impact students' fear of crime or their perceived risk of crime on campus. Using this operationalization (Emery et. al, 2014), students were asked to select all of the platforms they receive risk-based communication on. During analysis, results were coded to combine all platforms compared to email, the highest response of participants. Participants who subscribed to two channels, including or not including email, were combined into one group. Participants who indicated they subscribed to email only were analyzed together. For a full list of questions on the degree of exposure, see Appendix C.

Table 1: Platforms

| Item | <i>n</i> | <i>%</i> |
|--|-----------------|-----------------|
| Single Channel (Email Only) | 72 | 25.8 |
| Multichannel (Email, Text, Social Media, TUPD App) | 207 | 74.2 |

Based on previous research (Patton & Gregory, 2014; Egnoto, et. al & 2010), this study examined the perceived temporal distance of participants and campus crime. Research (Seigfried-Spellar, Flores & Griffin, 2015) suggested that psychological proximity plays a

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role in the way people perceive risk and how they communicate during crises. Students' spatial distance from crime changes the way, in which the credibility of information is processed and perceived, with those furthest from the crime feeling least threatened (Seigfried-Spellar et. al, 2015). Depending on the psychological spatial distance between students and the crime, they may be less likely to pay attention to the alert. Kim and Kim (2017) defined temporal distance as the psychological distance from the present to a future event. Therefore, students were asked to answer Likert-type items about how imminent or distant Part I crimes are from happening to their student peers and to themselves.

Additionally, participants were asked to indicate how fearful they were of certain crimes. Ferraro and Grange (1987) defined fear of crime as the affective response to crime and its situational cues. Using this foundation of fear of crime, Ferraro's Fear of Crime scale (1995) was replicated to measure students' general fear of various crimes. Students were asked to indicate their level of fear of various crimes such as being approached by a beggar or having your car stolen. The Fear of Crime (FOC) scale consisted of ten items and was considered highly reliable ($\alpha = .929$). For a full list of questions on FOC, see Appendix C.

Table 2: Fear of Crime

| Item | <i>M</i> | <i>SD</i> |
|--|-----------------|------------------|
| Being approached on the street by a beggar or panhandler. | 3.98 | 1.758 |
| Being cheated or conned out of money. | 4.25 | 1.875 |
| Having someone break into your dorm or home while you are away. | 4.43 | 1.968 |
| Having someone break into your dorm or home while you are there. | 4.59 | 2.050 |
| Being raped or sexually assaulted. | 5.08 | 2.047 |
| Being murdered. | 4.41 | 2.209 |
| Being attacked by someone with a weapon. | 5.01 | 1.872 |
| Having your car stolen. | 4.35 | 1.955 |
| Being robbed or mugged on the street. | 5.05 | 1.754 |
| Having your property damaged by vandals. | 4.46 | 1.797 |

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Perceived risk of victimization is considered the cognitive mechanism that informs an individual of their fear (Farrall, Jackson & Gray, 2007; Hale, 1996). Using this foundation of risk perception, scales from Chadee and Ying (2013) were replicated to determine how the Campus Emergency Notification System impacts students. Using a Likert-scale, students were asked if receiving messages from the Campus Emergency Notification System increased their fear of walking around campus at night. The Campus Emergency Notification System (CENS) Impact scale consisted of three items and was determined reliable ($\alpha = .823$). Additionally, students were asked how they feel when they receive a Campus Emergency Notification System risk-based communication message. Participants were provided semantic differential items, such as safe and scared or calm and worried. The Campus Emergency Notification System (CENS) Feelings scale consisted of five items and was determined reliable ($\alpha = .841$). For a full list of questions on CENS Impact, or CENS Feelings, see Appendix C.

Table 3: CENS Impact

| Item | <i>M</i> | <i>SD</i> |
|---|-----------------|------------------|
| More fearful of walking around campus during the day. | 2.54 | 1.558 |
| More fearful of walking around campus after dark. | 4.08 | 1.950 |
| More fearful of crime in general on campus. | 3.57 | 1.748 |

Table 4: CENS Feeling

| Item | <i>M</i> | <i>SD</i> |
|--|-----------------|------------------|
| I feel safe... I feel scared. | 4.79 | 1.613 |
| I feel good... I feel bad. | 4.57 | 1.631 |
| I feel calm... I feel worried. | 4.49 | 1.682 |
| I feel unaffected... I feel affected. | 4.68 | 1.756 |
| I feel uninterested... I feel curious. | 3.52 | 1.922 |

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Results

Findings

In the 2016-2017 academic year, 19,198 undergraduate students were enrolled, full or part-time, at Towson University. 20.8 percent of students were randomly selected as participants of this study. Out of the sample of 4,000 undergraduate Towson University students, 11.25 percent of students participated in the survey. In total, 450 students responded to the survey. Out of those responses, 242 surveys were completed and included in the data analysis. 208 surveys that were partially incomplete in one or more of the independent variable questions (gender, victimhood and platforms) or the dependent variable questions (FOC, CENS Feelings and CENS Impact) and were therefore, discarded from the results outlined in this section.

75.6 percent of survey participants were female and 24.4 percent were male. Approximately 60 percent of undergraduate students at Towson University are female and 40 percent male. 67.1 percent of students identified as Caucasian while 21 percent of students identified as Black or African American. 5.8 percent of students identified as Asian, 5.8 percent selected “other” and less than one percent of students identified as American Indian or Alaska Native. Survey participants’ indication of race closely matches Towson University’s records of enrollment. Hispanic and Foreign Exchange or Nonresident Alien were excluded as responses for this survey, but are included in Towson University’s enrollment by ethnicity data. 25 percent, the majority, of students indicated they were 21 years old, followed by 18.3 percent for 19 years old. For a full representation of student participant demographics compared to Towson University enrollment data, see Table 1.

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Table 5: Participant Demographics

| Variable | | <i>n</i> | % | TU %* |
|------------------------------|-----------------------------|-----------------|----------|--------------|
| Gender | Male | 59 | 24.4 | 59.92 |
| | Female | 183 | 75.6 | 40.08 |
| Race | White | 163 | 67.1 | 59 |
| | Black or African American | 51 | 21.0 | 18 |
| | American Indian or Alaskan | 1 | .4 | 4 |
| | Asian | 14 | 5.8 | 6 |
| | Other | 14 | 5.8 | 36.4 |
| Age | 18 | 27 | 11.3 | - |
| | 19 | 44 | 18.3 | - |
| | 20 | 36 | 15.0 | - |
| | 21 | 60 | 25.0 | - |
| | 22 | 27 | 11.3 | - |
| | 23 | 14 | 5.8 | - |
| | 24 | 4 | 1.7 | - |
| | 25 | 8 | 3.3 | - |
| | +26 | 20 | 8.4 | - |
| Class Rank | Freshman | 50 | 20.7 | 19.39 |
| | Sophomore | 45 | 18.6 | 21.34 |
| | Junior | 59 | 24.4 | 27.37 |
| | Senior | 86 | 35.5 | 29.64 |
| | Other | 2 | .8 | 2.27 |
| Academic College | Business and Economics | 31 | 7.5 | 13 |
| | Education | 36 | 8.7 | 9 |
| | Fine Arts and Communication | 36 | 8.7 | 12 |
| | Health Professions | 48 | 11.7 | 14 |
| | Liberal Arts | 59 | 14.3 | 28 |
| | Science and Mathematics | 42 | 10.2 | 23 |
| | Honors | 15 | 3.6 | .30 |
| Undecided | 2 | 0.5 | .01 | |
| Campus Activity | On-Campus Job | 24 | 5.8 | - |
| | Resident Assistant | 2 | .5 | - |
| | Greek Life | 37 | 9.0 | - |
| | SGA | 4 | 1.0 | - |
| | Club or Group | 68 | 16.50 | - |
| | Other | 23 | 5.6 | - |
| Housing During Academic Year | On-Campus | 75 | 30.9 | - |
| | Less than 1 mile | 42 | 17.3 | - |
| | 1-5 miles | 54 | 22.2 | - |
| | 6-10 miles | 23 | 9.5 | - |
| | More than 10 miles | 49 | 20.2 | - |

* Prepared by the Office of Institutional Research (2016). Percentages rounded and may not total 100. Additional details can be found at www.towson.edu/ir

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In regards to gender and fear of crime, males ($n=59$) compared to females ($n= 183$) were slightly less fearful ($M= 3.8$; $SD= 4.88$) of crime than females ($M= 4.88$; $SD= 1.44$). A Factorial ANOVA was conducted to compare the effects of gender and the interaction effect between gender and fear of crime. There was a statistically significant interaction between the effects of gender and participants' fear of crime ($F(1, 237)= 4.68$, $p= .032$).

Survey respondents were asked to report whether they received the Campus Emergency Notification System messages via email only or on multiple channels, such as social media and SMS messages. Students who received only email messages ($n= 58$) compared to students who received messages on multiple channels ($n= 183$) indicated they were slightly less fearful of crime ($M= 4.46$; $SD= 1.7$) compared to students who received notifications on multiple channels ($M= 4.66$; $SD= 1.54$). A two-way ANOVA was conducted that examined the effect of cultivation and participants' fear of crime. Effects of the interaction were statistically insignificant between cultivation and respondents' fear of crime ($F(1, 277)= 2.73$, $p= .1$).

Participants were asked to record how they feel when they receive a Campus Emergency Alert Notification. Females ($n= 181$) compared to males ($n= 58$) felt less negative emotions ($M=4.39$; $SD= 4.44$) than the male participants ($M=4.44$; $SD= 1.56$). A two-way ANOVA was conducted that examined the effect of gender and student participants' feelings regarding the Campus Emergency Notification System. Effects of the interaction were statistically significant between gender and participants' feelings toward the Campus Emergency Notification System ($F(1, 234)= 4.38$, $p= .037$).

In regards to message exposure, participants were asked to report how many channels they receive Campus Emergency Notification System alerts on. Students who received

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emails only ($n=58$) compared to those who received notifications on multiple platforms ($n=180$) had stronger negative feelings regarding the Campus Emergency Notification System ($M=4.7$; $SD=1.26$) compared to students who received messages on multiple platforms ($M=4.32$; $SD= 1.35$). A two-way ANOVA explored the effect of cultivation and participants' feelings regarding the Campus Emergency Notification System. Effects of the interaction were statistically significant between cultivation and participants' feelings regarding the Campus Emergency Notification System ($F(1, 255)= .003$, $p = .955$).

Regarding the impact of the risk messages, students were asked to state whether the messages made them more fearful of various situations on campus. Females ($n=183$) were slightly more impacted ($M=3.6$; $SD=1.36$) than males ($n=183$) by the messages ($M=2.93$; $SD=1.83$). A Factorial ANOVA was conducted to compare the effects of gender and the interaction effect between gender and the impact of the Campus Emergency Notification System. There interaction between the effects of gender and the impact of the Campus Emergency Notification System ($F(1, 237)= 2.1$, $p= .148$) was statistically insignificant.

Students who reported they subscribed to multichannel alerts ($n=183$) compared to students who received emails only ($n=58$) were slightly more impacted ($M=3.6$; $SD=1.35$) by the alerts than students using a single platform ($M=2.81$; $SD=1.35$). A Factorial ANOVA was conducted to compare the effects of cultivation and the interaction effect between cultivation and the impact of Campus Emergency Alert System. There was a statistically insignificant interaction between the effects of cultivation and the impact of Campus Emergency Notification System ($F(1,254)= 3.58$, $p= .059$).

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Table 6: ANOVA of Variables

| | Item | Fear of Crime | | | CENS Feelings | | | CENS Impact | | |
|-----------|----------|---------------|-----------|----------|---------------|-----------|----------|-------------|-----------|----------|
| | | <i>M</i> | <i>SD</i> | <i>n</i> | <i>M</i> | <i>SD</i> | <i>n</i> | <i>M</i> | <i>SD</i> | <i>n</i> |
| Gender | Male | 3.8 | 1.70 | 59 | 4.44 | 1.56 | 58 | 2.93 | 1.83 | 59 |
| | Female | 4.88 | 1.44 | 183 | 4.39 | 1.26 | 181 | 3.6 | 1.36 | 183 |
| Platforms | Email | 4.46 | 1.7 | 58 | 4.7 | 1.26 | 58 | 2.81 | 1.35 | 58 |
| | Multiple | 4.66 | 1.54 | 183 | 4.32 | 1.35 | 180 | 3.6 | 1.5 | 183 |

Students who selected that the Campus Emergency Notification System, either email or SMS messages, was their primary source of risk-based communication were asked to select their secondary source of information. A frequency table revealed that students' second most popular source of risk communication were their friends or peers ($n=89$). In line with the findings of the Pew Research Center (2012) social media sites ($n=69$) were the third most popular source of risk communication. When asked what platforms or sites students used to obtain risk-based information about on-campus situations, participants reported that they use Internet search engines ($n=202$) and social media ($n=174$) most frequently. Responses to the "Platforms Used to Obtain Information" question were provided and participants were allowed to select more than one item if they used multiple platforms to obtain information.

Table 7: Non-CENS Sources of Risk Communication

| Item | <i>n</i> | % |
|---------------------|----------|------|
| A friend | 89 | 19.8 |
| A family member | 12 | 2.7 |
| A TU faculty member | 8 | 1.8 |
| Social Media | 69 | 15.3 |
| News | 13 | 2.9 |
| Other | 55 | 12.2 |

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Table 8: Platforms Used To Obtain Information

| Item | <i>n</i> | % |
|---------------------------|-----------------|----------|
| Internet Search Engines | 202 | 65.37 |
| Online News Source | 97 | 31.39 |
| Television | 47 | 15.21 |
| Social Media | 174 | 56.31 |
| Towson University Website | 125 | 40.45 |
| Other | 10 | 3.24 |

When provided the opportunity to add or share anything that the survey did not cover, 17.31 percent of students ($n=45$) expressed comments or concerns regarding the Campus Emergency Notification System. Qualitative open-ended responses were coded by topic and opinion. Most frequently, students asked for more timely updates and more frequent updates. Respondents stated that they would prefer to receive more texts while an incident is ongoing instead of questioning their safety. Students requested to be informed when a suspect was found, even if the case closed several days later. No participants answered that they wish they received less frequent risk-based communication messages or answered that the messages were unhelpful or useless. In general, the open-ended questions in this study received very little negative feedback toward the Campus Emergency Notification System from students.

Table 9: Comments Regarding Campus Emergency Notification System

| Item | <i>n</i> |
|--|-----------------|
| Suspect description | 5 |
| More tips to stay safe | 6 |
| Cover off campus incidents more frequently | 5 |
| Report success rates of crimes posted | 2 |
| More timely updates | 14 |
| More frequent communication ensures safety | 10 |

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Limitations

Several limitations existed that might have affected data collection. Earlier in the academic year, the Towson University Police Department (TUPD) conducted research regarding their practices and reputation. The TUPD survey was distributed in a similar method and sampled the same student population. As a result, students who completed the TUPD survey may have been discouraged to complete another survey on the same topic. Given the timeframe of data collection of this study, around end of semester final exams, some students may have been less likely to participate in the study. Lastly, given the topic of the study, some students might have been discouraged to take the survey out of fear of repercussions from the university.

In the text response portion of the survey, several students reported that they had stopped receiving text messages this year. Students are automatically unsubscribed, but encouraged to reenroll after three years of their subscription date. Additionally, in recent reports, Towson University reported the crime rate has decreased by 37 percent this academic year compared to last (Gorsuch, 2017). This decrease in crime may have caused students to believe they were unsubscribed from the Campus Emergency Notification System alerts. This also may have affected data collection. Participants were asked to report the number of Campus Emergency Notification System text messages they received, but with the reduction of crimes reported, alerts may have been less frequent this academic year compared to previous academic years.

This study did not ask participants detailed questions concerning their use of the Towson University Twitter or the Towson University Police Department Twitter. Although questions asked students if they “follow” these accounts on Twitter, it did not specifically

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examine the potential media effects of Tweets on participants. Students may consider mass media alerts to be a form of interpersonal while SMS alerts may be seen as an intrapersonal mode of communication. Additionally, Twitter and other social media channels allow for two-way communication and thus are seen as more credible modes of communication. The Campus Emergency Notification System does not allow for message receiver feedback. Within social media, users can respond to posts or messages with feedback. This may make it easier for student to interact or engage with the content posted by Towson University or the Towson University Police Department.

Perhaps the most relevant limitation is that Towson University is a safe campus. This study was conducted at Towson University in a suburban city on the outskirts of Baltimore City. If this study was conducted on campus in a more urban setting, results may differ. Between Aug. and Nov. 2013, Towson University disseminated 14 Campus Emergency Notification System alerts regarding armed robberies. A local news station interviewed Towson University students who stated that campus crime had risen and expressed that they did not feel safe on campus or in the surrounding area (Dacey, 2013). However, more recently an article (Gorsuch, 2017) commended Towson University for its low crime rates. Additionally, it was noted that crime rates the academic year that this study was conducted in were the lowest they had been in several years.

Discussion

This study sought to determine how students internalize the Campus Emergency Notification System. From a theoretical standpoint, results of this study do not expand upon the framework of cultivation theory. However, this research does bring to the forefront an important contradictory outcome of cultivation research. Cultivation is understood as the sum

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of messages and their impact on the receiver (Morgan, Shanahan & Signorielli, 2008).

However, previous research revealed two dissimilar results of cultivation theory. Literature suggests that due to the degree of exposure to a message, recipients experience message fatigue and information overload or develop an unrealistic view of society. Although both outcomes of cultivation research resulted by studying repetition, these results somewhat contradict one another. Therefore, it is important to understand what cultivation means in an increasingly digital world. Message fatigue and an unrealistic view of society may be dangerous for students who are exposed to crime-based messaging.

From a practical standpoint, the results of this study provide practitioners the ability to examine current practices and make adjustments to risk communication strategy. In open-ended questions, students indicated that they wished to receive more messages. Students requested more timely updates, off campus housing to be covered, suspect descriptions to be included and tips to stay safe during risk situations. Results suggested that victimhood was not a factor of risk-based communication. Thus, communicators do not need to craft and send different messages to students who have been a victim of crime in the past. Whether a student was a victim did not influence the way the study participants interpreted messages or feared crime.

Additionally, results indicated that gender plays a significant role in whether students are impacted by risk-based communication messages. Additionally, gender played a significant role in whether participants felt negative emotions after receiving a Campus Emergency Notification System message. The sample of participants included significantly more females than males; however, the ratio of male to female participants very closely aligned with the Towson University 2016 enrollment data for the academic year.

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Male participants were slightly less fearful of crime than female participants. When asked to indicate whether or not they were afraid of various crimes, such as being approached by a beggar or being raped or sexually assaulted, females recorded that they were slightly more afraid of crime. Therefore, gender played a significant role in determining whether or not participants were fearful of crime. Conversely, male participants indicated that they felt more negative emotions upon receiving a Campus Emergency Notification System alert. Although only minimally, male students indicated that they felt more scared, bad, worried or affected by the Campus Emergency Notification System alerts. Findings suggest that although female students are more fearful of crime, male students develop more negative feelings after receiving an alert.

Upon examining how participants internalized the degree of exposure to the Campus Emergency Notification System messages, students who indicated they receive notifications on email only experienced a stronger negative impact compared to students who received notifications on multiple channels. The cultivation of messages desensitized students who received messages on numerous platforms. Results are in line with the findings of mere exposure (Zajonc, 1968) and message fatigue (Hiltz & Turoff, 1985). As previously stated, overexposure to a message may lead the receiver to experience message fatigue or information overload (Rogers & Agarwala-Rodgers, 1075). Individuals cannot process the information presented to them, or they simply ignore the message.

While Zajonc (1968) suggested that effects of message fatigue were temporary, the overexposure to Campus Emergency Notification System (CENS) messages may cause students to behave unsafely in a risk situation. Regardless of whether or not the effects are temporary, after a weekend filled with crime alerts, students are at risk of becoming

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desensitized to messages and ultimately, could find themselves ignoring alert and placing themselves in unsafe situations. For example, students who are desensitized to risk-based communication messages may ignore the message and travel to an area that the CENS message notified students to avoid. Dependent upon the size of students affected by the desensitization, the overexposure to CENS messages may need to be further examined on a larger scale.

In addition to the degree of exposure regarding alerts received on a single or multichannel platform, it is important to understand how students conceptualize the alerts. Specially, in regards to intrapersonal and interpersonal communication, students may consider the Campus Emergency Notification System alerts a mass notification because the university distributes it. However, some students may consider the alerts to be intrapersonal because they are receiving it on their cellphone, a device that many students consider personal. As a result, email alerts may be considered more of a mass notification than text alerts. Future research should expand upon these findings to determine whether email alerts or text alerts are considered more personal, thus understanding the impact of these notifications. Future research should consider whether students are engaging with the Towson University Police Department tweets containing risk-based communication to effectively determine whether students are more engaged with messages on digital platforms, where they are given the opportunity to respond or interact with the message, their peers, and the source.

Almost 80 percent of students indicated that the Towson University's Campus Emergency Notification System (email or SMS) was their primary source of risk-based information. From a practical standpoint, the Campus Emergency Notification System is

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functioning as designed. The Campus Emergency Notification System SMS alerts are delivered in a timely and succinct fashion so that students are receiving the message prior to hearing about a crime via social media, word of mouth or an online news source, etc. If students were obtaining risk-based communication information from another source, it may indicate that the Campus Emergency Notification System was not sufficient in notifying students of potential risk situations. Students are looking to Towson University to provide them with risk-based communication to ensure their safety.

It is important to consider whether the medium or the message is more important to the student population. Students may be more inclined to opt-in to receive Campus Emergency Notification System text messages because they are the official source of risk communication by the university. If another source emerges that students consider more reliable, such as a student-run social media account that acts as an eyewitness reporter, students may be inclined to decrease their reliance of the Campus Emergency Notification System. For example, if student reporters of the student-run university newspaper created a social media account, students may be more inclined to obtain updates from their peers rather than the university. At this time, Towson University's risk-based communication tactics are the primary source of risk-based communication that participants sought information from.

Lastly, it is important to understand how these variables of CENS feeling, CENS impact and FOC impact students' perceptions of Towson University's Campus Emergency Notification System. These perceptions may influence TUPD's strategy of risk-based communication with students and their public relations strategies to promote their organization and safety. In order to be better risk communicators, Towson University should evaluate their Campus Emergency Notification System once a year using a similar scale

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provided in this study. Additionally, in order to decrease the potential for students to become overexposed to a message, Towson University should consider shortening text messages to provide specific safety details such as, “Avoid Student Union. In area, take cover. Details in email,” with an email sent simultaneously. This way, students are encouraged to check their email, but are not overexposed to the same message, thus decreasing the potential for students to develop an unrealistic fear or crime or increase students’ negative feelings. Because emails are the most used platform and legally required, it makes the most sense to disseminate the most important information via email.

Emails should be sent in a more timely fashion. In open-ended responses, students requested more current updates. Emails with an active risk-based situation should state that. For example, an email could say “FOR IMMEDIATE RELEASE,” similar to a news article or “ACTIVE CAMPUS RISK EVENT” to ensure students understood whether the instance was occurring on or off-campus. Emails with updates to a crime or a closed crime that occurred in the immediate past should also state that. For example, in open-ended responses, students indicated that Towson University requests the student body’s help in identifying suspects, looking for stolen equipment and a variety of other things, but students do not feel that the university appropriately follows up with them when a crime is solved. Emails could state “CRIME SOLVED (DATE).” Words in past tense may help students feel safer, as they will encourage that the event is not current. Additionally, it may encourage students to report more things that they see occur on campus because they will see that the instances are followed up with and solved.

Given the current state of Towson University, being a relatively safe campus with few reported crimes this academic year, future research should reexamine the culture on campus

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and students' fears using an experimental design to further determine if message fatigue is an issue with the Campus Emergency Notification System (CENS) alerts. Furthermore, it is important to understand whether or not these issues occur on all campuses. Additional research should be conducted on a variety of campuses to increase generalizability; campuses should include ones such as small, large, public, private, rural, suburban and urban settings. Students' safety and campus safety are the number one concern of universities. Therefore, it is vital to understand how Towson University students interpret the CENS alerts to confirm students are behaving safely, but also to ensure students feel safe on their campus.

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Appendix A



Office of Sponsored Programs and Research
Towson University 8000 York Road Towson, MD 21252-0001
t. 410 704-2236 f. 410 704-4494

Date: April 11th, 2017

NOTICE OF APPROVAL

TO: Taylor Lutz

DEPT: Mass Comm Study

PROJECT TITLE: *Understanding the Impact of Risk Communication by Campus Police on College Students*

SPONSORING AGENCY: None

APPROVAL NUMBER: 1703017585

The Institutional Review Board for the Protection of Human Participants has approved the project described above. Approval was based on the descriptive material and procedures you submitted for review. Should any changes be made in your procedures, or if you should encounter any new risks, reactions, injuries, or deaths of persons as participants, you should notify the Board.

A consent form is required of each participant

is not

Assent is required of each participant

is not

This protocol was first approved on: April 11, 2017

A handwritten signature in black ink, appearing to read "Elizabeth Katz".

Elizabeth Katz, Chair

Towson University Institutional Review Board, IRB

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Appendix B

Invitation to participate in the research project titled: “UNDERSTANDING THE IMPACT OF RISK COMMUNICATION BY CAMPUS POLICE ON COLLEGE STUDENTS”

Dear Student,

As part of my Master’s thesis for the Communication Management program, I am conducting an online survey as part of a research study to increase my understanding of the potential impact of risk-based communication in college campus setting. I hope to determine how students feel about Towson University’s Campus Emergency Notification System SMS messages, more commonly know as “crime alerts.” As a student at Towson, you are in an ideal position help me understand your perspective, which is highly valued.

Participation in this study is voluntary. If you choose to participate in my project, you will be asked to complete a short survey. Your answers will remain anonymous. It is not necessary to answer every question, and you may discontinue your participation in the project at any time. There are no known risks associated with this study and your decision whether or not to participate in the project or to withdraw from the project at any time will in no way affect your standing with the university. Your participation will be a valuable addition to this research and findings could lead to greater public understanding of the impact of these risk-based communications.

If you have any questions please do not hesitate to ask. If you have any questions about the project, you may contact me at tlutz4@students.towson.edu, my faculty advisor of the Mass Communication Department, Dr. Melanie Formentin at (410) 704-4657 or mformentin@towson.edu, or the Chairperson of Towson University’s Institutional Review Board for the Protection of Human Participants, Dr. Elizabeth Katz, at (410) 704-2236.

Thank you,
Taylor Lutz
Masters Student—Communication Management

THIS PROJECT HAS BEEN REVIEWED BY THE INSTITUTIONAL REVIEW BOARD FOR THE PROTECTION OF HUMAN PARTICIPANTS AT TOWSON UNIVERSITY.

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Appendix C

Q1 This study seeks to understand how Towson University (TU) undergraduate students feel about the Towson University Campus Emergency Notification System text messages, informally known as the TUPD crime alerts. Your participation in this study is voluntary, but greatly appreciated. This survey should take you no more than 15-20 minutes to complete. The information obtained from this study will be used in a Masters thesis project in hopes of providing TU with suggestions for improving the Campus Emergency Notification System text messages. All responses recorded in this study are anonymous and confidential.

Q2 Informed Consent

- I choose to participate in this study. (1)
- I do not wish to participate in this study. (2)

Condition: I do not wish to participat... Is Selected. Skip To: End of Survey.

Q3 This section contains items about how you feel in regards to your personal safety.

Q4 Rate your fear of the following crimes: I am fearful of _____

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| | Strongly disagree (1) | Disagree (2) | Somewhat disagree (3) | Neither agree nor disagree (4) | Somewhat agree (5) | Agree (6) | Strongly agree (7) |
|--|-----------------------|-----------------------|-----------------------|--------------------------------|-----------------------|-----------------------|-----------------------|
| Being approached on the street by a beggar or panhandler (1) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Being cheated or conned out of money (2) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Having someone break into your dorm or home while you are away (3) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Having someone break into your home while you are there (4) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Being raped or sexually assaulted (5) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Being murdered (6) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Being attacked by someone with a weapon (7) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Having your car stolen (8) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

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| | | | | | | | |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Being robbed or mugged on the street (9) | <input type="radio"/> |
| Having your property damaged by vandals (10) | <input type="radio"/> |

Q5 I have been a victim of a crime.

- Yes (1)
- No (2)
- Refuse to Answer (3)

Q6 I have been a victim of crime on campus.

- Yes (1)
- No (2)
- Refuse to Answer (3)

Q7 This section contains items evaluating your feelings toward campus crime.

Q8 How imminent (about to happen) or distant (not about to happen) do you think the likelihood is of the crimes listed below happening to students on campus?

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| | Very Imminent (1) | Imminent (2) | Somewhat Imminent (3) | Neither Imminent nor Distant (4) | Somewhat Distant (5) | Distant (6) | Very Distant (7) |
|-------------------------------------|-----------------------|-----------------------|-----------------------|----------------------------------|-----------------------|-----------------------|-----------------------|
| Hate crime or bias (1) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Theft/ robbery without a weapon (2) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Theft/ robbery with a weapon (3) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Assault without a weapon (4) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Assault with a weapon (5) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Sexual assault (6) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Stabbing (7) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Hazing (8) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Other: (9) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Q9 How imminent (about to happen) or distant (not about to happen) do you think the likelihood is of the crimes listed below happening to you on campus?

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| | Very Imminent (1) | Imminent (2) | Somewhat Imminent (3) | Neither Imminent nor Distant (4) | Somewhat Distant (5) | Distant (6) | Very Distant (7) |
|-------------------------------------|-----------------------|-----------------------|-----------------------|----------------------------------|-----------------------|-----------------------|-----------------------|
| Hate crime or bias (1) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Theft/ robbery without a weapon (2) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Theft/ robbery with a weapon (3) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Assault without a weapon (4) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Assault with a weapon (5) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Sexual assault (6) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Stabbing (7) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Hazing (8) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Other: (9) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Q10 This section asks questions regarding the Campus Emergency Notification System.

Q11 What platforms do you receive or seek communication about Towson University campus crime, safety, weather or other announcements?

Q12 What platforms do you receive or seek communication about Towson University campus crime, safety, weather or other announcements? Check all that apply.

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- Campus Emergency Notification System text messages (1)
- Campus Emergency Notification System email messages (2)
- TUPD Twitter (3)
- TUPD Facebook (4)
- TUPD Cell Phone App (5)
- Towson University Twitter (6)
- Towson University Facebook (7)
- Towson University website (8)
- Other: (9) _____

Q13 When you hear about risk factors, such as crime, safety, weather or other announcements, which platforms do you use to search for information?

- Internet search engines (i.e. Google, Bing, etc.) (1)
- Online news source (2)
- Television (3)
- Social Media (4)
- Towson University website (5)
- Other: (6) _____

Q14 The Campus Emergency Notification System text messages contain the following:
(Select all that apply)

- Hazard or Incident (1)
- Location (2)
- Guidance or Instructions to Stay Safe (3)
- Time (4)
- Source or Sender of the Alert (5)
- None of the Above (6)
- Other: (7) _____

Q15 The Campus Emergency Notification System text messages should contain the suspect(s): (Select all that apply)

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| | Strongly disagree (1) | Disagree (2) | Somewhat disagree (3) | Neither agree nor disagree (4) | Somewhat agree (5) | Agree (6) | Strongly agree (7) |
|-----------------------|-----------------------|-----------------------|-----------------------|--------------------------------|-----------------------|-----------------------|-----------------------|
| Race (1) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Gender (2) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Height (3) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Weight (4) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Clothing (5) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Possible Location (6) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| None of the Above (7) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Other (8) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Q16 For each of the following word pairs, indicate how you feel when you receive a Campus Emergency Notification System text message.

| | 1 (1) | 2 (2) | 3 (3) | 4 (4) | 5 (5) | 6 (6) | 7 (7) |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| I feel safe:I feel scared (1) | <input type="radio"/> |
| I feel good:I feel bad (2) | <input type="radio"/> |
| I feel calm:I feel worried (3) | <input type="radio"/> |
| I feel unaffected:I feel affected (4) | <input type="radio"/> |
| I feel uninterested:I feel curious (5) | <input type="radio"/> |

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Q17 The Campus Emergency Notification System text messages make me:

| | Strongly disagree (1) | Disagree (2) | Somewhat disagree (3) | Neither agree nor disagree (4) | Somewhat agree (5) | Agree (6) | Strongly agree (7) |
|--|-----------------------|-----------------------|-----------------------|--------------------------------|-----------------------|-----------------------|-----------------------|
| More fearful of walking around campus during the day (1) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| More fearful of walking around campus after dark (2) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| More fearful of crime in general on campus (3) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Do not change the way I feel about my safety (4) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Q18 This section presents items aimed at understanding your feelings related to your location when a Campus Emergency Notification System text message is sent.

Q19 The area most featured in Campus Emergency Notification System text messages is:

- On Campus (1)
- Off Campus (2)
- Unsure (3)

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Q20 If I receive a Campus Emergency Notification System text message about a particular location, I will avoid going to that area.

- Strongly disagree (1)
- Disagree (2)
- Somewhat disagree (3)
- Neither agree nor disagree (4)
- Somewhat agree (5)
- Agree (6)
- Strongly agree (7)

Q21 I don't pay attention to Campus Emergency Notification System text messages because they do not cover off-campus housing, such as student apartment complexes.

- Strongly disagree (1)
- Disagree (2)
- Somewhat disagree (3)
- Neither agree nor disagree (4)
- Somewhat agree (5)
- Agree (6)
- Strongly agree (7)

Q22 The items in this section explore your perceptions about the frequency of Campus Emergency Notification System text messages you receive.

Q23 Using your cell phone, please check the log of messages you have received as part of the Campus Emergency Notification System. The number Campus Emergency Notification System text messages are sent from is: 795-16.

Q24 Do you store or delete the Campus Emergency Notification System text messages?

- I store them (1)
- I delete them (2)

Condition: I delete them Is Selected. Skip To: I open the Campus Em....

Q25 How many text messages have you received from Campus Emergency Notification System in the past 48 hours? Please count the messages in your phone.

Q26 How many text messages have you received from Campus Emergency Notification System in the past week? Please count the messages in your phone.

Q27 Please indicate how you feel regarding the following items:

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| | Strongly disagree (1) | Disagree (2) | Somewhat disagree (3) | Neither agree nor disagree (4) | Somewhat agree (5) | Agree (6) | Strongly agree (7) |
|---|--------------------------|-----------------------|--------------------------|-----------------------------------|-----------------------|-----------------------|-----------------------|
| Students receive too many Campus Emergency Notification System text messages. (1) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I open the Campus Emergency Notification System text messages without reading them. (2) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I delete the Campus Emergency Notification System text messages without reading them. (3) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Q28 By the time I receive a Campus Emergency Notification System text message about a crime, I've already heard about the incident from: (Select all that apply)

- A friend (1)
- A family member (2)
- A TU faculty member (3)
- Social Media (4)
- The news (5)
- Other (6)

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Q29 Can you offer any suggestions about how Towson University can improve their Campus Emergency Notification System text messages?

- Yes: (1) _____
- No (2)

Q30 Is there anything else you would like to add or share?

- Yes: (1) _____
- No (2)

Q31 This final section of questions asks you to provide your demographic information. This information will be used for generalization purposes and will not be used to identify you personally.

Q32 How old are you?

Q33 What is your gender?

- Male (1)
- Female (2)
- Prefer not to disclose (3)

Q34 What is your racial or ethnic identification?

- White (1)
- Black or African American (2)
- American Indian or Alaska Native (3)
- Asian (4)
- Native Hawaiian or Pacific Islander (5)
- Other (6)

Q35 What is your class standing at Towson University?

- Freshman (1)
- Sophomore (2)
- Junior (3)
- Senior (4)
- Other (5)

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Q36 What academic college does your major(s) fall under? (Select all that apply)

- Business and Economics (1)
- Education (2)
- Fine Arts and Communication (3)
- Health Professions (4)
- Liberal Arts (5)
- Science and Mathematics (6)
- Honors (7)
- Undecided (8)

Q37 How many credit hours are you taking this term?

- 9 or fewer (1)
- 10-12 (2)
- 13-15 (3)
- 16+ (4)

Q38 Where do you live during the school year?

- On-campus (1)
- Less than 1 mile (2)
- 1-5 miles (3)
- 6-10 miles (4)
- More than 10 miles (5)

Q39 Please indicate if you participate in any of the following on campus: (Select all that apply)

- I have a on-campus job (1)
- I am an RA (2)
- I am a member of Greek life (3)
- I am a member of the SGA (4)
- I am a member of a campus club or group (5)
- Other: (6) _____

Q40 This is the end of the survey. Thank you for taking the time to complete this survey. Your anonymous responses are greatly appreciated and will assist in making TU a safer place. If you are interested in learning about the results of this study, please contact tlutz4@students.towson.edu.

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- Areas of Interest: Risk Communication, Health Communication, Media Effects, Digital and Social Media, Advertising, Organizational Public Relations, Police

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