

DOES KNOWLEDGE PREDICT FEAR: PRIOR KNOWLEDGE OF MASS
SCHOOL SHOOTINGS AND STUDENTS FEAR OF CRIME ON A COLLEGE
CAMPUS

by

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ABSTRACT

On April 16, 2007, 32 students and faculty were killed on the Virginia Polytechnic Institute and State University campus, making this incident the deadliest mass school shooting in United States history. Other school shootings, such as the infamous Columbine High School shootings and the more recent Northern Illinois State shootings, have become popular topics in today's social media (Kaminski et al, 2010; Reese 2009). Due to these events, schools and universities have become interested in the safety of their students as well as the students overall feelings towards crime while on their campus. New research studies have taken an interest in students' overall fear of crime and how this fear is impacted by variables including sex of the student and the time of day (Kaminski et al. 2010; Murray 2001). Though these studies have found who is more fearful of crime and which types of crime are feared most among their samples, these studies and others do not take into account whether the student is aware of shooting incidents that have occurred on college campuses around the country. The current study addresses this gap.

The purpose of this study is to measure whether a University of Central Florida student's knowledge of mass school shootings influences their own levels of fear regarding crime and criminal victimization. Using an anonymous online survey, data from students at the University of Central Florida was collected and analyzed. The survey used quiz style questioning to gauge a students' overall knowledge on mass school shootings. Other questions such as demographics fear of various types of crime, and fear of different locations on campus were also asked. This research addresses which areas of the University of Central Florida that students fear most (such as the Parking Garages), whether a student who lives in off campus housing is more fearful than

a student who lives on campus, and whether having more knowledge of mass school shootings cause more fear of crime in students than those with less knowledge, and do students with more knowledge feel that they will be victimized more. This research hopes to help the University of Central Florida's Counseling center and well as the UCF Police Department to help understand students fears and needs to help create a safer learning environment and help those students in need in addition to adding to the overall literature on fear of crime.

DEDICATION

For my family, thank you for your love and support.

For my professors, thank you for your guidance throughout this process.

For my friends, thank you for all of the good times these past three years.

For Mom and Dad, words cannot say how much I love you both. Thank you for all that you have done for me.

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TABLE OF CONTENTS

INTRODUCTION	1
LITERATURE REVIEW	2
Media Influence on Fear of Crime.....	2
Changes in Behavior due to Perception of Fear.....	3
Perceived Risk of Crime on Campus	4
This Study	6
THEORETICAL ORIENTATION.....	7
RESEARCH QUESTION.....	8
HYPOTHESES	9
METHODS/SAMPLE	10
MEASUREMENTS	11
Demographics	11
Independent Variables	11
Dependent Variables	11
Control Variables	12
RESULTS	13
DISCUSSION.....	22
CONCLUSION.....	25
APPENDIX 1: SURVEY.....	27
APPENDIX 2: IRB APPROVAL LETTER.....	39
REFERENCES	41

LIST OF TABLES

Table 1 Sample Demographic (N=335).....	14
Table 2 Frequency of Fear of Crime for Sample	15
Table 3 Frequency of Self-Reported Knowledge of Mass School Shootings	15
Table 4 Correlation Matrix of Knowledge of Mass School Shooting Incidents and Fear of Crime	17
Table 5 T-test Comparing Sex and Fear of Crime.....	18
Table 6 Frequency Table of Responses to Student’s Frequency of Thinking About Mass School Shooting Events	19
Table 7 Correlation Matrix of Self-Reported Knowledge of Mass School Shooting Incidents and School Shooting Scenarios	20

INTRODUCTION

On April 16, 2007, 32 students and faculty were killed on the Virginia Polytechnic Institute and State University campus, making this incident the deadliest mass school shooting in United States history. Other school shootings, such as the infamous Columbine High School shootings and the more recent Northern Illinois State shootings, have become popular topics in today's social media (Kaminski et al, 2010; Reese 2009). Due to these events, schools and universities have become interested in the safety of their students as well as the students overall feelings towards crime while on their campus. New research studies have taken an interest in students' overall fear of crime and how this fear is impacted by variables including sex of the student and the time of day (Kaminski et al. 2010; Murray 2001). Though these studies have found who is more fearful of crime and which types of crime are feared most among their samples, these studies and others do not take into account whether the student is aware of shooting incidents that have occurred on college campuses around the country. The current study addresses this gap. The purpose of the current research is to address the question of whether prior knowledge of mass school shootings has an effect on a student's fear of crime. By testing a student's knowledge towards major crimes that have occurred on college campuses, this research hopes to discover the potential impact of a previously un-researched variable.

LITERATURE REVIEW

Since the 1960s, “fear of crime” has been a focus in the fields of sociology and criminology. (Murray 2001). More recently there is an increase in research focusing on fear of crime and student safety in both secondary and higher education (Kaminski et al. 2010). Perceptions of fear and where fears manifest, especially in terms of college students, have become a major part of the literature of fear of crime. This increase is assumed, in these studies, to be from an increase in the reporting of mass school shootings across the nation. Some incidences, such as the Columbine High School shootings in 1999, have become popular subjects in the media that could be a source of influence on the feelings of fear in students (Kaminski et al. 2010). Another example would be the Virginia Polytechnic Institute and State University shootings that left 32 student and faculty members dead and 17 others injured (Reese 2009). Through media coverage, the nation witnessed horrible crimes that were committed in an environment widely considered to be very safe. The link between media and fear could help in determining if these events have any influence on a student’s overall perception of their own safety on their school campus, and whether or not this knowledge causes a change in the student’s behaviors while on campus (Kohm et al. 2012).

Media Influence on Fear of Crime

Television news and paper media are some of the tools individuals use to gain knowledge of their surrounding world. This can influence perceived fear of crime and a person’s overall feelings of safety, based on the content and portrayal of the crime (Kaminski et al. 2010). In a study by Chiricos et al. (2000), a survey of 2,250 Florida residents was conducted in order to see if there is a connection between crime reality and exposure to televised news. The researchers

tested three different hypotheses, all of which focused on what type of television news programs were watched, whether a specific type or a non-specific type was viewed (such as a program focusing on local news in one area), and how that predicted an overall fear of crime. The researchers found that watching local television news caused higher levels of fear, and that national news caused a neutral fear of crime (Chricos et al. 2000).

The research of Kohm et al. (2012) expands upon prior studies with the inclusion of the radio and Internet to measure which media source correlates to which type of fear. There is very little research that focuses on the Internet; due to its “rapid growth as an information source”, it is a viable source of study, thus giving a more modern look at media and crime. American and Canadian students (N=1,466) were surveyed to see if their consumption of different types of media affected their overall fear of crime. The research found that the media was a significant predictor of fear of crime and that local television news caused the highest levels of that fear. However, the researchers also found that the overall amount of media (television, the Internet, radio) was not a significant predictor of fear, contradicting previous studies (Kohm et al. 2012).

Changes in Behavior due to Perception of Fear

Certain behaviors and environments can cause an increase in risk of a person being victimized (Tewksbury and Mustaine 2003). This increase in potential victimization causes students to change their behaviors to avoid crime, such as carrying a weapon; minimizing the time of transit between class, work and home; and not going outside during certain times of night (Lane et al. 2009; Tewksbury and Mustaine 2003; Woolnough 2009). In a study by Tewksbury and Mustaine (2003), 1,513 students were surveyed about their lifestyles, including carrying weapons, their place of residence, if they were employed, and whether they participated in

activities at night, to see if they fit the conditions to be considered a potential target of crime.

The survey consisted of 95 items with questions about demographics, daily routines, prior crime experience, fear of crime, perceptions of safety, and self-protective behaviors (such as carrying weapons). The researchers found that over 42% of their sample reported regularly using one or more of the weapons in the survey. “The most common forms of self- protection were the use of mace (21.5%) and guns (17%)”. They also found that carrying a weapon was dependent upon factors such as types of transportation used, employment status, how often the participants associated with strangers, living in neighborhoods prone to violence, the use of cocaine, and the individuals’ perceptions of the safety of their home (Tewksbury and Mustaine 2003).

Perceived Risk of Crime on Campus

Due to the violent occurrences on high school and college campuses over the past twenty years, there has been a change in the attitude of students and their overall feelings of safety while attending school (Jennings et al. 2007; Kaminski et al. 2010; Kohm et al 2012; Woolnough 2009). In a study by Lane et al. (2009), 449 students from the University of Florida were given a 29 question survey to test the popular hypothesis of women being more fearful of crime than men and why that may be. The survey measured “demographics, personal characteristics, previous victimization, opinions about campus law enforcement, crime preventative behaviors, lifestyle characteristics, and perceived risk and fear of crime” (Lane et al. 2009). The researchers in this study focused on prior victimization and perceived risk of crime (Lane et al. 2009). The researchers found that women were more likely to feel that they would be the victims of violent crime (sexual assault, murder, robbery, etc.) than men. Students felt that they were more likely to be the victim of a violent crime at night rather than during the day, with women feeling more

afraid than men, which was consistent with other fear of crime research. The researchers felt that women were more fearful at night due to a feeling of being alone and increased vulnerability. Of the different types of crime in the survey, they found that women were most fearful of being sexually assaulted and men were most fearful of robbery. The biggest disparity between males and females was the fear of being sexually assaulted. Women ranked themselves as being more emotionally fearful of crime as opposed to a lower ranking when it came to their own physical victimization. Men ranked these two categories more equally than women (Lane et al. 2009).

A study by Cook and Fox (2011) also observed perceived risk of crime, however, they focused their topic on property theft and vicarious victimization. Vicarious victimization is the knowledge of crimes that have happened to others, which causes the individual to have a higher fear of crime based on that knowledge. The study focused on six different types of property crime, specifically ones that are more likely to occur at night. These types of crime include vehicular burglary, home burglary, bicycle, and property theft. They sampled 282 students, 42% male and 56% female, with 68% of the sample being white. Few students reported being victimized. Most students reported knowing someone else who had been victimized, with property and bicycle theft (58% and 37% respectively) being the most common. The researchers found that most students were fearful of property crime occurring at night and of the six types of crime, bicycle theft ranked the highest in terms of overall fear and perceived risk (Cook and Fox 2011).

In the current literature, most studies have come to a consensus that women are more fearful of crime than males and that theft is the crime that is feared the most among students (Cook and Fox 2011; Jennings et al. 2007; Kaminski et al. 2010; Kohm et al 2012; Lane et al.

2009; Woolnough 2009). Changes in behavior, such as carrying a weapon or avoiding walking alone at night, are some of the ways students have coped with their levels of fear (Lane et al. 2009; Tewksbury and Mustaine 2003; Woolnough 2009).

This Study

In the current literature, most studies focus on a student's overall feelings of fear of crime based on their daily routines. The aim of this study is to measure the amount of knowledge a student has about violent acts occurring on school campus, and determine if this impacts the perception and fear of crime. The study will be conducted at the University of Central Florida, the second largest undergraduate populated university in the nation and a university with a high population of students from the state of Florida, thus the study will be able to gain an understanding of Floridian students perceptions of fear of crime on campus.

THEORETICAL ORIENTATION

Routine activities theory holds that crime is not random, but that it comes from the lifestyles and daily routines of individuals (Tewsbury and Mustaine 2003). Routine activities theory posits that in order for a crime to occur, there must be a motivated offender, a victim that is suitable for the crime, and the absence of a capable guardian in the environment. The demographics of the area are also taken into account, though the theory suggests that in order for the crime to be committed there must be an opportunity. If that opportunity never arises, the crime will not occur. Thus would a student who is more fearful of crime change their behavior to attempt to prevent the crime from occurring? Would a student who is more knowledgeable of crime change their behavior to avoid crime? Tewsbury and Mustaine (2003), observed students' behaviors, such as carrying a weapon and avoiding being alone at certain times of day, and found that the demographics and lifestyles of the individual changed their likelihood of being the victim and their overall perception of fear.

RESEARCH QUESTION

Does knowledge of prior crimes on college campuses impact student's feelings of safety on the University of Central Florida campus?

HYPOTHESES

Hypothesis 1: Students who self report being more knowledgeable of mass school shootings will be more fearful of crime on their college campus.

Hypothesis 2: Students who own a weapon will have higher fear of crime and feel like they are more likely to be the victim of crime compared to those who do not carry a weapon.

Hypothesis 3: If a student lives in off-campus affiliated housing, they will be more fearful of crime and feel like they are more likely to be the victim of crime then students who live in other types of housing, as these areas will have more crime then on campus housing, causing student's who live in these areas to be more fearful of crime.

Hypothesis 4: Females will be more fearful of crime then males.

Hypothesis 5: Students who identify with being White/Caucasian will be more fearful of crime then other races/ethnicities.

Hypothesis 6: Students who self report being more knowledgeable of mass school shootings will be more likely to think about mass school shooting events happening to them.

METHODS/SAMPLE

An anonymous online survey was distributed to collect the data for this research. The survey examines whether a student's knowledge of mass school shootings affects their overall feelings of safety on campus. A convenience sample of 335 students enrolled in classes at the University of Central Florida was used for this research. The survey was distributed through the online surveying system Qualtrics. The link to the IRB approved survey was distributed to students in classrooms around campus. Each participant was notified that the survey is voluntary and that they must be 18 years of age or older to participate. To advertise the survey, professors put a link to the survey on Webcourses, a system used by the students and faculty of the University of Central Florida for classes. After all of the surveys were administered, the data was entered and statistically analyzed in SPSS.

MEASUREMENTS

Demographics

There are four demographic variables used in this research. The variable measuring sex will have the option of male or female. The student will fill in their age for the age question, as most students are a few years apart, thus giving a more accurate sample. The variable measuring race and ethnicity will have the option of White, Black, Hispanic, Asian, and Other, with the Other option having a fill in for the students that do not fit into the prior categories. The student will be able to select all that apply. The measure for class standing is freshman, sophomore, junior, senior, and graduate level.

Independent Variables

The measure for whether a student owns a weapon will have the options of taser, mace, knife, gun, and none of the above; check boxes will be used to allow for multiple items to be selected. A follow-up question for students who did not choose the option of none of the above will ask if the student carries their weapon on campus, with the option of yes or no.

Dependent Variables

Students are asked how afraid they are of crime on their campus using a 4-point Likert scale ranging from “not afraid” to “very afraid”. Students are then asked to rank how fearful they are of crime on their campus based on time of day (day and night) using a 4-point Likert scale ranging from “not afraid” to “very afraid.” Students will rank their familiarity with different school shooting events using a 5-point Likert scale ranging from “never heard of it” to “very familiar” to measure a student’s overall knowledge of mass school shootings. Students will be

asked 3 quiz style questions to validate their answers from the 5-point Likert scale questions asking their familiarity with the shooting events. A 5-point Likert scale ranging from “never” to “always” will be used to measure the amount of time a student thinks about mass school shooting events happening on their campus.

An index was created using student’s self reported knowledge of mass school shootings, specifically the shootings that occurred at Columbine High School, Virginia Tech, N. Illinois Univeristy, and Sandy Hook Elementary. The responses were recoded so 1 was Never Heard Of, 2 was Not Very Familiar, 3 was Somewhat Familiar, and 4 was Very Familiar. Students would have a composite score of there responses totaling up to 16 (meaning Very Familiar with all school shooting scenarios).

Control Variables

A control variable was included to measure a student’s place of residence. Students are asked in which locations they live in relation to the University of Central Florida. The variable measuring student housing has the option of on campus (dormitory), on campus (Fraternity/Sorority house), and off-campus.

RESULTS

The sample demographics of the 335 University of Central Florida students surveyed are reported in Table 1. Of these 335 students, 31.5% were male and 68.5% were female, and a mean age of the students surveyed was 19 years. 62.1% of the respondents identified themselves as White/Caucasian, 12.6% identified as Black/African American, 13.6% identified as Hispanic/Latino, 6.6% identified as Asian/Pacific Islander, and 5% identified themselves as a non-listed race/ethnicity. The majority of students in this sample identified themselves as being freshman undergraduate students at the University of Central Florida (34%). Others classified themselves as sophomores (23.6%), juniors (27.7%), seniors (13.5%), and graduate students (1.3%). Students were asked to identify which type of housing they lived in while attending school. 35.2% of the sample lives in on campus housing in dormitories found throughout the campus. 63.2 % live in Off-Campus housing and 1.6% of the sample live on campus in sorority or fraternity houses. Students were also asked whether they owned a weapon (classified as mace, pepper spray, knife (non-kitchen related), Taser, or gun). Of the 335 students, 43.3% own a weapon and 56.7% do not own a weapon.

Table 1 Sample Demographic (N=335)

Mean Age*	19
Gender	
Male	31.5
Female	68.5
Race/Ethnicity	
White/Caucasian	62.1
Black/African America	12.6
Hispanic/Latino	13.6
Asian/Pacific Islander	6.6
Other	5.0
Class Rank	
Freshman	34.0
Sophomore	23.6
Junior	27.7
Senior	13.5
Graduate	1.3
Housing	
On Campus (Dormitory)	35.2
On Campus (Fraternity/Sorority House)	1.6
Off Campus	63.2
Own Weapon	
Yes	43.3
No	56.7

Note: All numbers are percentages except for mean age

To test Hypothesis 1, which states that students who have a higher knowledge of mass school shooting events would be more fearful of crime, a correlation was run between student's fear of crime and the student's self-reported knowledge of various mass school shooting events.. Table 2 reports the frequency for the fear of crime variable. The frequency for student's self-reported knowledge of mass school shooting events is reported in Table 3.

Table 2 Frequency of Fear of Crime for Sample

Fear of Being a Victim of Crime	
Not Afraid at All	29.9
Rarely Afraid	39.8
Somewhat Afraid	25.1
Frequently Afraid	3.3
Very Afraid	1.8

Note: All numbers are percentages.

Table 3 Frequency of Self-Reported Knowledge of Mass School Shootings

Columbine High School (1999)	
Never Heard of It	7.1
Not Very Familiar	12.4
Somewhat Familiar	45.2
Very Familiar	35.3
Virginia Tech (2007)	
Never Heard of It	.6
Not Very Familiar	7.1
Somewhat Familiar	50.9
Very Familiar	41.4
Northern Illinois University (2008)	
Never Heard of It	45.3
Not Very Familiar	40.6
Somewhat Familiar	11.6
Very Familiar	2.5
University of Miami (2002)*	
Never Heard of It	56.3
Not Very Familiar	36.3
Somewhat Familiar	5.3
Very Familiar	2.2
Amish Schoolhouse Shooting	
Never Heard of It	38.5
Not Very Familiar	24.9
Somewhat Familiar	26.5
Very Familiar	10.1
Jonesboro, Arkansas Westside School Shooting (1998)	
Never Heard of It	59.4

	30.3
Not Very Familiar	
Somewhat Familiar	6.8
Very Familiar	3.4
Sandy Hook Elementary (2012)	
Never Heard of It	3.4
Not Very Familiar	3.1
Somewhat Familiar	12.7
Very Familiar	80.9

*Note: The University of Miami shooting is a fake event included to act as an accuracy check.
Note: All numbers are percentages.

Of the seven school shooting events, the Columbine High School shootings, Virginia Tech Shootings, and the Sandy Hook Elementary School shootings have the highest occurrence of familiarity, as reported by students answering with “Very Familiar” (35.3%, 41.4%, and 80.9% respectively).

Table 4 presents a correlation matrix between fear of crime and students self-reported knowledge of mass school shooting events. 18 correlations were significant at the .05 and .01 level. There was a strong, positive correlation between knowledge of the University of Miami shootings (a fake school shooting that was included to access continuity) and knowledge of the Northern Illinois University shootings (.707). There was a moderate correlation between knowledge of the Jonesboro, Arkansas School shootings and the knowledge of the Northern Illinois University shootings (.521) and the University of Miami shootings (.553). There was also a moderate correlation between the Virginia Tech school shootings and the Columbine High School shootings (.483). All other correlations were weak.

Table 4 Correlation Matrix of Knowledge of Mass School Shooting Incidents and Fear of Crime

	1	2	3	4	5	6	7	8
Columbine High School (1)	-	-	-	-	-	-	-	-
Virginia Tech (2)	.483**	-	-	-	-	-	-	-
N. Illinois University (3)	.189**	.214**	-	-	-	-	-	-
University of Miami (4)	.141*	.190**	.707**	-	-	-	-	-
Amish Schoolhouse Shooting (5)	.355**	.255**	.288**	.346**	-	-	-	-
Jonesboro, Ar. School Shootings (6)	.221**	.201**	.521**	.553**	.420**	-	-	-
Sandy Hook Elementary (7)	.146**	.313**	.100	.105	.157**	.064	-	-
Fear of Crime (8)	.102	.095	-.054	-.121*	-.036	-.064	.075	-

*p < .05; **p < .01

A correlation was run between the index and fear of crime. The test found that there were no strong correlations between the two variables (table not shown).

To test Hypothesis 2, which states that weapon ownership causes an increase in fear of crime, a t-test was run comparing students who own a gun with those that do not (see Table 1) and their mean scores on self-reported fear of crime (See Table 2). The test showed that there was no significance between the two groups (table not shown).

To test Hypothesis 3, which states that students who live in off campus housing will be more fearful of crime, an ANOVA was run testing student housing situation (see Table 1) and

self-reported fear of crime (See Table 2). The test showed that there was no significant difference between the groups in regards to their self-reported fear of crime two (table not show).

To test Hypothesis 4, which states that females will have a higher fear of crime than males, a t-test comparing sex (Table 1) and a student’s fear of crime (Table 2) was performed. Table 5 reports the outcome of that t-test. Fear of crime is measured on a 5-point Likert scale ranging from 1, “Not Afraid at All”, to 5, “Very Afraid”. Females had a mean fear of crime of 2.28, while males averaged 1.56. There was a significant difference found between male and female students self-reported fear of crime.

Table 5 T-test Comparing Sex and Fear of Crime

Independent Variable	Mean	t	df	Sig. (2-tailed)
Sex		-7.158	315	.000
Male	1.56			
Female	2.28			

Note: Fear of Crime is measured on a 5 point scale where 1 means “Not Afraid at All” and 5 means “Very Afraid”.

To test Hypothesis 5, which states that students who identify with being White/Caucasian would have high fear of crime than other races/ethnicities, an ANOVA comparing the race/ethnicity of the sample (Table 1) and a student’s fear of crime (Table 2) was run. This test did not find any significant differences between the racial and ethnic groups and fear of crime (table not shown).

To test Hypothesis 6, which states that a student with higher knowledge of mass school shooting events will think about mass school shooting scenarios more often, a correlation was run between a student’s self-reported knowledge of mass school shootings (Table 3) and students

frequency of thoughts of school shooting scenarios. A frequency of the samples responses to the four scenarios can be found in Table 6.

Table 6 Frequency Table of Responses to Student’s Frequency of Thinking About Mass School Shooting Events

A Student Opening Fire in a Classroom	
Never	31.0
Rarely	39.5
Sometimes	23.2
Frequently	4.7
Always	1.6
A Teacher Opening Fire in a Classroom	
Never	67.8
Rarely	26.3
Sometimes	4.1
Frequently	.9
Always	.9
A Non-School Associated Person Opening Fire On Campus	
Never	25.3
Rarely	35.3
Sometimes	29.1
Frequently	8.4
Always	1.9
A Student Opening Fire in a Dorm Building	
Never	45.9
Rarely	32.5
Sometimes	16.9
Frequently	3.8
Always	.9

Note: All numbers are percentages.

Table 7 shows a correlation matrix between the student’s frequency of thoughts of school shooting scenarios and a student’s self-reported knowledge of mass school shootings. When comparing the responses of students who answered, “Sometimes” to the different school

shooting scenarios, “a non-school associated person opening fire on campus” was the most feared scenario (29.1%). The second most feared scenario was “A student opening fire in a classroom” (23.2%). The least feared scenario was a teacher opening fire in a classroom (4.1%). Strong to moderate correlations were found between all school shooting scenarios with the strongest being between “A student opening fire in a classroom” and “a non-school associated person opening fire on school campus” (.700). No strong correlations were found between the self-reported knowledge of school shooting and the school shooting scenarios.

Table 7 Correlation Matrix of Self-Reported Knowledge of Mass School Shooting Incidents and School Shooting Scenarios

	1	2	3	4	5	6	7	8	9	10	11
A Student Shooting in a Classroom (1)	-	-	-	-	-	-	-	-	-	-	-
Teacher Shooting in a Classroom (2)	.478**	-	-	-	-	-	-	-	-	-	-
Non-School Associated Person Shooting on Campus (3)	.700**	.484**	-	-	-	-	-	-	-	-	-
A Student Shooting in a Dorm (4)	.576**	.610**	.540**	-	-	-	-	-	-	-	-
Columbine High School (5)	.186**	.087	.137*	.060**	-	-	-	-	-	-	-
Virginia Tech (6)	.177**	.124*	.125*	.097**	.483*	-	-	-	-	-	-
Northern Illinois University (7)	.064	.163**	.054	.130	.189**	.214	-	-	-	-	-

University of Miami (8)	-.010	.203	.011	.034	.141	.190	.707	-	-	-	-
Amish Schoolhouse Shooting (9)	.057	.104	.060	.042	.355	.255	.288	.346	-	-	-
Jonesboro, Ar. School (10)	.071	.163	.029	.145	.221	.201	.521	.553	.420	-	-
Sandy Hook Elementary (11)	.126	.081	.099	.101	.146	.313	.100	.105	.157	.064	-

* $p < .05$; ** $p < .01$

A correlation was run between the index created for Hypothesis 1 and the four school shooting scenarios. The test showed that there were weak correlations between the school shooting scenarios and the index (table not shown).

DISCUSSION

The overall goal of this research was to see if prior knowledge of mass school shootings is correlated with an increased fear of crime in students. When looking at the results it is clear that for this sample, there is no significant relationship between fear of crime and knowledge. What was interesting about the results for Hypothesis 1 was that there was a strong correlation between a student's reported knowledge of the false school shooting, the University of Miami shootings, and the Northern Illinois University shootings. This means that as knowledge of the Northern Illinois University shootings increased so increased a student's knowledge of the (fake) University of Miami school shootings. This could be due to students clicking through the answers without thinking in order to finish the survey or it could have something to do with students wanting to appear knowledgeable about events, even if these events have not in fact occurred. There was an expectation to find that students would be more fearful of crime that has happened on university campuses as opposed to high school and elementary school crimes. The index was created to test if university shootings causes higher fear in college students but there was no strong correlation between the index and fear of crime. This could be due to the randomness at which school shootings occur and may cause students to feel as if this kind of situation will not happen to them.

For hypothesis 2, which states that a person who owns a weapon will have a higher fear of crime, was found to not be significant. This means that weapon ownership has no effect of a person's fear of crime in this study. These findings contradict the literature, as prior studies have found that students change their behavior, such as carrying a weapon, when they are more cognizant of crime occurring (Lane et al. 2009; Tewksbury and Mustaine 2003; Woolnough

2009). This hypothesis was based on the routine activities theory. The theory states that crime is not a random act, but that it comes from the lifestyles and daily routines of the individual. Thus, a person may own a weapon in order to protect himself or herself from a dangerous area (such as a high crime community), which in turn creates an opportunity for the individual to be in dangerous situations, thus changing their perceptions of fear of crime. One explanation for why these findings are not supported is that a student may own a weapon for other reasons beyond protection. For example, a student may be a hunter and would thus own a weapon for that hobby and not for protection.

The third hypothesis was tested using an ANOVA to determine if a student who lived in off campus housing was more likely to be more fearful of crime. This hypothesis was also not supported, as there was no significant relationship between where a student lives and their fear of crime. The hypothesis was created based on findings found in previous research which has concluded that certain environments cause changes in a student's perceived risk of crime (Tewksbury and Mustaine 2003). Due to off campus housing not having the same restrictions on behavior as on campus housing, students who live in off campus housing are theoretically subject to potentially violent situations more often than students who live in on campus housing. However, the tests showed that there were no significant differences among my sample. This could be due to the small sample size, which may not have included students living in the many off campus communities.

Hypothesis 4 was tested using a t-test to compare the sex of student to the student's fear of crime. The results show that there is a significant relationship between a person's sex and their overall fear of crime. The results from the t-test showed that females, on average, were more

fearful of crime than men. These findings correlate with the findings found in other literature (Cook and Fox 2011; Jennings et al. 2007; Kaminski et al. 2010; Kohm et al 2012; Lane et al. 2009; Woolnough 2009).

Hypothesis 5, which states that white/Caucasian identifying students, would be more fearful of crime than students of other races/ethnicities. The results found that there was no significance in terms of race/ethnicity causing a person to be more fearful of crime. This could be due to a small sample size, as 62.1% of the sample identified as being White/Caucasian, which does not give a good representation of the other races/ethnicities. This result could also be due to crime around the University of Central Florida not being racially charged, thus students in this area are not as fearful of crime based on their own race.

Hypothesis 6 used a correlation to determine if a student who frequently thinks about school shooting scenarios is more knowledgeable of mass school shootings than someone who does not think about school shooting scenarios frequently. The results found that there was a weak correlation between self-reported knowledge and school shooting scenarios. However, there were moderate-strong correlations between the scenarios themselves, which shows that students who think about one type of event, such as a student opening fire in a classroom, are just as likely to think about other scenarios.

CONCLUSION

The overall purpose of this research was to determine if students were more fearful of crime happening on campus if they were more aware of mass school shooting events. The intent of the research was to gain an understanding of areas where students felt less safe, which students (based on sex, ethnicity, housing type) were more fearful of crime and how these issues can be addressed by the University of Central Florida community as a whole. The findings in this research hope to contribute to the body of literature in order to assist universities and campuses in the understanding of their students overall fears and which students are more fearful.

This research found that students who have a higher knowledge of mass school shootings do not have higher fear of crime when compared to students with lower levels of knowledge. Weapon ownership, race/ethnicity, and a student's place of residence were other factors that were found to not contribute to a student's overall fear of crime. The only factor that had any significance in determining an increase in fear of crime, for this sample, was the gender of the students, as females reported having higher fear of crime than males.

Further research should include a focus on off campus housing. This research focused on which places on school campus did students fear the most. Future research should observe students fears in terms of off campus housing (such as parking garages, hallways, and community shared centers) as well as looking into popular spots around the school campus where large groups of students like to congregate (such as clubs, restaurants, etc.).

Other research could focus on student's opinions of new gun laws, such as teachers being able to carry a gun on campus, to see if this may cause a change in a student's perception of safety on campus.

Due to the recent events at the University of Central Florida, fear of crime could have potentially increased among the student population, especially students living in dorm buildings. A second study could be performed on the University of Central Florida's students to see if fear of crime has increased in the past semester. The current research could, theoretically, act as a comparison point for future research done on student's fear of crime at this university.

APPENDIX 1: SURVEY

To participate in the survey, you must be 18 years of age or older. This survey is entirely anonymous and voluntary. Please select an answer that best answers the question.

1. What type of classes have you taken? (Check all that apply)
 - Day
 - Night
 - Online
2. Have you taken night classes this past semester?
 - a) Yes
 - b) No (**Skip to Question 4**)
3. If you have taken night classes, how many nights per week were you on campus for class?
 - a) 1
 - b) 2
 - c) 3
 - d) 4
4. How do you usually get from one place to another on campus?
 - a.) Walk
 - b.) Drive your own vehicle
 - c.) Drive with a friend
 - d.) Ride a bike/skateboard
 - e.) Bus
 - f.) Other (specify)

Please answer the following questions by choosing a rank from 1 (Never) to 5 (Always)

5. I walk alone on campus during the day.	1	2	3	4	5
6. I walk alone on campus at night.	1	2	3	4	5
7. I avoid going out alone on campus out of fear of being the victim of crime.	1	2	3	4	5
8. I avoid areas on campus that have poor lighting.	1	2	3	4	5

9. Do you own at least one of the following? (Check all that apply)

- Taser
- Mace (Pepper Spray)
- Knife (other than kitchen utensils) or cutting instrument
- Gun (rifle, handgun, shotgun, etc.)
- None of the above (**Skip to question 11**)

10. If you answered yes to the previous question, do you carry any of these on campus?

- a) Yes
- b) No

11. How afraid are you of being the victim of crime on campus?

- a) Not afraid
- b) Not very afraid
- c) Somewhat afraid
- d) Very afraid

12. How afraid are you of being the victim of crime on campus during the day?

- a) Not afraid
- b) Not very afraid

- c) Somewhat afraid
 - d) Very afraid
13. How afraid are you of being the victim of crime on campus at night?
- a) Not afraid
 - b) Not very afraid
 - c) Somewhat afraid
 - d) Very afraid
14. Have you ever been the victim of a crime (theft, assault, burglary, etc.) on campus?
- a) Yes
 - b) No
15. Are you aware of the UCF Campus Alert System (UCFAlerts) to notify you in case of an emergency?
- a) Yes
 - b) No
16. Are you signed up to receive UCFAlerts from UCF in case of an emergency?
- a) Yes
 - b) No

Location

17. Please rank on a scale of 1 to 10, **how afraid you are of being the victim of a crime in the following locations during the day**, where 1 means *you are not afraid at all* and 5 means *you are very afraid*.

a. Memory Mall	1	2	3	4	5
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b. Classrooms	1	2	3	4	5
c. Parking Garages	1	2	3	4	5
d. Dormitories	1	2	3	4	5
e. Health and Wellness Center (Gym)	1	2	3	4	5
f. Library	1	2	3	4	5

18. Please rank on a scale of 1 to 10, **how afraid you are of being the victim of a crime in the following locations at night**, where 1 means *you are not afraid at all* and 5 means *you are very afraid*.

a. Memory Mall	1	2	3	4	5
b. Classrooms	1	2	3	4	5
c. Parking Garages	1	2	3	4	5
d. Dormitories	1	2	3	4	5
e. Health and Wellness Center (Gym)	1	2	3	4	5
f. Library	1	2	3	4	5

19. Please rank on a scale of 1 to 10, **how likely do you feel you are going to be the victim of a crime in the following locations during the day**, where 1 means *you are not likely at all* and 5 means *you are very likely*.

a. Memory Mall	1	2	3	4	5
b. Classrooms	1	2	3	4	5
c. Parking Garages	1	2	3	4	5

d. Dormitories	1	2	3	4	5
e. Health and Wellness Center (Gym)	1	2	3	4	5
f. Library	1	2	3	4	5

20. Please rank on a scale of 1 to 10, **how likely do you that you are going to be the victim of a crime in the following locations at night**, where 1 means *you are not likely at all* and 5 means *you are very likely*.

a. Memory Mall	1	2	3	4	5
b. Classrooms	1	2	3	4	5
c. Parking Garages	1	2	3	4	5
d. Dormitories	1	2	3	4	5
e. Health and Wellness Center (Gym)	1	2	3	4	5
f. Library	1	2	3	4	5

Crime

21. Please rank on a scale of 1 to 10, **how afraid are you of being the victim of the following crimes on campus during the day**, where 1 means *you are not afraid at all* and 5 means *you are very afraid*.

a. Being robbed or mugged on campus	1	2	3	4	5
b. Being raped or sexually assaulted	1	2	3	4	5
c. Having your property stolen on campus	1	2	3	4	5
d. Being attacked by someone with a weapon	1	2	3	4	5
e. Having your car stolen	1	2	3	4	5

f. Having your car broken into	1	2	3	4	5
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22. Please rank on a scale of 1 to 10, **how afraid are you of being the victim of the following crimes on campus at night**, where 1 means *you are not afraid at all* and 5 means *you are very afraid*.

a. Being robbed or mugged on campus	1	2	3	4	5
b. Being raped or sexually assaulted	1	2	3	4	5
c. Having your property stolen on campus	1	2	3	4	5
d. Being attacked by someone with a weapon	1	2	3	4	5
e. Having your car stolen	1	2	3	4	5
f. Having your car broken into	1	2	3	4	5

23. Please rank on a scale of 1 to 10, **how likely do you feel that you are going to be the victim of the following crimes on campus during the day**, where 1 means *you are not afraid at all* and 5 means *you are very afraid*.

a. Being robbed or mugged on campus	1	2	3	4	5
b. Being raped or sexually assaulted	1	2	3	4	5
c. Having your property stolen on campus	1	2	3	4	5
d. Being attacked by someone with a weapon	1	2	3	4	5
e. Having your car stolen	1	2	3	4	5
f. Having your car broken into	1	2	3	4	5

24. Please rank on a scale of 1 to 10, **how likely do you feel that you are going to be the victim of the following crimes on campus at night**, where 1 means *you are not afraid at all* and 5 means *you are very afraid*.

a. Being robbed or mugged on campus	1	2	3	4	5
b. Being raped or sexually assaulted	1	2	3	4	5
c. Having your property stolen on campus	1	2	3	4	5
d. Being attacked by someone with a weapon	1	2	3	4	5
e. Having your car stolen	1	2	3	4	5
f. Having your car broken into	1	2	3	4	5

Knowledge

25. Please rate your familiarity with the following cases of school shootings by giving a rank from 1 (Never Heard of It) to 5 (Very Familiar).

a. Columbine High School (1999)	1	2	3	4	5
b. Virginia Tech (2007)	1	2	3	4	5
c. Northern Illinois University (2008)	1	2	3	4	5
d. University of Miami (2002)	1	2	3	4	5
e. Amish Schoolhouse Shooting (2006)	1	2	3	4	5
f. Jonesboro, Arkansas Westside School Shooting (1998)	1	2	3	4	5
g. Sandy Hook Elementary (2012)	1	2	3	4	5

26. Which of the following shootings is the most deadly in the United States history?

- a) Columbine High School
- b) Jonesboro, Arkansas Westside School Shooting
- c) Northern Illinois University
- d) University of Miami
- e) Virginia Tech
- f) Don't know

27. Which of the following shootings ended in the assailant committing suicide?

- a) Virginia Tech
- b) Columbine High School
- c) Jonesboro, Arkansas Westside School Shooting
- d) University of Miami
- e) Sandy Hook Elementary
- f) None of the above
- g) All of the above

28. In which state did the Columbine School Shooting occur?

- a) Kansas
- b) Florida
- c) Ohio
- d) California
- e) Colorado
- f) None of the above

29. On a scale of 1 to 5, how often do you think about the following scenarios, where 1 means *never* and 5 means *always*.

a. A student opening fire in a classroom	1	2	3	4	5
b. A teacher opening fire in a classroom	1	2	3	4	5
c. A non-school associated person opening fire on campus	1	2	3	4	5
d. A student opening fire in a dorm building	1	2	3	4	5

30. Please answer the following questions by giving a ranking from 1 (Strongly Disagree) to 5 (Strongly Agree).

a. School shootings are a major problem in the U.S.	1	2	3	4	5
b. I believe a school shooting could happen at my school.	1	2	3	4	5
c. School shootings are unpredictable.	1	2	3	4	5
d. I believe school shootings are a major issue worldwide.	1	2	3	4	5
e. I believe that school shootings are on the rise.	1	2	3	4	5
f. School shootings are premeditated events.	1	2	3	4	5
g. The odds of being a victim of a school shooting are greater than the odds of being the victim of other types of crime (theft, rape, etc.).	1	2	3	4	5
h. I believe my school should have more rigorous safety procedures in place to prevent school shootings.	1	2	3	4	5
i. I feel safe on campus.	1	2	3	4	5

Demographics

31. What is your age? (Specify)

32. Sex?

- a) Female
- b) Male

33. Ethnicity/Race?

- a) White
- b) Black
- c) Hispanic
- d) Asian
- e) Multi
- f) Other (Specify)

34. What is your class rank at UCF?

- a) Freshman
- b) Sophomore
- c) Junior
- d) Senior
- e) Graduate

35. What type of housing do you live in?

- a) On-Campus (Dormitory) (**Skip to end of survey**)
- b) On-Campus (Fraternity/Sorority House) (**Skip to end of survey**)
- c) Off-Campus

36. What type of Off-Campus housing do you live in?

- a) Affiliated housing with roommates

- b) Affiliated housing alone
- c) With family (2 or more miles from campus)
- d) With roommates (2 more miles from campus)
- e) Alone (2 or more miles from campus)

APPENDIX 2: IRB APPROVAL LETTER



University of Central Florida Institutional Review Board
Office of Research & Commercialization
12201 Research Parkway, Suite 501
Orlando, Florida 32826-3246
Telephone: 407-823-2901 or 407-882-2276
www.research.ucf.edu/compliance/irb.html

Approval of Exempt Human Research

From: **UCF Institutional Review Board #1**
FWA00000351, IRB00001138

To: **Amy M. Donley** and Co-PI: **Emily P. Rosenbaum**

Date: **December 18, 2012**

Dear Researcher:

On 12/18/2012, the IRB approved the following activity as human participant research that is exempt from regulation:

Type of Review: Exempt Determination
Project Title: Does Knowledge Predict Fear: Prior Knowledge of Mass School Shootings and Students Fear of Crime on Campus
Investigator: Amy M Donley
IRB Number: SBE-12-08920
Funding Agency:
Grant Title:
Research ID: N/A

This determination applies only to the activities described in the IRB submission and does not apply should any changes be made. If changes are made and there are questions about whether these changes affect the exempt status of the human research, please contact the IRB. When you have completed your research, please submit a Study Closure request in iRIS so that IRB records will be accurate.

In the conduct of this research, you are responsible to follow the requirements of the Investigator Manual.

On behalf of Sophia Dziegielewski, Ph.D., L.C.S.W., UCF IRB Chair, this letter is signed by:

Signature applied by Joanne Muratori on 12/18/2012 02:13:51 PM EST

IRB Coordinator

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