

The Pennsylvania State University

The Graduate School

Department of Counselor Education, Counseling Psychology, and Rehabilitation Services

**RESPONSES TO A FIRE EMERGENCY: STUDENTS' KNOWLEDGE AND
WILLINGNESS TO ASSIST ANOTHER STUDENT**

A Dissertation in

Counselor Education

by

Susan Varghese

©2010 Susan Varghese

Submitted in Partial Fulfillment
of the Requirements
for the Degree of

Doctor of Philosophy

May 2010

The dissertation of Susan Varghese was reviewed and approved* by the following:

Liza M. Conyers
Associate Professor of Counselor Education
Dissertation Advisor
Chair of Committee

James T. Herbert
Professor of Counselor Education

Keith B. Wilson
Professor of Counselor Education

Beverly J. Vandiver
Associate Professor of Education
School Psychology Program

Spencer G. Niles
Professor of Counselor Education
Head of the Department of Counselor Education
Counseling Psychology, and Rehabilitation Services

*Signatures are on file in the Graduate School

ABSTRACT

Recent statistics have shown an increasing trend in the frequency and severity of emergency situations around the world, with women and people with disabilities being disproportionately impacted by these emergencies. A review of the literature suggests that college campuses are particularly vulnerable during emergencies. With the increasing enrollment of women and students with disabilities on college campuses it has become essential to assess the knowledge levels of students regarding emergency procedures, and the willingness of students to assist others during a campus emergency. For this study, quantitative and qualitative data were collected from 436 undergraduate students through a paper and pencil survey. Each participant was randomly assigned to one of four vignettes describing a fire emergency on campus with a student (male with disability/male without disability/female with disability/female without disability) seeking assistance from the participant. The vignette was followed by questions to assess participants' knowledge of emergency procedures and their willingness to assist others, a demographic questionnaire, the Marlowe-Crowne Social Desirability Scale, the Self-Report Altruism Scale and the Interpersonal Reactivity Index. Hierarchical regression analysis showed that male participants reported higher levels of knowledge regarding emergency procedures than female participants. Participants who had previous experience with fire emergencies and previous training in emergency procedures also reported a higher level of knowledge of safety measures. Participants reported having less knowledge to help a student with disability as compared to a student without disability. Willingness to assist another student was positively influenced by personal factors such as higher levels of knowledge regarding emergency procedures and higher scores on the social desirability scale and the self-report altruism scale. Participants were more willing to assist another student if the student had a disability, and if the

student was female. Analysis of the qualitative data revealed that students were more likely to seek input from a person requiring help if the person did not have a disability or was male. Further, willingness to help was influenced by stereotypes regarding disability and gender. Implications of these findings on research, training and practice are discussed.

TABLE OF CONTENTS

LIST OF TABLES	ix
ACKNOWLEDGEMENTS	x
CHAPTER ONE: Introduction	1
Background and Significance	1
Emergencies and College Campuses	3
Knowledge of Emergency Procedures.....	6
Gender.....	7
Previous Experience with Emergencies.....	7
Previous Training in Emergency Procedures.....	8
Willingness to Help Others.....	8
Personal Factors	9
Social Desirability.....	9
Knowledge of Emergency Procedures.....	9
Empathy	10
Altruism	10
Situational Factors	11
Gender of Person Requesting Help.....	11
Disability Status of the Person Requesting Help	11
Research Questions	11
CHAPTER TWO: Literature Review	13
Emergencies on College Campuses	14
Student Composition of Colleges	16
Ethnic Minority Students	16
Students with Disabilities	16
Women on College Campuses	17
Safety Initiatives	18
Responsibility for Safety	20
Knowledge of Emergency Procedures	22
Factors Influencing Knowledge of Emergency Procedures	23
Age	23
Gender	23
Previous Experience with Emergency Procedures	24
Previous Training in Emergency Procedures.....	24
Emergency Situations and People with Disabilities	25
Emergency Situations and Women	29
Summary	31
Willingness to Help Others During Emergency Situations	31
Personal Factors that Influence One’s Willingness to Help Others	31

Social desirability	32
Knowledge of Emergency Situations	32
Empathy	32
Altruism	33
Situational Factors that Influence One’s Willingness to Help Others	34
Disability Status of the Person Requesting Help	34
Gender of the Person Requesting Help	36
Summary	36
Purpose of the Study	37
CHAPTER THREE: Method.....	39
Participants	39
Research Design	40
Vignettes	40
Measures	41
Follow-up Items to Vignette	42
Responsible Party	42
Perceived Knowledge to Help Oneself	42
Perceived Knowledge to Help Another Student	42
Willingness to Provide Assistance to Another Student	42
Individual Responses to Fire Emergency	43
Demographic Questionnaire	43
Previous Experience with Emergencies	43
Participation in Training Programs for Emergency Situations	44
Marlowe-Crowne Social Desirability Scale	44
Self-Report Altruism Scale	46
Interpersonal Reactivity Index	46
Procedures	47
Pilot Testing Emergency Situations	47
Recruitment Procedures	48
Data Collection Procedures	49
Data Analyses	49
CHAPTER FOUR: Results.....	51
Preliminary Analysis	51
Data Management	51
Tests of Regression Assumptions	51
Descriptive Statistics	52
Group Equivalence.....	52
Research Question and Analyses	53
Research Question 1	53
Research Question 2	57

Research Question 3	60
Qualitative Analyses	63
Themes Describing How to Respond	63
Seeking Input from Student	63
Acting Without Input	64
Acting Without Input and Seeking Others' Help	64
Helping Without Following Guidelines	66
Other	66
Themes Describing Willingness to Help	66
Personality	67
Physical Condition	67
Own Life in Danger	67
Empathy	67
Altruism	68
Guilt	68
Not Willing to Help	68
Other	68
CHAPTER FIVE: Discussion.....	70
Hypothesis.....	70
Responsibility of Safety	70
Knowledge to Help Others	71
Disability Status.....	71
Previous Experience in Emergency Situations	72
Training in Emergency Procedures	73
Willingness to Help	73
Altruism	74
Knowledge About Emergency Procedures	74
Disability Status	74
Gender	75
Empathy	75
Responses to Open-Ended Questions	76
Assumptions about Gender and Disability	76
Willingness to Help	77
Limitations of Research Study	77
Implications for Research, Training and Practice	79
Research.....	79
Training.....	79
Practice.....	82
Conclusions.....	83
REFERENCES	86
APPENDIX A: Vignette 1 (Male Student without Disability).....	99

APPENDIX B: Vignette 2 (Male Student with Disability)	101
APPENDIX C: Vignette 3 (Female Student without Disability)	103
APPENDIX D: Vignette 4 (Female Student with Disability)	105
APPENDIX E: Demographic Questionnaire	107
APPENDIX F: Marlowe-Crowne Social Desirability Scale	109
APPENDIX G: Self-Report Altruism Scale	110
APPENDIX H: The Interpersonal Reactivity Index	111
APPENDIX I: Recruitment Email	113
APPENDIX J: Informed Consent Form	114

LIST OF TABLES

Table 1	
Means, Standard Deviations, Reliability Estimates, and Correlations for Scores on Knowledge to Help, Willingness to Help, MCSDS, SRA, and IRI	53
Table 2	
Respondents' Ranking of Party most Responsible for Student Safety	54
Table 3	
Summary of Mann Whitney Tests of Disability on Responsible Party for Student Safety	56
Table 4	
Responsibility Ranks by Vignette Condition (Percentage Age in Each Condition)	57
Table 5	
Summary of Hierarchical Regression Analysis for Variables Predicting Knowledge to Help Others	59
Table 6	
Summary of Hierarchical Regression Analysis for Variables Predicting Willingness to Help Others	62
Table 7	
Responding to Student Asking for Help	65
Table 8	
Willingness to Help	69

ACKNOWLEDGEMENTS

First and foremost I want to thank God for blessing me with such wonderful learning opportunities and for providing with me with all that I have ever needed.

I am immensely thankful and grateful to my advisor and my chair, Dr. Liza Conyers, without whom completing this dissertation would have been impossible. Her constant encouragement, support, and faith in me have helped me gain confidence in myself and I really admire her for being a great mentor and advisor. I've learned so much from her not only about being a good researcher and counselor, but also about being a good human being. Her readiness to listen and her thoughtfulness have been a great source of strength for me and I truly value our association.

I also wish to thank Dr. Jim Herbert, Dr. Keith Wilson and Dr. Beverly Vandiver for so graciously agreeing to serve on my committee. I sincerely appreciate all the suggestions and encouragement I have received from each of them throughout this process. I am very grateful to them for their guidance and patience in providing feedback at crucial points during the Ph.D program and I really appreciate the time and effort each of them invested in helping me complete the dissertation.

I would like to sincerely thank Dr. Meg Meloy for providing me with access to students for my data collection. I'm very grateful for her help.

Additionally, I want to thank everyone in the Department of Counselor Education. The faculty and my cohort have been amazing and the staff has been helpful in more ways than I could have imagined. A special thanks to Chris Andrus and Heather Homan who have been forever ready to help and who have become wonderful friends in the process. My time at Penn State has truly been a memorable one thanks to everyone in the department and I owe it to each one of them for making me feel like Penn State was my home away from home.

Words are not enough to say thank you to my husband, Sunil Thomas, who has sacrificed more than I could have asked for, in order to help me realize my dream. He has been a rock solid support for me every step of the way. His constant encouragement, support, advice, his faith in me and his prayers are the only reasons why I have been able to complete this dissertation. His sense of humor, and his energy and enthusiasm kept me going throughout the Ph.D program. From staying up with me as I worked through the night to giving up his own research time to babysit so that I could complete my dissertation, he believed in me even when I didn't. I am really fortunate to share my life with him and I just want to thank him for everything.

My two-year old son Jonathan has brought so much joy and meaning to my life. His lively spirit, his smile, and his ability to make every moment special has taught me a lot about life and living. In his own special way he motivated me to complete this dissertation and I can't imagine what this process would have been without him.

My parents have always encouraged me to pursue my academic dreams and I am really grateful to them for their encouragement and their prayers. They've experienced every bit of this roller-coaster ride with me. Even though they are thousands of miles away in India I can hear them cheering me on as I complete this significant phase of my life. I also want to thank my father-in-law and mother-in-law who have been an inspiration and source of support for me. I hope one day I will have their ability to always look at the positive side of things and to have the faith to face every challenge confidently.

I would also like to thank my sister Ann and her family and my husband's siblings and their families for their support throughout this Ph.D program. I consider myself really fortunate to be part of such a wonderful family. I want to thank all my uncles, aunts and cousins back in India for their prayers and encouragement. I want to thank my friends Sanju and Sindhu for all their help and for opening up their home during my numerous trips to State College. I also want to thank my friends in California especially Abey, Jiby, Daniel, Anna, Binu and Ruth for constantly assuring me that I could do this.

I really can't imagine being where I am today without any of the people I have mentioned above. To all of you, I am forever grateful.

DEDICATION

I would like to dedicate this dissertation to the memory of my beloved grandmother Mrs. Sosa George.

“Who, like thyself, my guide and stay can be?

Through cloud and sunshine, Lord, abide with me.”

~ Henry Francis Lyte

CHAPTER 1

Introduction

Background and Significance

Recent statistics show an increasing trend in the frequency and severity of emergency situations occurring around the world (Keefe, 2000). An emergency situation refers to both man-made and natural disasters, and may include disasters, such as fire, shootings at college campuses or schools, power breakdowns, and natural calamities (Federal Emergency Management Agency, [FEMA] 2004). According to the United Nations International Strategy for Disaster Reduction Secretariat (2009), there were over 245 natural disasters in 2009 alone, and about 58 million people were affected by these emergency situations. Fire emergencies are a particular cause of concern in the United States according to the American Red Cross (2009) as the number of deaths during incidents of fire is much higher compared to casualties occurring in all the other disasters combined.

The literature suggests that the impact of an emergency is often dependent on pre-existing conditions ranging from social and economic factors to political conditions (Storey, 2008). The casualties in any emergency situation are often amplified by factors like race, ethnicity, gender, disability, and age (Cutter, 2008). A review of the literature on emergencies reveals that the two most vulnerable populations in emergency situations are people with disabilities (Grady & Andrew, 2006) and females (Berg et al., 2008; Ho, Shaw, Lin, & Chiu, 2008). For example, 73% of individuals who died during Hurricane Katrina were individuals who had medical conditions and various mobility or sensory disabilities (Frieden, 2006). Statistics show that of individuals with disabilities, those with mobility disabilities are among the most vulnerable (Fox, White, Rooney, & Rowland, 2007). Statistics also reveal women have

suffered far more casualties compared to men in emergency situations, like Hurricane Katrina and the Indian Ocean Tsunami (Asia Pacific Forum on Women, Law and Development, 2005; Frieden, 2006).

A number of reasons have been given to explain the increased vulnerability of people with disabilities and women during emergency situations. The major concerns for people with disabilities have been the unavailability of appropriate safety measures and the absence of adequate knowledge regarding safety measures during times of emergency (National Organization on Disability SNAKE Report, 2005). According to Lathrop (1994), during an emergency situation like an earthquake, individuals with disabilities find it difficult to access medical supplies or get access to appropriate transportation facilities for evacuation. Similarly many evacuation centers may be ill-equipped or inaccessible for individuals with disabilities, thus preventing them from getting essential medical and civic amenities (Lathrop, 1994). Some reports have also suggested that even if the person with a disability asks for assistance from others during an emergency, the latter may not be willing to help (Fox et al., 2007). One reason for this could be the lack of sufficient knowledge of what is to be done to help a person with a disability during an emergency (Fox et al., 2007; National Organization on Disability SNAKE Report, 2005).

As mentioned earlier, women have been more vulnerable in emergency situations in comparison to men. Some reasons for this gender difference are that women may not have the social support systems needed to survive in these situations and they may have difficulty in accessing government relief programs. Women are also less likely to have access to official information that might help them to be better prepared, which makes it even more difficult for them to respond appropriately in emergency situations (West & Orr, 2007). Additionally,

stereotypes and assumptions regarding women and people with disabilities may influence the degree of help they receive during an emergency (Baldrige & Veiga, 2003; Eagly & Crowley, 1986). The literature also suggests that individuals from ethnic minority populations often suffer disproportionately more casualties during emergency situations in comparison to individuals from majority populations (Cutter, 2008). However, there is not much evidence to suggest that knowledge of emergency procedures is influenced by the race of the person requesting help during an emergency. Thus, the focus of this study is to understand the roles of gender and disability in an emergency situation.

Emergencies and College Campuses

Literature shows that many emergency situations occur on college and school campuses (Jackson & Terrell, 2007; Scalora, Simons, & VanSlyke, 2010). According to a report in the Boston Globe (2009), in the state of Massachusetts alone, there were 260 fires in college dorms in one year. The high incidence of campus fires and the recent shootings at Virginia Tech in April 2007 and at Northern Illinois University in February 2008 all serve to highlight the vulnerability of college campuses. Over the years, there has also been a considerable increase in the number of students with disabilities and women students seeking post-secondary degrees (Peter, Horn, & Carroll, 2005; Stebnicki, Sibrava & Rice-Mason, 1998), and as highlighted earlier, these two groups are the most vulnerable during emergency situations. The percentage of students with disabilities entering institutions of higher education has almost tripled since the 1970s (Block, 1993). According to the U.S. Department of Education, around 10% of students who are enrolled in graduate and undergraduate degree programs in universities across the United States have indicated that they have at least one or more disabilities (Stebnicki et al., 1998). There has also been a steady increase in the number of women accessing higher education

over the years (Kelly & Torres, 2006). According to King (2000 as cited in Kelly & Torres, 2006), there were about 5 million women seeking undergraduate and graduate degrees in 1975 in the United States, and in 1997 the number rose up to 8 million. In fact projections suggest that by 2013 women's enrollment will go up to 8.9 million in undergraduate programs alone (Peter et al., 2005).

Currently, a number of measures are being taken to make campuses safe for students and to prepare the students and the staff for unpredictable emergency situations. Organizations and committees like the FEMA, the American Red Cross, President Bush's Interagency Coordinating Council on Emergency Preparedness and Individuals with Disabilities, and the National Organization on Disability are all taking an active interest in improving emergency services during crisis situations. For example, in February 2003, the government announced that universities needed to revise their security measures as most college campuses were at risk for emergency situations (Arenson, 2001). Soon after this announcement, colleges across the United States adopted a number of new safety measures and revamped their preparedness plans (Arenson, 2001). Colleges also ensured that the new emergency measures were reviewed and updated on a periodic basis to ensure a safe campus environment for students, staff, and faculty (Neyman, 2004). Another initiative towards campus safety was the signing of the H.R. 4137 "Higher Education Opportunity Act" into law in 2008 by the then president, President Bush (Klotz, 2008). The act specifically focuses on campus safety and security. It mandates that all universities provide an annual fire safety report on student housing on each dormitory on campus. The law also requires the universities to share this report with the campus community as well the Secretary of Education. The report is required to contain details like the "number of fires, deaths, injuries, fire drills, fire related property damage and the type of fire detection

system in each building” (Klotz, 2008, p. 16). The law also established a U.S. Department of Education Student Safety and Campus Emergency Management grant program that provides financial support for universities to install various security equipments.

While many measures have already been taken to improve emergency preparedness, a review of governmental, non-governmental, and university websites and manuals related to emergencies reveals some expectations that these agencies have from the public. Governmental and non-governmental agencies expect the general public to have some knowledge about emergency measures and expect people to assist others around them during an emergency situation. Most agencies emphasize that individuals have the primary responsibility for their safety, and resources provided by the agencies are there for additional support. According to Boondi (2001) and Davis, LaTourette, Mosher, Davis, and Howell (2003), individuals need to depend on themselves to safeguard their own health and lives. Thus, it is expected that individuals should have knowledge about emergency procedures if casualties are to be minimized and safety is to be ensured during emergency situations. However, there appears to be a disconnect between the public and this expectation because often individuals believe that governmental and non-governmental agencies are responsible for emergency measures and safety precautions, despite these agencies emphasizing that the primary responsibility belongs to the individual involved in the emergency (Kennedy, 2009; National Organization on Disability, 2005).

As mentioned earlier, emergency situations like fires are extremely common and frequently result in fatalities on college campuses (Boston Globe, 2005). There is also evidence to show that a number of measures have been initiated to ensure that college campuses are safe and students are well informed about safety measures during emergency fire situations (Arenson,

2001; Klotz, 2008). However, there is a dearth of research regarding key issues, such as knowledge of emergency procedures and the willingness of victims to help other victims during emergencies. The intent of the current study is to look into the perceived knowledge of students on university campuses regarding an emergency fire situation and their willingness to help others during such an emergency. Therefore, this study specifically examined (a) students' expectations regarding who is responsible for their safety during emergency situations, (b) the impact of disability status on students' knowledge to assist another student during an emergency, and (c) the impact of gender and disability status on students' willingness to help another student during an emergency.

The variables for the study have been generated after an extensive review of the existing literature on emergency situations as well as helping behaviors. Variables influencing one's *knowledge* during emergency situations include one's gender, previous experiences with emergencies and previous training in emergency procedures. Variables influencing one's *willingness to help* others during emergency situations include one's knowledge of emergency procedures, gender and disability of the person asking for help, and levels of altruism as well as levels of empathy of the person answering the survey. In the following section, each of these variables will be briefly reviewed so as to better understand the rationale for selecting these particular variables to study.

Knowledge of Emergency Procedures

Emergency preparedness and focus on knowledge of emergency procedures has come into prominence since the September 11, 2001 terrorist attacks (FEMA 2009). After recent incidents like the Virginia Tech campus shooting, agencies like the Association for Communications Technology Professionals in Higher Education (Anonymous, 2008) have urged

that all individuals find out more information on how to ensure their safety and how to assist others around them during crisis situations on college campuses. It has been emphasized that appropriate knowledge about safety measures will play a significant role in ensuring one's own safety and that of others who may require assistance. The literature suggests that gender, previous experience with emergencies, and previous training in emergency procedures could all have an impact on one's knowledge of emergency procedures.

Gender

Gender has been shown to have an impact on one's knowledge of emergency situations (Crane, 2005). Studies have shown that women often report being less prepared and having less knowledge about what to do in the event of an emergency (Axxess Point, 2007; Crane, 2005). In fact studies have also shown that not only do men report a higher level of knowledge regarding emergency procedures, but that more men are able to identify specific plans and emergency protocols regarding safety measures in comparison to women (Axxess Point, 2007).

Previous Experience with Emergencies

Previous experience with emergency situations has been seen to have an impact on one's perception of risk about similar future situations as well as one's preparedness levels (Mulilis, Duval, & Rogers, 2003; Russell, Goltz, & Bourque, 1995). For example, research shows that individuals who had experienced an earthquake in the past were better prepared for future earthquakes than someone who had not experienced an earthquake before (Russell et al., 1995). It was also seen that those with previous experience in earthquakes reported higher level of knowledge regarding what to do during an emergency situation and what safety measures they needed to take in the event of another earthquake in comparison to those who did not have any previous experience (Russell et al., 1995).

Previous Training in Emergency Procedures

Training in emergency procedures like fire drills has been seen as a very useful tool in promoting safety (Porter, 1998). Research shows that safety training and drills provide participants with a sense of security and can be a useful method of providing them with skills they can use in the event of a future emergency (Zhe, 2006). In fact repeated training in emergency procedures will help participants to be familiar with emergency protocol as well as give them the opportunity to practice some of the skills that they may have read or heard about. Training in emergency procedures may not ensure complete safety of the participant in an actual emergency situation but it may at least provide people with the basic skills to respond to an emergency (Glancy, 2008). In other words, victims can say, “I know what to do. I know how to at least keep this situation stable until additional assistance can arrive” (Glancy, 2008, p. 10)

Willingness to Help Others

Willingness to help others in emergency situations varies based on personal and situational factors. For the current study, a framework was developed based on an extensive review of the research on helping behaviors and emergency situations. The review was done in order to examine the variables that have an impact on people’s willingness to help fellow victims during an emergency. It was found that while studies on helping behavior have examined different variables that influence willingness to help others, these variables can be classified under two broad categories, namely *personal* and *situational* factors (Darley & Batson, 1973; Hampson, 1981; Mayer, 2009; Mechelen, 2008; Wilson, 1976; Wilson & Petruska, 1984). Based on the literature, the personal factors investigated for this study are empathy, altruism, social desirability, and knowledge to help while the situational factors are gender and disability status

of the person requiring help. More information on these variables is provided in the following paragraphs.

Personal Factors

Personal factors could influence one's willingness to help others and include social desirability, empathy, altruism, and knowledge to help. These factors are described in detail in the following section.

Social desirability. Social desirability or the need to be perceived positively by others is a variable that has an impact on one's willingness to assist others (Beretvas, Meyers, & Leite, 2002). Often individuals' decisions and responses may be determined by their need to obtain positive approval from people around them (Karakashian, Walter, Christopher, & Lucas, 2006). Thus, individuals may make the decision to help other individuals if they realize that they are going to receive positive social approval from other people witnessing the same event. In the context of this study, individuals may have a tendency to give socially desirable responses, which may lead them to report higher levels of perceived knowledge and higher levels of willingness to help others.

Knowledge of emergency procedures. Knowledge regarding emergency procedures is a personal variable that has a major influence on one's willingness to help others (Davis, LaTourette, Mosher, Davis, & Howell, 2003). For example, a survey done on three Los Angeles School Districts regarding emergency preparedness revealed that students who had prior knowledge regarding emergency procedures and basic skills like CPR and first aid were more willing to assist others during an emergency situation as compared to students who did not have these skills (Kano, Ramirez, Ybarra, Frias, & Bourque, 2007).

Empathy. Empathy has been reported to be an important factor that influences one's willingness to help others (Marjanovic, 2006). Empathy is defined as an "emotional response congruent with the perceived welfare of another" (Marjanovic, 2006, p. 269). Studies have shown that people who have higher levels of empathy or who experience increased empathy often report being more willing to help someone in need (Berenguer, 2007; Marjanovic, 2006). For example, in a study done on 60 undergraduate psychology students, participants were assigned to various empathy inducing conditions before being asked if they were willing to help someone in need. Results showed that participants who reported a higher level of empathy were more willing to help the person in need than those who reported lower levels of empathy (Berenguer, 2007).

Altruism. Altruism is another factor that has been shown to have an influence on people's willingness to help others. Piliavin (2009) stated, "altruism can be defined as behavior carried out to benefit another without anticipation of rewards from external sources" (p. 209). Studies on helping behaviors have consistently reported that high levels of altruism, especially during emergency situations like natural disasters, have led to higher levels of willingness to help victims of the disasters (Staud & Vollhardt, 2008). For example, in an experimental study done by Simpson and Willer (2009), it was seen that individuals who scored higher on an altruism scale were willing to help a person in need irrespective of the incentive or rewards. In comparison, individuals who scored low on the altruism scale were also those who had scored higher on a scale to measure egoistic personalities and were willing to help only in return for an incentive.

Situational Factors

Situational factors such as the gender and disability status of the person requiring help could play an important role in one's willingness to help. This is because people may have stereotypes and assumptions regarding women and people with disabilities in crisis situations.

Gender of person requesting help. In the case of women, research shows that women receive more help in situations in need as compared to men because of stereotypes like women being helpless and weak and needing additional assistance in a situation where help is required (Eagly & Crowley, 1986). Assumptions like men are calmer in emergency situations while women are not risk takers especially in emergency situations could also lead to women receiving more help (Eagly & Crowley, 1986).

Disability status of person requesting help. Research shows that stereotypes affect the social interactions between people with disabilities and people without disabilities. For example, people with disabilities may be viewed as being helpless and as needing assistance, and therefore be provided with assistance even when it is not requested. Similarly, people may be more willing to help a person with disability because of factors like pity. However, it has also been suggested that social awkwardness could lower helping behaviors directed towards persons with disability (Baldrige & Veiga, 2003).

Research Questions

Five research questions guided this study. Hypotheses are presented after the literature review.

1. In a fire emergency on campus, whom do participants' view as the party most responsible for student safety and does this vary by the disability status of the student needing assistance?

2. What is the nature of the relationship between disability status of a student seeking help and participants' knowledge to help?
3. What factors predict willingness to help another student during a fire emergency on campus and does this differ by gender and/or disability status of the student needing help in the "vignette"?
4. What are the primary themes identified in university students' descriptions of how they would assist another student in an emergency situation? Do these themes differ by disability status and gender of the student requiring help?
5. What are the primary themes identified in university students' descriptions of their willingness to assist another student in a fire emergency?

CHAPTER 2

Literature Review

The literature review provides a summary of the variables in the study, with the focus on students' knowledge regarding emergency procedures and their knowledge to help others during emergency situations. Students' willingness to help others during an emergency and the role of knowledge, altruism, and empathy on their willingness to help is also be reviewed. Additionally, the influence of gender and disability status of the person requiring help on students' knowledge and willingness to help during emergency situations are examined. These variables were selected based on existing literature on knowledge regarding emergency procedures and on people's willingness to help others during emergencies.

The current study is of high relevance considering the increase in man-made and natural disasters in recent years, which has made it critical to assess knowledge levels regarding emergency procedures, and knowledge levels to help others during such emergencies. According to the United Nations Environment Program (UNEP, 2010), there have been around 35 major conflicts and over 2,500 disasters in the world since the year 2000. The UNEP also reports that about 2 billion people have been affected and millions of people have lost their lives due to various man-made and natural disasters (UNEP, 2010). These man-made and natural disasters include chemical incidents, dam failures, earthquakes, fire or wildfires, flood, hazardous materials, heat, hurricanes, landslides, nuclear power plant emergencies, terrorism, thunderstorms, tornadoes, tsunamis, volcanoes, and winter storms (FEMA, 2010). In the last decade, the United States itself has seen an increase in man-made and natural disasters ranging from small-scale fires, snowstorms and wildfires, to major disasters, like Hurricanes Katrina and Rita, and the terrorist attacks of September 2001. As the number of disasters increase, it has been

reported that some populations are more vulnerable than others during emergency situations. Existing data on casualties in emergencies show that the two groups that are the most vulnerable in an emergency situation are people with disabilities and women. For example, Asia Pacific Forum on Women, Law and Development (APFWLD, 2005) reported that more than 300,000 people died during the Tsunami in 2004, of which more than 80% of the victims were women. Similarly, about 73% of individuals who died during Hurricane Katrina were individuals who had medical conditions and various mobility or sensory disabilities (Frieden, 2006). These statistics highlight the vulnerability of women and people with disabilities in emergency situations. A review of existing literature was examined for reasons why these two populations are most vulnerable and is presented later in this chapter.

Having sufficient knowledge about emergency procedures becomes critical not just because of the increase in the number of disasters occurring around the world but also because of the unpredictability of these events. Man-made or natural disasters can occur anywhere at any time (Burling & Hyle, 1997). For example, in the case of natural disasters, southeast United States has frequent hurricanes while the Gulf region is prone to numerous floods. Similarly, the northeastern states are often struck by severe winter storms. Even man-made or technological emergencies, such as terrorist attacks, aircraft crashes, and chemical spills can happen at any place without adequate warning (Burling & Hyle, 1997). This means that such events could occur anywhere at any time, including residential places, offices, and even schools and university campuses (Della-Giustina, 1988 as cited in Burling and Hyle, 1997).

Emergencies on College Campuses

According to Jackson and Terrell (2007), given the recent incidents of shootings on college campuses, universities and colleges cannot afford to ignore the fact that their campuses

are as vulnerable to violence and emergency situations as any other setting in society. Campus safety is an issue that needs to be the focus of administrators across all levels (Jackson & Terrell). A recent survey suggests that, in response to the shootings at Virginia Tech, institutions of higher education across the United States are making changes and trying to upgrade their existing emergency communications procedures (Kennedy, 2009). Given the vulnerability of college campuses, for this study I decided to focus on a university setting in order to investigate students' perceptions about who is responsible for their safety, and students' knowledge and willingness to help others during an emergency.

Fire emergencies are one of the most common types of emergencies world-wide and are responsible for the most number of casualties when compared to all other natural disasters combined (American Red Cross, 2009). In 2005, there were around 1.6 million fires in the United States that caused more than 3,900 deaths (Ta, Frattaroli, Bergen, & Gielen 2006). According to a report by the American Society of Safety Engineers (2005), there are around 1,700 fires that occur each year on and off college campuses, and around 150 fires take place in various fraternity and sorority houses. Some of the primary causes for these fires are cooking, arson and smoking by students. In fact according to the report, "In 2001, the academic year with the most fatal fires between 2000 and 2005, there were 2,530 reported fires in dormitories causing 6 deaths, 82 injuries and around 48.5 million in estimated direct property damage" (American Society of Safety Engineers, 2005, p. 1). According to a report in the *Boston Globe* (2005), many university campuses lack appropriate safety standards in their dorms. For example, the report suggests that universities in the United States lack sprinklers in the student residence halls and lack appropriate disposal systems for smoking materials or alcohol – making dorms extremely fire hazardous. The report also indicates that in 2003, around 260 residence halls fires

occurred across universities in Massachusetts alone, with more than 66 students dying in fires on and off campus over a five-year period (*Boston Globe*, 2005).

Student Composition of Colleges

College campuses can be described as a microcosm of society (Apostolakis & Lemon, 2005) and are similar to small towns surrounded by a larger community. Thus, a college campus is like a town where there are large numbers of residential members as well as daily commuters. Such towns have their own services like police personnel and medical facilities. They also have their own systems for utilities like electricity and water. They have their phone networks, own TV stations, local newspapers and transportation facilities. College campuses are also locations where diverse populations flourish. These campuses often witness an ever-evolving population comprising of individuals from various ethnic and racial groups, individuals with various acculturation levels, individuals with disabilities, etc.

Ethnic Minority Students

An example of this increasing diversity can be found in the increasing number of ethnic minority students enrolled in institutions of higher education during the last 20 years. According to the American Council on Education, almost 2 million African American, Hispanic, Asian American, and American Indian students were registered in universities in 1980 and by the year 2000, more than 4.3 million students from the same groups were enrolled in college (Gomstyn, 2003).

Students with Disabilities

College campuses are witnessing a considerable increase in the number of students with disabilities. In the last two decades, the number of students with disabilities seeking admissions to universities has grown significantly, in both graduate and undergraduate degree programs

(Stebnicki, Sibrava & Rice-Mason, 1998). “The percentage of college freshman reporting a disability had more than tripled from 2.6% in 1978 to 8.8% in 1991, or one in 11 students” (Henderson, 1992 as cited in Stebnicki, Sibrava & Rice-Mason, 1998, p. 30). The U.S. Department of Education also reported that around 10% of students enrolled in graduate and undergraduate degree programs have indicated that they have at least one or more disabilities (Stebnicki et al., 1998). There do not appear to be significant gender differences in the students with disabilities who are enrolled in colleges. An annual survey conducted by the Cooperative Institutional Research Program (CIRP) and cosponsored by the American Council on Education (ACE) and University of California at Los Angeles (UCLA) on a sample of incoming freshman across colleges in the United States revealed that in 2000 about 48 % of students with disabilities entering college were female while about 52 % were male (Henderson, 2001). These percentages show that the number of women accessing higher education has been increasing, given that historically, the number of women with disabilities seeking higher education was very low (Traustadottir & Harris, 1997).

Women on College Campuses

There has been a considerable increase in the number of female students enrolling in college over the past years. According to Freeman (2004, as cited in Peter, Horn, & Carroll, 2005), between the years 1970 and 2001, the percentage of women enrolled in undergraduate programs in the United States went up from 42% to 56%. Gerald and Hussar (2003, as cited in Peter, Horn, & Carroll, 2005) projected that by 2013 the enrollment of women in undergraduate programs will increase to 8.9 million, and they will comprise 57% of the total undergraduate population.

Safety Initiatives

To address the needs and concerns of vulnerable populations during emergency situations as well as reduce the high number of casualties in general, various government and non-governmental organizations and university administrators have taken an increased interest in emergency preparedness and safety measures. FEMA, in the aftermath of Hurricane Katrina in 2005, decided to revamp a number of its departments and focus on providing the public with information about emergency procedures that would be useful during crisis situations. Thus, FEMA now provides information about emergency procedures for particular populations like schools, individuals with disabilities, homeowners, etc. FEMA provides detailed and in-depth information about each type of natural and man-made disaster, and lays out steps that people should take in order to ensure their safety during emergency situations (FEMA, 2004). The information provided is meant to help individuals to protect themselves during an emergency as well as plan in advance for natural disasters and man-made emergencies, which in turn may help in reducing casualties.

In July 2004, President George W. Bush announced the formation of the Interagency Coordinating Council on Emergency Preparedness and Individuals with Disabilities, which exclusively focuses on the needs of individuals with disabilities during crisis situations. The Council was created primarily to ensure that individuals with disabilities were provided with adequate resources for their safety during times of emergency. The Council consists of various departments like the Department of Education and Department of Justice as well as the Office of Disability Employment Policy. The main task of this Council was to involve individuals with disabilities while planning for emergency procedures in employment settings. This was included so that the unique needs of employees and clients with disabilities could be met. The Council

also called for cooperation among the various government (federal, state, and local) and private organizations in implementing emergency standards for people with disabilities.

The FEMA website also lays out guidelines that people with disabilities can follow during times of emergency. The website does not offer directions for specific disabilities, but provides suggestions like keeping a back up of batteries and emergency supplies for equipment that people with disabilities may require for their immediate medical care, being aware of the emergency exits in their work place and residence and planning for alternate routes to evacuate if the emergency exits are inaccessible. FEMA also recommends that individuals with disabilities should be ready to explain what they would need, in the event of an evacuation, to someone offering assistance. Additionally, FEMA recommends that people with disabilities arrange for an individual or individuals who can check on them during an emergency situation (FEMA, 2010).

Organizations like the American Red Cross and National Organization on Disability are also actively involved in improving their services pertaining to emergency preparedness. Various universities have also taken the initiative to introduce measures to ensure student safety such as text-messaging and emailing students to warn them about ongoing emergency situations on and around campus. Some of these initiatives were prompted by the campus shootings that took place at Virginia Tech University in April 2007. Following the 2007 Virginia Tech shooting incident, more than 100 universities in the United States signed up for emergency text-messaging services, including notable universities like Harvard, Texas A&M, and the Pennsylvania State University (Kennedy, 2009; Smeltz, 2007).

A major shortcoming of these updated online resources is that information about people with disabilities is not integrated with general emergency information. In other words, to access information on emergency standards and procedures for people with disabilities from such

websites, one needs to click on a different tab from that for general information. Thus, only people who have a disability, or have a family member/acquaintance with a disability, or have some personal interest in disability issues are likely to click on that information tab. If, however, information on disability issues was integrated with general information, this feature would help people visiting the website to have some basic information on what to do in an emergency situation involving people with disabilities.

Given the vulnerability of women during emergency situations, it is important to understand specific initiatives that have been taken to protect women during such emergencies. However, a review of the literature reveals a dearth of research on specific safety initiatives for women during campus emergencies. Many of the specific initiatives taken by universities have been focused on preventing violence against women on campus. Examples include self-defense classes, and police escort or walk services for students (David, Cotton, Simpson, & Weitlauf, 2004; King, 2009). While this is a very important issue, there is a need for more studies that investigate factors impacting the safety of women in campus emergencies.

Responsibility for Safety

In spite of all the steps taken by non-governmental and governmental organizations, all individuals are expected to have some knowledge about appropriate actions to be taken during an emergency. These agencies emphasize that individuals have the primary responsibility for their safety, and the resources provided by the agencies are there for additional support. According to Boondi (2001) and Davis, LaTourette, Mosher, Davis, and Howell (2003), individuals need to depend on themselves to safeguard their own health and lives. In other words, self-preparedness is vital if casualties are to be minimized and safety is to be ensured during emergency situations. However, there appears to be a disconnect between the expectations of the agencies

implementing emergency measures and the expectations of the general public. This is because people believe that the government and non-governmental agencies are responsible for all emergency measures and ensuring safety precautions, while agency personnel tend to put the primary responsibility on the individual involved in the emergency (National Organization on Disability, 2005). Research shows that despite resources emphasizing personal responsibility made available online through FEMA, the National Organization on Disability and the American Red Cross, students and parents typically hold school and college authorities responsible for student safety (Hammond, 2009). In 1999, the Columbine school district witnessed a horrific shooting attack in which 12 students and a teacher were killed (Collins, 2007). According to an administrator at the Columbine school district, in an emergency situation, no matter what information is available, students and parents expect the school officials to know all the answers and take all the responsibility (Hammond, 2009). A review of recent literature on school safety suggests that if an emergency situation occurs on a school campus, the stakeholders typically blame each other (Lenhardt & Willert, 2002; Mitroff, 1999; Seabrook, 2001). A study done by Lenhardt and Willert (2002) on major school stakeholders from 13 school districts in counties of New York revealed some interesting findings about the attribution of responsibility for school safety. The stakeholders interviewed for the study were middle and high school students, parents of middle and high school students, school personnel and community agency representatives. All data were collected through five focus group discussions comprising of 9 to 12 participants each (Lenhardt & Willert, 2002). All groups of stakeholders believed that responsibility for school safety and emergency procedures should be distributed among all concerned but the primary responsibility is on the school administrators. All stakeholders also reported that school parents should take more initiative in planning for emergency procedures and safety standards. Students,

parents and community agencies believed that “it was the schools’ responsibility to go beyond academics and provide additional services and programming that addresses all needs of students” (Lenhardt & Willert, 2002, p. 39). The study also revealed that students, parents and community agency personnel viewed responsibility of school safety should be shared by all stakeholders, but the school personnel should take the initiative to establish guidelines and procedures. For example, participants felt that teachers have a responsibility of ensuring safety while classrooms are in session and therefore they should have the “basic skills for conflict resolution and de-escalations” (Lenhardt & Willert, 2002, p. 43). Based on the findings above, it can be seen that students, parents and other stakeholders believe that school authorities and teachers have the primary responsibility to maintain safety during an emergency and they expect the authorities to guide them through what needs to be done in order to be safe in school. Even if the students are required to take safety measures during an emergency situation, it is assumed that the authorities would take the initiative and tell them what to do.

Knowledge of Emergency Procedures

Appropriate knowledge about safety measures may play a significant role in ensuring one's own safety and that of others who may require assistance. Knowledge has been studied in different contexts. It is commonly defined as “(i) expertise, and skills acquired by a person through experience or education; (ii) what is known in a particular field or in total; facts and information or (iii) awareness or familiarity gained by experience of a fact or situation.” (Compact Oxford English Dictionary, retrieved February 1, 2008 from http://www.askoxford.com/concise_oed/knowledge?view=uk). For the purpose of this study, knowledge refers to the awareness of measures that need to be taken during a fire emergency situation that is

described in a vignette. However, there are a number of specific factors that could influence one's knowledge of emergency procedures, which are discussed in the following paragraphs.

Factors Influencing Knowledge of Emergency Procedures

Many factors may influence individuals' knowledge regarding emergency procedures and willingness to help others during an emergency situation. These variables include age, gender, previous experience with emergencies, and previous training in emergency procedures and these variables will be explored in detail below.

Age. There is evidence to show that younger individuals are likely to have less knowledge about emergency preparedness, and this is of particular concern given the demographics of a university campus. Eisenman et al. (2006) conducted a survey in Los Angeles County in 2004 to assess the differences in individual-level preparedness to handle terrorism emergencies. The 1,041 respondents for this study were randomly selected from a pool of respondents, who had participated in another survey conducted in 2002-2003. The original study was conducted for Los Angeles County Health Survey, where 8,167 individuals had been interviewed. Telephone interviews were conducted and respondents were asked 12 questions about terrorism. Using a standard questionnaire, trained staff members conducted the interviews. Eisenman et al. reported that young people (below the age of 30) were less likely to have enough knowledge of an emergency. This result was considered understandable because younger individuals in general often have lower perceptions of risk (Millstein & Halpern-Felsher, 2002), which in turn influence their level of knowledge about emergency situations.

Gender. Knowledge of emergency procedures has been shown to be influenced by one's gender (Crane, 2005). Crane (2005) surveyed 2,279 Florida Community Healthcare providers about their knowledge of emergency situations and found that men were better prepared and

reported higher levels of knowledge about emergency procedures than women. According to the Crane, male healthcare providers were 1.32 times more likely to be prepared for emergency situations than women. Similarly, a study conducted by Axxess Point (2007), an online service that encourages people to prepare for emergencies, also found that women believed themselves to be less prepared for and less knowledgeable about emergencies than men. About 36% of the men reported having knowledge of emergency procedures compared to 22% of women.

Previous experience with emergencies. Existing literature suggests that previous experience of an emergency situation has an impact on one's perception of risk about similar future situations as well as one's preparedness levels (Mulilis, Duval, & Rogers, 2003; Russell, Goltz, & Bourque, 1995). Russell et al. (1995) conducted a study with 690 participants from Los Angeles County following the Whittier Narrows earthquake and 656 participants from San Francisco following the Loma Prieta earthquake to assess the level of preparedness of participants for future earthquakes. Participants were interviewed through 30-minute phone interviews. One of the important findings of the study was that anyone who had previously experienced an earthquake had taken action to prepare for future emergency situations. Also, their level of knowledge about earthquakes and what they need to do to protect themselves during a future earthquake was higher in comparison to participants with no previous experience (Russell et al., 1995).

Previous training in emergency procedures. Individuals' participation in training programs on emergency measures has an impact on their perceived knowledge about emergency procedures and on their willingness to help others during emergency situations. Research shows that training in emergency procedures is important for any population in any circumstance (Padgett, Strickland, & Coles, 2006). Pagett et al., using a "multiple baseline, multiple probe

design” (p. 68), taught five children, diagnosed with Fetal Alcohol Syndrome, fire safety procedures. All five children did not have any prior knowledge about fire emergency procedures (Padgett et al., 2006). Through the use of a computer game, participants were taught the procedures and then later given the task of using it in a simulated fire situation. After a week-long training, all five children were able to use appropriate safety measures in the fire simulation (Padgett et al., 2006). Thus, basic training programs, such as simulation exercises, fire drills, or even general emergency training could prove useful in increasing knowledge regarding fire emergencies.

Training college students about safety procedures can be a beneficial tool in promoting safety precautions among the larger community (Porter, 1998). For example, Porter assessed the recruitment strategies of student trainees who can promote safety programs. The researcher recruited 360 urban college students to distribute information about fire safety to community members. The students were given the task of distributing safety commitment cards, which urged community members to practice fire-safe behaviors. There were 107 students who completed the task and were able to get commitment pledges from 278 families, representing a very diverse population. Thus, college students were able to reach out to a wider audience and act as effective messengers of important safety information.

Emergency situations and people with disabilities. Existing literature on emergencies shows that during a disaster, individuals with disabilities have a far greater number of casualties compared to individuals without disabilities. For example, 73% of individuals who died during Hurricane Katrina were individuals who had medical conditions and various functional or sensory disabilities (Frieden, 2006). After the recent earthquake in Haiti in January 2010, Ron Nabors the CEO of an international non-profit commented:

The earthquake has been especially devastating to people with disabilities. In disasters like this earthquake, persons with disability are often the first to die. For those who do survive, they most likely have their wheelchairs, canes, and artificial limbs lost or demolished. They are existing in inhumane conditions with limited support from family, church, or community. They will be helpless to provide for themselves, making them highly vulnerable to the disaster's aftermath - which includes infectious diseases and malnutrition. (NCBI, 2010, p. 1)

According to the Americans with Disabilities Act (ADA) of 1990, a person with a disability is an individual who has “a physical or mental impairment that substantially limits one or more of the major life activities, who has a record of such an impairment or is regarded as having such impairment” (ADA, 2005, p. 1). With over 49.7 million individuals with disabilities in the United States (United States Department of Labor, 2007), individuals with disabilities form the largest minority group in the country and this group is especially vulnerable during emergency situations.

From the literature, individuals with disabilities reported being more anxious about their personal safety during emergencies in comparison to individuals without disabilities (NOD, 2001). The Harris Interactive Survey, which was initiated by the National Organization on Disability, interviewed 1,011 individuals, of which 15% of participants reported having disabilities. Using a telephone survey, individuals were asked how anxious they felt about their personal safety after the events of September 11th. Their choices were “extremely/very anxious,” “somewhat anxious,” “not very anxious,” “not at all anxious,” and “not sure/refused.” Some reasons for the increased anxiety about their personal safety were that they (a) did not feel adequately prepared to handle emergency situations, (b) were not confident about the nation’s

current state, and (c) were insecure about their financial situation. The study found that almost 18% of participants with disabilities expressed elevated levels of anxiety (high/extreme anxiety) for their personal safety while only 8% of respondents without disabilities expressed similar levels of anxiety. Almost 44% of participants with disabilities expressed some degree of anxiety about their personal safety (NOD, 2001). In 2005, a telephone survey called the Public Health Response to Emergent Threats Survey was conducted where 2,588 participants were interviewed (Eisenman et al., 2009). Participants were selected through random digital dialing. The focus of the survey was to investigate whether the more vulnerable populations, like people with disabilities, would have higher perceptions of risk in emergency situations and whether they would worry more and avoid more activities because of the fear of terrorist threat (Eisenman et al., 2009). The results revealed that people with disabilities were likely to perceive higher levels of risk in emergency situations. They also reported being more worried and were more likely to avoid activities in the fear of a terrorist attack occurring in their area (Eisenman et al., 2009).

The literature reveals that the higher perceptions of risk that people with disabilities have regarding emergencies are not without basis. After 2001, people in general have more knowledge about emergency situations but individuals with disabilities and women continue to have the highest number of casualties during emergency situations (Baldrige & Veiga, 2003; Fox, White, Rooney, & Rowland, 2007). Fox et al. (2007) investigated why the casualties among people with disabilities during emergencies continue to be high despite involving people with disabilities in emergency planning and increasing focus on safety measures for people with disabilities. The sample for this study was drawn from randomly selected disaster sites in each of the 10 different FEMA regions. The survey was done through phone interviews with local emergency management officials as well as through the review of the local emergency

management plans. The researchers also launched an online survey where people with disabilities from the 10 FEMA regions put up personal narratives of their experiences during emergency situations and described how the resources and assistance they received during the crisis were not enough.

The study revealed a number of findings that could possibly explain why individuals with disabilities continue to suffer more during times of crisis. Emergency management planners were often not aware of the number of people with disabilities in their jurisdiction and therefore did not have appropriate safety plans in place, people with disabilities were rarely invited to participate in the planning stage of emergency measures, and the majority of the emergency planners had minimal contact with people with disabilities. Fox et al. (2007) also provided an example of one of the narratives written by a participant with a mobility disability:

I have juvenile rheumatoid arthritis and use a wheelchair. We had a bomb threat at work, which was very scary. Everyone evacuated, but I was still left on the 3rd floor by the stairwell for the fire- fighters to come get me. But, no one came. Finally, I just struggled, and I used pure fear to get myself down the stairs and outside. It was scary just to realize that there are not really any procedures in place to help someone like me in an emergency. (p. 1)

Other than emergency planners, all employees in a work place are also expected to be aware of emergency standards. However, Fox et al. (2007) revealed that while various guidelines that specify the procedures that each agency needs to follow are in place, employees are uncertain about office emergency procedures, and about what to do to help employees with disabilities. Therefore, it is obvious that even if individuals with disabilities are prepared, their

co-workers may not be prepared to help them and their workplace itself may not be equipped to provide them with appropriate assistance.

Emergency situations and women. Data on gender differences during emergency situations show that women suffer more casualties than men during disasters. Studies have shown that women and girls, are almost 14 times more likely than men to die during an emergency situation (Peterson, 2007). According to Ikeda (1995), during the series of cyclones that struck Bangladesh in 1991 about 90% of victims were women. A report issued after the Indian Ocean tsunami in 2004 highlighted that more than 80% of the 300,000 victims who died during the tsunami were women (APLWD, 2005). Even in a disaster as recent as Hurricane Katrina in the United States, a disproportionately higher number of victims were women who were trapped (Gault et al., 2005; Williams et al., 2006). According to Lawry (2007), during emergencies like Hurricane Katrina women suffered more both mentally and physically, and also experienced more gender-based violence. Lawry (2007) reports that about half of the women interviewed after Hurricane Katrina were clinically depressed.

Existing literature on emergency situations and gender differences has shown that women tend to express higher levels of stress and anxiety during emergencies like earthquakes. Anderson and Manuel (1994) interviewed 108 men and 103 women college students immediately after an earthquake had occurred in their city. The students were asked to complete two measures, the Impact of Events Scale (Horowitz, Wilner, & Alvarez, 1979) and the Symptom Checklist-90R (Derogatis, 1977). The results of the study showed that women reported higher levels of stress concerning the earthquake compared to the men. The women also reported experiencing the earthquake for a significantly longer duration in comparison to the men. According to the researchers, these results are similar to previous research where women have

consistently expressed greater anxiety, stress, and depression associated with emergency situations, as compared to men (Anderson & Manuel, 1994). In an opinion survey conducted in Rhode Island, 785 adult residents were interviewed on the phone and asked questions about their perceptions of vulnerability to hurricanes and their willingness to evacuate in case of a hurricane (West & Orr, 2007). Social vulnerability, economic vulnerability and geographic vulnerability were also assessed. Results of the survey revealed that women respondents expressed the highest level of vulnerability in the event of a hurricane (West & Orr, 2007). West and Orr suggested that women's level of vulnerability could be due to factors, such as a lack of adequate financial resources, unavailability of strong social support systems, and the inability to access government relief programs (Enarson, 1998 as cited in West & Orr, 2007). Another reason suggested was that women were "were less likely to have access to official information that might enable them to assess disaster risks, and this makes it much more difficult for them to respond to disaster scenarios" (Morrow, 1999, as cited in West & Orr, 2007, p. 578)

The Pan American Health Organization (2007) has also reported that women are typically more vulnerable than men in emergency situations. Many women are vulnerable during emergencies because they are pregnant or are nursing, or are often taking care of young children who are dependent on them. Women suffer more because "they are affected by the loss of assets and entitlements, the breakdown of social networks, and the disruption of their household life" (Lawry, 2007, p. 1). Consequently, there is a decline in women's health and the problem is compounded by the fact that timely services are not available to address the issues they are facing.

Summary

The literature review on knowledge to help during emergency situations reveals that people with disabilities and women frequently suffer more casualties during emergency situations because they are often in situations where they can't escape and because bystanders or other victims don't know how to help someone who has a disability. As noted in the earlier paragraphs, information offered by emergency procedure planners for people with disabilities and other vulnerable populations is not often easily accessible. In some instances, groups such as office employees may assume they know what to do to help other employees with disabilities, but in actuality do not have sufficient knowledge to assist others during an actual emergency situation.

Willingness to Help Others During Emergency Situations

A review of the literature on helping behaviors revealed a number of variables that influence one's willingness to help others during emergency situations. All these variables can be classified into two broad categories: personal and situational factors. Numerous researchers have used this categorization in studies related to helping behaviors and willingness to help (Darley & Batson, 1973; Hampson, 1981; Mayer, 2009; Mechelen, 2008; Wilson, 1976; Wilson & Petruska, 1984). These two broad factors also form the framework for this study and the following sections provide details of the personal and situational factors that are examined in this study.

Personal Factors that Influence One's Willingness to Help Others

Willingness to help others is influenced by personal factors, which include wanting to receive positive reactions from people around (Ferrari & Bristow, 2005, Yoeli, 2009), having personal experience with a similar situation in the past (Beeble, Bybee, & Sullivan, 2008),

having received specialized training in the type of help required (Beeble et al., 2008), and feelings of empathy (Berenguer, 2007) and altruism (Staub & Vollhardt, 2008).

Social desirability. One factor that has been consistently seen to influence people's responses towards helping others is social desirability or their "need to look good in front of others" (Beretvas, Meyers, & Leite, 2002). Often individuals' decisions and responses may be determined by their need to obtain positive approval from people around them (Karakashian, Walter, Christopher, & Lucas, 2006). Individuals wanting to look good may make the decision to help other individuals if they realize that they are going to receive positive social approval from other people witnessing the same event. In the context of this study, individuals may have a tendency to give socially desirable responses, which may lead them to report higher levels of perceived knowledge.

Knowledge of emergency situations. Knowledge of emergency situations is another factor that could influence willingness to help. For example, a study conducted in Florida to assess the preparedness levels and willingness of healthcare workers to help others in the event of a bioterrorist attack found a strong link between knowledge and willingness to help. Crane (2005) found that health care workers who reported a higher level of knowledge of emergency procedures were more willing to help people in an emergency as opposed to health care workers who reported a lower level of knowledge (Crane, 2005).

Empathy. Empathy can be defined as an emotional response regarding the welfare of another person. Studies have shown that people who have higher levels of empathy or who experience increased empathy often report being more willing to help someone in need (Berenguer, 2007; Marjanovic, 2006). Berenguer (2007) conducted a study on 60 undergraduate psychology students who were randomly assigned to one of four groups and were exposed to

conditions that would induce high or low empathy reactions to either an object or a living being. Participants were then asked to rate their willingness to help and levels of empathy. Results showed that participants with higher levels of empathy were more willing to help the object or the person in the scenario, while participants that expressed lower levels of empathy were more objective in their responses and not willing to offer as much help (Berenguer, 2007). Another study done by Marjanovic (2006) on 212 undergraduates revealed similar results. Marjanovic investigated if factors like empathy, global social responsibility and conditions of responsibility influenced donors' support for people who were victims of a natural calamity. Participants were asked to respond to two scenarios about a devastating earthquake in Southern Korea. In one scenario, the victims were responsible for their disaster because of their lack of prior disaster preparedness, and in the other scenario, there was no responsibility attributed to the victims. The results revealed that the conditions of responsibility did not have any influence on participants' willingness to help the victims. More importantly, it was seen that participants reporting a higher level of empathy were more willing to help the victim than those reporting lower levels of empathy, irrespective of the conditions of responsibility (Marjanovic, 2006).

Altruism. Altruism can be defined as a behavior that is initiated in order to benefit others without any expectations or anticipations to be rewarded for the same (Pillavin, 2009). According to Hoffman (1981), altruistic behavior is a behavior that is carried out to promote the welfare of another person without any vested self-interests. Studies on helping behaviors have consistently reported that high levels of altruism, especially during emergency situations like natural disasters, have led to higher levels of willingness to help victims of the disasters (Staub & Vollhardt, 2008). For example, an experimental study on the interaction between a person (an egoistic person/altruistic person) and a situation (providing reputational incentive/no reputational

incentive) on willingness to help was done with 89 undergraduate students (Simpson & Willer, 2009). Participants were asked to respond to social value orientation measures, which categorized them as egoistic or altruistic. Next participants who were now categorized as either being egoistic or altruistic were provided with scenarios where they were required to give away some resources for a person in need (Simpson & Willer, 2009). In one situation the incentive of being recognized publicly was present. In the other case, the recognition was not public but in the form of a private gesture. Results found that participants who were categorized as being egoistic decided not to give away resources if they were not gaining any public acknowledgement while participants categorized as being altruistic were not concerned about the recognition (Simpson & Willer, 2009).

Situational Factors that Influence One's Willingness to Help Others

Disability status of person requesting help. The role of stereotypes and assumptions regarding people with disabilities cannot be overlooked while discussing one's willingness to assist people with disabilities during emergency situations. According to Lehman (1997), the influence of media is unquestionable when it comes to forming assumptions about people with disabilities. Movies like the "Scent of a Woman" and "Whose Life is it Anyway?" present people with disabilities as being extremely bitter and angry and often requiring the intervention of a good-spirited person without a disability (Lehman, 1997). According to Lehman (1997, p. 29), "it's a depiction that has real-life implication, isolating the disabled even more from the able-bodied and subtly blaming the disabled for the frustrations they experience." These stereotypes often act as obstacles to people with disabilities when they are seeking jobs, dating or even forming friendships. These stereotypes could also influence people's willingness to help individuals with disabilities during emergency situations.

Another assumption that exists is that people with disabilities always want or need help from people who do not have a disability (Funk, 1994). Green, Davis, Karshmer, Marsh, and Straight (2005) conducted a qualitative study, where parents of children with disabilities, as well as people with disabilities, were interviewed in order to gain in-depth knowledge about stereotypes associated with having a disability. Specifically, seven parents of children with disabilities that included cerebral palsy, Down syndrome, and severe autism, were interviewed for the study. Additionally, eight adults with disabilities that included hearing impairments, mobility disability, and a seizure disorder were interviewed for the study. Several themes that emerged in this narrative study were social awkwardness and pity from others. Participants reported that often there is a social awkwardness when they interact with people without disabilities. Some of them felt it was because the disability was so obvious that the other person did not know what exactly to talk about or because people without disabilities are often not sure about simple things like shaking hands with somebody in a wheelchair or greeting them with a hug. Such minor incidents often lead to a certain level of social awkwardness (Green et al., 2005). Participants also reported that frequently because of their disability, people react with pity. It is also assumed that they have less power or lower status in society because of their disability. From the discussion above it can be seen that these stereotypes affect the social interactions between people with disabilities and people without disabilities. In the context of emergency situations, people with disabilities may be seen as helpless and in need of assistance. They may also be helped because of feelings of pity or conversely, may not be helped because of social awkwardness. It has also been suggested that individuals with disabilities may be reluctant to ask for assistance during times of emergencies (Baldrige & Veiga, 2003). They may

either feel that they will attract too much attention to themselves or that asking for assistance will affect their personal image in front of other employees or bystanders (Baldrige & Veiga, 2003).

Gender of person requesting help. According to the social psychology literature, the victim's gender also has a major influence on an individual's willingness to help others who are victims of an emergency situation (Eveland & Crutchfield, 2006). A meta-analysis was done by Eagly and Crowley (1986) of 174 research articles on how helping behaviors are influenced by the gender of the person receiving or giving help. Out of the 174 research studies, 25 research studies were identified as studies where the gender of the victim was manipulated and there was a very clear request for help. The analyses revealed that women would receive more help in situations in need as compared to men. Results were linked to existing stereotypes of women being helpless and weak, and needing additional assistance in a situation where help is required (Eagly and Crowley, 1986). In other words, the meta-analysis revealed that unlike women, men were viewed as having risk-taking tendencies, and remaining calm during emergency situations (Eagly & Crowley, 1986). Women were often seen as receiving more help in comparison to men, while men engaged in more helping behavior more than women. The analyses also revealed interesting reasons for why women receive more help than men. According to Eagly and Crowley (1986), "tendencies for men to be more helpful than women and for women to receive more help than men are enhanced by the presence of an audience, chivalrous and heroic behavior may be largely a product of social norms rather than ingrained motives or dispositions" (p. 301).

Summary

To summarize, the review of literature on willingness to help during emergency situations revealed that one's need for social approval might influence one's willingness to help others. Thus, social desirability is a crucial factor in one's willingness to help others. It has also

been suggested that people who report having a higher level of knowledge about emergency procedures or who have received prior training in emergency measures would be more willing to help others during an emergency situation. Also, attributes of empathy and willingness are important factors that might influence one's willingness to help others. Finally, the review also revealed that people would be more willing to help people with disabilities and women because of common stereotypes such as being helpless or weak.

Purpose of the Study

Over the years the number of man-made and natural disasters worldwide has considerably increased, and people with disabilities and women have suffered disproportionately high casualties during such situations. The literature review highlights the need for individuals to know what steps to take during an emergency situation to help themselves as well as others around them who ask for assistance (including people with disabilities). Given the vulnerability of college campuses during emergencies, it is vital that students have knowledge about appropriate emergency procedures and are willing to help others during emergency situations. This purpose of this study was to examine some of the issues addressed in the literature in the context of a fire emergency on a campus as presented in a vignette. The following hypotheses were tested:

Hypothesis 1a (H_{1a}): Participants will view university authorities as being most responsible for student safety.

Hypothesis 1b (H_{1b}): Participants' views of who is responsible for student safety will vary based on the disability status of the student needing assistance.

Hypothesis 2 (H₂): Participants' knowledge about the appropriate emergency procedure will be higher for the "vignette" student without a disability than for a "vignette" student who has a disability.

Hypothesis 3_a (H_{3a}): Willingness to help another student will be higher for a participant who has higher knowledge of emergency procedures.

Hypothesis 3_b (H_{3b}): Willingness to help the "vignette" student will be higher when the "vignette" student is female.

Hypothesis 3_c (H_{3c}): Willingness to help another student will be higher for a participant when a student with a disability asks for help.

Hypothesis 3_d (H_{3d}): Willingness to help another student will be higher for a participant who has higher level of altruism.

Hypothesis 3_e (H_{3e}): Willingness to help another student will be higher for a participant who has higher level of empathy.

CHAPTER 3

Method

This chapter summarizes the methodology used to conduct the study. This includes participants, procedures, including recruitment and data collection procedures, measures, and data analyses.

Participants

Data were obtained from 440 undergraduate students. However, data from 436 out the 440 participants were used, as cases were eliminated because of incomplete information. Two participants did not complete the demographic questionnaire, one participant did not complete part of the *Marlowe-Crowne Social Desirability Scale (MCSDS)* and *Self-Report Altruism Scale (SRA)* and 1 participant did not answer the *Interpersonal Reactivity Index (IRI)*. Sample size was considered sufficient, as an a priori power analysis was conducted using G*Power (v.3.0.5; Faul, Erdfelder & Buchner, 2007). The minimum sample size needed to detect statistical significance was 114, which was based on a power level of .80, statistical significance of .05, effect size of .15, and 9 predictors. The power and significance levels were set at .80 and .05, respectively since these are the traditional levels typically used (Cohen, 1988; Heppner, Kivlighan, & Wampold 1999). Given the lack of literature on college students and emergency situations, and the exploratory nature of this study, a medium effect size was chosen (Huenefeld, 1998). Other studies that have used similar scales as in this study and used hierarchical multiple regression have typically reported a medium effect size (for example, Keller & Siegrist, 2010; Miville, Carlozzi, Gushue, Schara, & Ueda, 2006).

Participants' age ranged from 18-23 years ($M = 20.24$ years, $SD = .60$, $N = 434$, 2 participants did not answer). More than half of the participants were male (55.8%), while 44.2%

were female. The majority of participants were White (78.2%), followed by Asian (14.0%) and African American (2.1%). The other races reported were Hispanic (1.8%), Multiracial (1.8%), Other (0.9%) and Native American (0.5%). For educational levels, the majority of participants were in their junior year (90.6%), followed by participants in their senior (7.6%), and sophomore years (1.6%). Approximately 98.6% of participants reported not having a disability.

Research Design

A quasi-experimental design was used, in which participants were randomly assigned to one of four vignettes. Each vignette contained a scenario followed by questions. The independent variables (disability status of the student in the scenario and gender of the student in the scenario) were manipulated, resulting in each participant exposed only to one of four possible conditions. Vignette 1 had a male student asking for assistance, vignette 2 had a male student with a disability asking for asking for assistance, vignette 3 had a female student without a disability asking for assistance, and vignette 4 had a female student with a disability asking for assistance.

Vignettes

Each of the four vignettes used in this study described an emergency situation. In this study an emergency situation has been defined as a fire in a building on a university campus. The emergency was presented to participants in the form of a scenario describing a fire on the sixth floor of a university building. As noted earlier, a fire emergency was selected as it is one of the most common emergencies, and is responsible for the most number of casualties when compared to all other natural disasters combined (American Red Cross, 2007). Most students have been exposed to fire emergencies either through their personal lives or through the required fire

emergency drills conducted from preschool through high school, and fire emergency alarms tested periodically at most universities.

Vignette 1 (Appendix A) describes a situation in which John, a student, goes to look for his cell phone, which he has left behind in a classroom earlier during the day. On his way to the classroom he notices that very few students are in the building's hallway since it is late in the evening. After finding his cell phone in the classroom he is about to leave when he hears a loud sound and the floor starts filling up with smoke. He decides to dial 911 when he realizes that the cell phone doesn't have adequate network reception in the building. Details such as the student not being able to use his cell phone and isolation on the sixth floor of a sparsely populated campus building late in the evening were added to the vignette to heighten the level of risk that the student is facing. Vignette 2 (Appendix B) describes a similar situation with the only difference from vignette 1 is disability status: John is a wheelchair user. Vignette 3 (Appendix C) describes a similar situation with gender the only difference from vignette 1: Jennifer (a female) is the student in the scenario, and vignette 4 (Appendix D) describes a similar situation with the only difference from vignette 3 is disability status: Jennifer is a wheelchair user. Thus, there is a main effect for gender, male in vignettes 1 and 2 and female in vignettes 3 and 4, and a main effect for disability: no disability in vignettes 1 and 3 and disability on vignettes 2 and 4.

Measures

Measures used in the study were (a) follow-up items to the vignette, (b) a demographic questionnaire, (c) the Marlowe Crowne Social Desirability Scale (MCSDS), (d) the Self-Report Altruism Scale (SRA), and (e) the Interpersonal Reactivity Scale (IRI).

Follow-up Items to Vignette

Responsible party. Responsible party in the context of this study was measured by item 1 in the vignette (see Appendices A, B, C, and D). This item uses a rank order format to identify the person or organization, which students believe has the primary charge of ensuring the safety of individuals during a fire emergency on campus. Participants were asked to rank the parties responsible for ensuring that John is able to make it safely out of the building, using a scale from 1 “*most responsible*” to 5 “*least responsible*.” The five parties participants were asked to ranked were (a) university authorities, (b) fellow students, (c) firefighters, (d) John (the student in the vignette) and (e) university police.

Perceived knowledge to help oneself. Perceived knowledge to help oneself was measured by item 4 in the vignette: “I have enough knowledge about what to do in such an emergency to get out safely.” Participants indicated the extent of their agreement or disagreement with the above statement on a Likert scale, ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). A higher number indicated greater perceived knowledge.

Perceived knowledge to help another student. Perceived knowledge to help another student was assessed by item 5 in the vignette: “I have enough knowledge about what to do to help John in this situation.” Similar to the measure for perceived knowledge to help oneself, this item also was measured on a Likert scale, ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). A higher number indicated greater perceived knowledge.

Willingness to provide assistance to another student. Participants’ willingness to provide assistance in a fire emergency was measured by item 5 in the vignette: “I would be willing to help John in this situation.” Participants indicated the extent of their agreement or disagreement with the above statement on a Likert scale, ranging from 1 (*strongly disagree*) to 7 (*strongly agree*).

agree). A higher number indicated greater willingness to help. An open-ended question about the vignette was also included in order to gain further insight into respondents' willingness to help another student requiring assistance during the fire emergency. Item 7 was used to ask the following: "What factors may influence your willingness to help John in this situation?"

Individual response to fire emergency. Individual response to fire emergency was measured by item 6 on the vignette instrument: "Describe what you would do to respond to John in this situation?" This was an open-ended question designed to elicit qualitative data from the respondents regarding how they would respond to the fire emergency presented in the vignette.

Demographic Questionnaire

The demographic questionnaire (Appendix E) is a 22-item measure designed to collect the following information: background information (age, gender, race/ethnicity, current level of education, and disability status), previous experience with emergency situations, including training, and experiences with disabilities. The disability status of participants was identified by their response to the question "Do you have a disability?"

Previous experience with emergencies was measured through three items (11, 12, & 14) on a Likert scale, ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). The first item, "I have been involved in a fire emergency situation," was included as previous experience with a fire emergency may influence knowledge of emergency procedures. The second item, "I have been involved in an emergency situation other than a fire," was included as previous experience with other emergencies could also increase knowledge of emergency procedures. The third item, "One of my family members or friends has been involved in an emergency situation," was included as such involvement has been shown in earlier studies to increase knowledge of emergency procedures. As a follow up to the second and third items, if participants or their family members

have been involved in an emergency, participants were asked to specify the type of emergency involved.

Participation in training programs for emergency situations was measured through two items from the demographic questionnaire (13 & 14). The first item, “Approximately how many fire-drills have you ever been part of, at your work place or in your school in the last 5 years?,” indicates participation in fire drills, which is likely to influence knowledge regarding fire emergency procedures. The second item, “Other than fire-drills, approximately how many training programs for emergency preparedness have you participated in, in the last 5 years?,” indicates training in any safety program other than a fire drill, which may also influence knowledge regarding emergency procedures. If participants had participated in any such programs, they were asked to specify the types of training programs attended.

Marlowe-Crowne Social Desirability Scale

According to Marlowe and Crowne (as cited in Paquette, 2005), individuals who give more socially desirable responses attach importance to social approval and do not like be negatively evaluated by other people. To account for this phenomenon, one of the shorter versions of the Marlowe-Crowne Social Desirability Scale (MCSDS, Marlowe & Crowne, 1961) was used in this study. *Social desirability* in the context of this study refers to participant’s tendency to report having a higher level of knowledge of emergency procedures or the tendency to express a higher level of willingness to help another student in need in order to maintain a good image of themselves (Paquette, 2005).

The original MCSDS is a 33-item scale to measure social desirability. Participants have to mark *True* or *False* responses to each item. The responses are summed, with scores ranging from 0 to 33 points; the higher the score, the greater the respondents need to seek social approval

(Paquette, 2005). The internal consistency for the MCSDS scores has varied from .73 to .88, while the test-retest reliabilities of the scores have been in the range of .84 to .88 (Paulhus, 1991). The validity of the MCSDS scores has also been established with Edward's Social Desirability Scale (Edwards, 1957) and different forms of the Minnesota Multiphasic Personality Inventory scale (Hathaway & McKinley, 1943; Barger 2002). For example, Tatman, Swogger, Love, and Cook (2009) reported that the MCSDS scores are significantly and positively correlated to scores on the MMPI-2 L scale (a "faking good" scale) and on the MMPI-2 K scale (a denying "personal faults" scale; p. 26). Similarly they found that the MCSDS scores is significantly negatively related to the MMPI-2 F scale (a "faking bad" scale), evidence for discriminant validity (Tatman et al., 2009, p. 27).

A number of shorter versions of this scale have been developed (Ballard, 1992; Ballard, Crino, & Rubenfeld, 1988; Reynolds, 1982; Strahan & Gerbasi, 1972). The Strahan and Gerbasi version, which has 13 items, has the highest internal consistency of scores (.70) and has high validity of scores (Reynolds, 1982). The validity of the shorter scale was established by correlating it to the longer version of the scale as well as to the Edwards Social Desirability Scale (Reynolds, 1982). Thus, Strahan and Gerbasi's short version of the MCSDS is the one used in the current study. The participants have to mark *True* or *False* responses to all the 13 items, with each true or false response counted as 1 point. Points are summed across all items, with scores ranging from 0 to 13 points. The higher the score indicates the more participants need to seek social approval. Sample items on the 13-item the MCSDS scale are "I'm always willing to admit when I make a mistake," "I almost never felt the urge to tell someone off," and "I am sometimes irritated by people who ask favors of me." A copy of the 13-item MCSDS is in Appendix F.

Self-Report Altruism Scale

Participants' altruistic behavior was measured using the Self-Report Altruism Scale (SRA; Rushton, Chrisjohn, & Fekken, 1981). Altruism is defined as a behavior carried out in order to assist someone else without expecting or asking for a reward or incentive in return (Johnson et al., 1989). The SRA is a 20 item self-report scale developed by Rushton et al. (1981). Participants are asked to report the frequency with which they have performed various altruistic tasks. The options for the responses range from "0 = never" to "4 = very often" Cronbach's alpha for the scale scores is .86 (Johnson et al., 1989). Rushton et al. (1981) reported that scores on the SRA scale were significantly ($p < .01$) positively correlated to scores on similar constructs such as social responsibility, empathy and nurturance, evidence supporting convergent validity. Scores on the SRA scale were also significantly ($p < .05$) negatively correlated to scores on the Machiavellianism Scale (Christie & Geis, 1968), evidence supporting discriminant validity. The scale is included as Appendix G.

Interpersonal Reactivity Index

Existing literature on empathy suggests that individual differences in helping behavior can be predicted using a multidimensional empathy measure like the Interpersonal Reactivity Index (IRI; Schmidt, 2001). The IRI is a 28-item scale and is comprised of four subscales, all of which measure different dimensions of empathy (Do, 2006). The Fantasy subscale (7 items) is used to measure the respondents' empathy towards fictional characters in movies or novels. The Empathetic Concern subscale (7 items) measures the emotional aspect of empathy like respondents' concern for other people. The Perspective-Taking subscale (7 items) measures cognitive aspects of empathy like the respondents' tendency to look at situations from other people's viewpoint. Finally, the Personal Distress subscale (7 items) measures the respondent's

experience of anxiety and uneasiness when they see someone else going through a negative experience (Schmidt, 2001).

The items are measured on a 5-point Likert scale, ranging from 0 “*does not describe me well*” to 4 “*describes me very well.*” The internal reliability of the overall scale scores has varied from .68 to .79 (Rogers, Dziobek, Hassens, Wolf, & Convit, 2006). The IRI has been compared to other measures of empathy. Davis (1983) reported that correlations of the subscales were in the predicted direction. Convergent and discriminant validity have been established by correlating scores on the subscales to other constructs. For example, Davis (1983) found that Perspective Taking was positively related to self-esteem, Fantasy was positively related to sensitivity, Empathic Concern was positively related to selflessness but negatively related to interpersonal styles typified by egotism, and Personal Distress was negatively related to self-esteem. The test-retest reliability for the IRI scale score has ranged from .61 to .81 (Schmidt, 2001). The Cronbach’s alpha has also been reported for each of the four subscales of the instrument: Fantasy = 0.79; Perspective = 0.75, Empathic Concern = 0.73; and Personal Distress = 0.75 (Liu, 2003). The IRI is attached as Appendix H.

Procedures

Pilot Testing

The research packet comprising of the vignettes, demographic questionnaire, the Interpersonal Reactivity Index, the Self Report Altruism Scale, as well as the short version of the MCSDS, was first pilot tested with a group of undergraduate students at a large university located in the Northeast region of the United States. The survey packet was administered on paper and in a lab so that it could replicate the conditions of the actual study. It took approximately 20 minutes for them to complete. In return for their participation, students were

given extra-credit in their course. The pilot test revealed some insight into questions that needed to be modified. For example, the question which required participants to report the number of fire drills they had attended in the past was too vague for the participants because they didn't know whether it referred to fire drills since kindergarten or high school or college. To make the question clearer it was changed to participants having to report fire drills in the last 5 years. Based on the pilot test, modifications were also made to the vignettes and the questionnaire.

Recruitment Procedures

Participants for this study were recruited through a subject pool organized by the business school in a large public US university located in the Northeast. After obtaining permission from the Institutional Review Board office at Penn State to conduct the study, I contacted the coordinator of the subject pool for the business school. The business school subject pool was chosen because of logistics of running the study, time constraints as well as being able to get access to a large number of participants. The coordinator forwarded the recruitment email to the course instructors for two sections of a specific business course, who then forwarded the email to their students informing them about the study and the opportunity to earn extra-credit. The students were provided with a signup sheet where they could choose a time and day to complete the study. Each time slot had 20 spots. Once students signed up, they were provided with a lab number. The recruitment email has been attached as Appendix I. The recruitment email was sent to over 500 students. Research on response rate to surveys shows that response rates are higher when sent out by a person in authority or by an organization that participants are familiar with (Porter & Whitcomb, 2003). A request for participation by a university source is likely to establish more credibility and trust regarding the survey in comparison to a request by someone with lower authority like a graduate student (Porter & Whitcomb, 2003). Additionally, as the

students were receiving extra-credit for their participation in the study, it was decided that it would be best if instructors were contacted their students. Another reason for approaching university instructors was that students often receive emails from spammers and junk email, and therefore there is a greater chance of them opening an email from someone they are familiar with, like their instructor instead of a stranger like the researcher herself (Porter & Whitcomb, 2003).

Data Collection Procedures

Data collection was done through a paper and pencil method. Participants were all provided with a Scantron sheet, a pencil and a packet consisting of the informed consent form, the survey questionnaire and instruments. After participants read and signed the informed consent (see Appendix J), they completed the survey. Once students completed the survey, they filled in the Scantron sheets with their name, student ID numbers and course number and section. The Scantron sheet was collected separately from the survey so that no identifying information was associated with the survey responses. The Scantron sheets were filled so that students could receive extra-credit for their participation in the study. Participants took approximately 20 minutes to fill out the survey. The participants first received the informed consent form, followed by the vignette. The vignette was followed by the demographic questionnaire, the Marlowe Crowne Social Desirability Scale, the Self-Report Altruism Scale, and finally the Interpersonal Reactivity Index. The surveys were sorted by condition and participants were randomly assigned to one of the four conditions when they came in for their session.

Data Analyses

Using SPSS 15.0 statistical software, hierarchical regression analysis was conducted to assess the effect of the independent variables of participants' social desirability score, gender,

previous experience in fire or other emergencies, and previous training in fire drills or other emergency training, and the manipulated variables of gender and disability status of the person in the scenario, on the dependent variable, knowledge to help others.

CHAPTER 4

Results

In this chapter, I report the results of my quasi-experimental study. Preliminary analyses, such as the checks for assumptions of linear regression, descriptive statistics, and group equivalence, are presented. Then the results of the regression equations, followed by the results from the qualitative data are described.

Preliminary Analysis

Data Management

Analyses were conducted on 436 completed questionnaires, which included an equivalent number across the experimental conditions: 106 in condition 1 (male with disability), 112 in condition 2 (female without disability), 108 in condition 3 (female with disability) and 110 in condition 4 (male without disability).

Tests of Regression Assumptions

Data were examined for assumptions of normality, multicollinearity, linearity, and homoscedasticity. A visual examination of residual plots was conducted on the standardized predicted scores and errors of predictions for each regression equation (knowledge to help others and willingness to help others). All the plots were uniformly distributed around the center suggesting that the assumption of normality was met. Additionally, the plots were rectangular in shape suggesting that the assumption of linearity was met. Finally, the residuals were approximately equally distributed at the different levels of each dependent variable.

Multicollinearity was not observed to be an issue between the predictors (social desirability, fire emergency, other emergency, family emergency, fire drills training, other training, interpersonal reactivity index score and score on self-reporting altruism scale), as the correlations between the

predictors were much less than .90, tolerance values were greater than 0, and the variance inflation factors were less than 10 (Tabachnick & Fidell, 2006).

Descriptive Statistics

Descriptive statistics, including scale means, standard deviations, reliability estimates and correlations of scores for all the major variables of the study—knowledge to help, willingness to help, social desirability, altruism, and the interpersonal reactivity—are presented in Table 1 below. Correlations between the variables ranged from $|.00|$ to $|.39|$ (Mdn = $|.095|$). Cronbach's alphas for the scores of SRA (.82) and IRI (.81) were good, but was low for MCSDS scores (.61).

Group Equivalence

Preliminary analyses were conducted to check that random assignment actually made the experimental conditions equivalent on characteristics of participants. A 2 (gender) x 4 (vignette) cross-tabulation analysis was conducted to examine whether the number of males and females in the four vignette conditions was uniformly distributed. There was no statistically significant difference between the four groups, $\chi^2(3, N = 434) = 2.50, p = .48$, Cramer's $V = .08$. There was approximately the same number of males and females in each of the four groups. A 2 (race) x 4 (vignette) cross-tabulation was done to compare distribution of White versus racial minority participants across the four conditions. There was no statistically significant difference across the four conditions, $\chi^2(3, N = 436) = 2.74, p = .43$, Cramer's $V = .08$. Findings of a one-way ANOVA indicated that the groups also were not statistically different for age, $F(3, N = 433) = .140, p = .93$.

Table 1

Means, Standard Deviations, Reliability Estimates, and Correlations for Scores on Knowledge to Help, Willingness to Help, MCSDS, SRA, and IRI

Scale	1	2	3	4	5
1. Knowledge to Help	--				
2. Willingness to Help	.39**	--			
3. MCSDS	.00	.09*	--		
4. SRA	.12*	.19**	.03	--	
5. IRI	-.10*	-.00	.03	.18**	--
M	4.60	6.29	5.31	1.70	2.31
SD	1.38	.96	2.54	.48	.42
Alpha	--	--	.61	.82	.81

Note: N= 436; MCSDS = Marlowe Crowne Social Desirability Scale; SRA = Self-Report Altruism Scale; IRI = Interpersonal Reactivity Index; M = Mean; SD = Standard Deviation; Alpha = Cronbach's alpha.

* $p \leq .05$; ** $p \leq .01$

Research Questions and Analyses

Research Question 1

In a fire emergency on campus, whom do participants' view as the party most responsible for student safety and does this vary by the disability status of the student needing assistance?

Two hypotheses were tested from this research question and findings for each are presented by hypothesis.

Hypothesis 1a (H_{1a}). Participants will view university authorities as being most responsible for student safety. Using SPSS version 15.0, the modes for each of the five categories were computed, collapsing vignette conditions, and are presented in Table 2 as well as the percentage of participants who rated each of the categories first. The most common rank assigned by participants to the student in the vignette was 1 (most responsible) and the most common rank assigned by participants to fellow students in the vignette was 5 (least responsible). In general, more than half of the participants (58.9%) viewed the student in the vignette as most responsible for his/her safety, with the other sources ranked as first substantially lower, with almost a 40% decrease between the student and the next source, firefighters. Less than 10% of the participants rated fellow students and university police ranked these sources as most responsible.

Table 2

Respondents' Ranking of Party most Responsible for Student Safety (in Percentages)

Category	Mode	% of respondents ranking Category as # 1	N	
			Valid	Missing
Student in Scenario	1	58.9	431	5
Firefighters	2	19.5	434	2
University Authorities	4	10.1	432	4
Fellow Students	5	8.7	432	4
University Police	3	4.4	431	5

Hypothesis 1_b (H_{1b}). Participants' views of who is responsible for student safety will vary based on the disability status of the student needing assistance. A series of Mann-Whitney tests were conducted, with disability status as the grouping variable and each of the responsible parties as the outcome variable. Three of the five analyses were statistically significant and the summary is presented in Table 3: Fellow student, student in scenario, and university police. Participants in the no disability condition were likely to rank fellow students (mean rank = 248.70) as least responsible for the other student's safety than those in the disability condition (mean rank = 183.39). While participants in both conditions agreed that the student in the scenario was most responsible for his/her safety, more participants rated the student with no disability (mean rank = 204.57) as most responsible than those with the student with a disability (mean rank = 227.80). A similar pattern was found for university police. Participants in the no disability condition (mean rank = 204.33) tended to rate the police as more responsible for the student's safety in comparison to those in the disability condition (mean rank = 228.06). A more detailed comparison is provided in Table 4 between the two conditions by ratings (in percents) for responsible party.

Table 3

Summary of Mann Whitney Tests of Disability on Responsible Party for Student Safety

Source	Mann Whitney U	N	Z	P	r
University Authorities	23031.50	432	-.229	.82	-.01
Fellow Students	16271.00	432	-5.64	.00	-.27
Firefighters	23031.50	434	-1.75	.08	-.08
Student in Scenario	20711.50	431	-2.18	.03	-.11
University Police	20658.00	431	-2.05	.04	-.10

Note: r = Effect Size

Table 4

Responsibility Ranks by Vignette Condition (Percentage)

Rank within condition	University Authorities	Fellow Students	Firefighters	Scenario Student	University Police
Student with Disability (n = 214)					
1	8.02	15.02	18.31	56.13	5.19
2	12.74	30.05	32.86	10.85	12.26
3	23.58	12.68	29.11	6.60	27.83
4	30.19	16.90	11.27	9.91	33.02
5	25.47	25.35	8.45	16.51	21.70
Student without Disability (n = 222)					
1	12.27	2.74	20.81	63.01	3.65
2	9.09	21.00	39.37	12.33	16.44
3	19.54	10.96	25.34	9.13	35.62
4	32.72	19.18	7.69	10.05	29.68
5	26.36	46.12	6.79	5.48	14.61

Note. Rank 1 = Most Responsible for safety; Rank 5 = Least Responsible for safety

Research Question 2

What is the nature of the relationship between disability status of a student seeking help and participants' knowledge to help?

Hypothesis 2 (H₂). Participants' knowledge about the appropriate emergency procedure will be higher for a "vignette" student without a disability than for a "vignette" student who has a

disability. Predictors were entered into the regression equation in the order determined by the existing literature. In the first block of hierarchical regression the effect of social desirability on the participants' knowledge to help others was entered. In the second block, the gender of the respondent was added. Variables entered into the third block were respondents' previous experiences with emergency situations, including (a) fire emergencies, (b) emergencies other than fire, (c) fire drill training, and (d) training other than fire drills. The fourth block contained the manipulated variables, the gender and the disability status of the person requiring help in the scenario. The results of the hierarchical regression analysis are presented in Table 5.

Analyzed by step, social desirability did not have a statistically significant effect on knowledge to help others, but participants' gender did. Females reported having a lower level of knowledge to help others in comparison to males. Approximately, 5.9% of the variance in knowledge to help others was accounted for by the gender of the participant. At step 3, two of the 5 prior emergency experiences were statistically significant on knowledge to help others: (a) previous experience in a fire emergency and (b) family member's prior experience in a fire emergency. Participants who had been in a fire emergency in the past or had family members in prior fire emergencies reported having a higher level of knowledge to help others. An additional 8.4% of the variance in participants' knowledge to help others was accounted for by their previous experience in fire emergency situations and having a family member who had been in a fire emergency previously.

Table 5

Summary of Hierarchical Regression Analysis for Variables Predicting Knowledge to Help Others (N=436)

Variable	B	SE B	(β)
Step 1			
Social Desirability Score	-.01	.03	-.01
Step 2			
Participant's Gender	-.68	.14	-.24**
Step 3			
Fire emergency	.09	.04	.12*
Other Emergency	.02	.03	.03
Family Emergency	.13	.03	.20**
Fire Drills	.01	.01	.08
Other Training	.01	.03	.02
Step 4			
Scenario Gender	-.13	.13	-.05
Scenario Disability	-.32	.13	-.12*

Note: $R^2 = .000$ for Step 1; $\Delta R^2 = .059$ for Step 2 ($p < .01$); $\Delta R^2 = .084$ for Step 3 ($p < .01$); $\Delta R^2 = .015$ for Step 4 ($p < .05$)

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

At step 4, only disability status of the person requiring help, not gender, had a statistically significant effect on knowledge to help the person. Participants reported having higher knowledge to help if the student requiring help did not have a disability. An additional 1.5% of the variance in knowledge to help others was due to the manipulated variables of gender and disability.

Research Question 3

What factors predict willingness to help another student during a fire emergency on campus and does this differ by gender and/or disability status of the student needing help in the “vignette”? Five hypotheses were tested through one statistical analysis; as a result, the findings for these hypotheses are reported jointly.

Hypothesis 3_a (H_{3a}): Willingness to help another student will be higher for a participant who has higher knowledge of emergency procedures.

Hypothesis 3_b (H_{3b}): Willingness to help the “vignette” student will be higher when the “vignette” student is female.

Hypothesis 3_c (H_{3c}): Willingness to help another student will be higher for a participant when a student with a disability asks for help.

Hypothesis 3_d (H_{3d}): Willingness to help another student will be higher for a participant who has higher level of altruism.

Hypothesis 3_e (H_{3e}): Willingness to help another student will be higher for a participant who has higher level of empathy.

Analyses. Hierarchical regression analyses was used to assess the effect of the predictors social desirability, gender, knowledge to help others, IRI, SRA as well as the manipulated variables of gender and disability status on the outcome variable, willingness to help others. The

first block contained the social desirability score. The second block consisted of gender. The third block had knowledge to help others. The fourth block contained IRI scores, followed by the fifth block, i.e., SRA scores. Finally, the last block contained variables manipulated in the scenario, gender and disability status. A summary of the hierarchical regression analysis is presented in Table 6.

Results indicated that social desirability was statistically significant on willingness to help others. Individuals with higher social desirability scores reported a higher level of willingness to help others. Approximately, 1.2% of the variance in willingness to help was due to social desirability. In model 2, the gender of the participants was also statistically significant effect on their willingness to help, with males reporting a lower level of willingness to help others in comparison to females. An additional 2.6% of the variance in willingness to help was accounted for participant's gender. However, this effect of gender did not remain statistically significant in the remaining models, an indication that the effect diminished once other variables are considered.

At step 3, knowledge to help others had a statistically significant effect on participants' level of willingness to help others. Participants reported a higher level of willingness to help others when they reported having a higher level of knowledge to help others. An additional 11.8% of the variance in willingness to help was accounted for by knowledge to help others. At step 4, the effect of the interpersonal reactivity (IRI) was not statistically significant on willingness to help others (effect size = 0.2%). Altruism (SRA) in step 5 was statistically significant on willingness to help others. Participants having a higher level of altruism reported a higher level of willingness to help others, sharing approximately 1.7% of the variance.

Table 6

Summary of Hierarchical Regression Analysis for Variables Predicting Willingness to Help Others (N = 436)

Variable	B	SE B	(β)
Step 1			
Social Desirability Scale	.04	.02	.10*
Step 2			
Participant's Gender	-.31	.10	-.16
Step 3			
Knowledge to Help Others	.25	.03	.36**
Step 4			
Interpersonal Reactivity Index	.10	.11	.05
Step 5			
Self-Reporting Altruism Scale	.27	.10	.14**
Step 6			
Scenario Gender	-.20	.09	-.11*
Scenario Disability	.27	.09	.14**

Note: $R^2 = .012$ for Step 1 ; $\Delta R^2 = .026$ for Step 2; $\Delta R^2 = .118$ for Step 3; $\Delta R^2 = .002$ for Step 4; $\Delta R^2 = .017$ for Step 5; $\Delta R^2 = .031$ for Step 6

* $p < .05$, ** $p < .01$

Finally, at step 6, the manipulated variables (gender and disability) were both statistically significant willingness to help the person. Participants were more willing to help a female student requesting help as opposed to a male student asking for help. Also, participants were more willing to help if the student had a disability than when the student did not have a

disability. An additional 3.1% of the variance in willingness to help was accounted for by the manipulated variables of gender and disability.

Qualitative Analysis

Qualitative data were collected through two open-ended questions in space provided in the survey. In the first question participants were asked to describe what they would do to respond to the student in the scenario during the fire emergency. In the second question, participants were asked to describe what factors would influence their willingness to help the student in the scenario. Once data were collected, I read, reread and then coded each response into various categories based on the underlying themes. Another researcher, not connected to the study, also analyzed the data independently. Themes identified by both the researchers were compared to see if there were any major differences. Through a series of discussions and numerous iterations, common themes were identified for each of the two open-ended questions.

Themes Describing How Participants Would Respond to John/Jennifer

Five broad themes discovered through qualitative analysis are presented in Table 7 in frequency of participants' response by condition: (a) seeking input from the student; (b) acting without input; (c) acting without input and seeking others' help; (d) helping the student without following any guidelines; and (e) other (responses did not fall into any of the four broad categories).

Seeking input from student. Among participants who responded by first seeking input from the student in the scenario, the highest percentage (13.6%) was from participants who were in the male without disability condition ($n = 110$). The second highest percentage of 10.4% was from those in the male with a disability condition ($n = 106$). Responses typically consisted of

statements like, “I would ask her if it is Ok to take her out of her wheelchair,” and “ask him what I can do to help him.”

Acting without input. The most common theme across the conditions was participants’ helping the student asking for assistance without seeking any input from the student. This percent of response ranged from 75.5% of participants in the male student with a disability ($n = 106$) to 89.3% in the female student without a disability ($n = 112$). Responses were comprised of statements like, “I[would] cover her mouth with a wet T-shirt and take her out of the wheelchair, and “I would tell Jennifer to follow me and probably cover her mouth with her shirt or a rug to try and filter and some of the smoke.”

Acting without input and seeking others’ help. The second most common theme that emerged from responses was that of participants seeking assistance from a third party in order to help the student. Specifically, 30.2% of participants in the male student with a disability condition ($n = 106$) and 16.7% of those with a female with a disability ($n = 108$) sought help from others. These percentages were in sharp contrast to responses to the same theme from participants who received a student without a disability: 4.5% in male student without a disability ($n = 110$) and 3.6% in female without a disability ($n = 112$). Examples of responses in the category were from “Get someone to help us both,” and “I will call out for help so that someone can help me assist John.”

Table 7

Responding to Student Asking for Help (in Percentages)

Vignette	<u>Theme 1</u>	<u>Theme 2</u>	<u>Theme 3</u>	<u>Theme 4</u>	<u>Theme 5</u>
	Seeking input from student	Acting without input	Acting without input and seeking others' help	Helping without following guidelines	Other responses
Male with disability (<i>n</i> = 106)	10.4	75.5	30.2	1.9	10.4
Male without disability (<i>n</i> = 110)	13.7	82.7	4.5	2.7	2.7
Female with disability (<i>n</i> = 108)	8.3	85.2	16.7	1.9	3.7
Female without disability (<i>n</i> = 112)	4.5	89.3	3.6	1.8	2.7

Helping without following guidelines. Less than 3% of participants across all scenarios response to the student involved not following any appropriate emergency procedure guidelines. These percentages ranged from 2.7% for the male student without a disability condition to 1.9% for both conditions with a disability, regardless of gender. Typical responses in this category were, “I will grab her out of the wheelchair and drag him down the stairs,” and “I will take him to an elevator and send him downstairs.”

Other. Participants’ responses that did not fit under any of the themes mentioned above were categorized as “other.” The percentage of responses in this category ranged from about 10% for participants in the male with disability condition to about 3% each for the other three conditions. Common responses in this category included, “I would do whatever I could to get us both out safely as quickly as possible” and “Something to help myself only consider her first since she is a female.”

Themes Describing Factors Influencing Participants’ Willingness to Help

In the second question, participants were asked to describe what factors would influence their willingness to help the student in the scenario. Seven broad themes that were most commonly mentioned were identified. The first theme was personality characteristics of the student in need of help, such as being nice and not being arrogant or rude. The second theme was based on certain physical conditions, such as danger level in building, and extent of physical hurt due to fire. The third theme was risk to own life in the situation. The fourth and the fifth themes were empathy and altruism, respectively. The sixth theme was feeling guilty for not helping. The seventh theme consisted of responses in which participants stated that they were not willing to help the student in the scenario. Finally, if any statement was completely different from the

seven broad themes mentioned above, it was categorized as “other response.” These broad themes are described in Table 8.

Personality. A common theme found across the conditions was that participants’ willingness to help the student in the scenario was influenced by their personality: 10.9% in the male without a disability, 8.0% in female without disability, 4.7% male with disability, and 3.7% female with disability. Common responses were “If he is mean, I may not help him” and “If she acts very helpless, I will definitely help her.”

Physical condition. Physical condition was the second most common factor for participants in the male student with a disability (24.5%) and female student without a disability (20%) conditions. They expressed their willingness to respond as long as the student in the scenario was “not very heavy” or if “they themselves were not physically hurt.”

Own life in danger. Participants’ willingness to help if their own life was not in danger was most commonly expressed by those in the male with disability condition. About 23% in this condition noted that as long as their own life was not at risk, they would be willing to help. Only about 12% the participants in the female with disability and female without disability conditions mentioned that they would be willing to help as long as their own life was not in danger. Common responses were “As long as my own life was not danger” and “If there was no risk to my own safety.”

Empathy. Empathy was the most common factor that influenced the willingness of those in student with a disability conditions, regardless of gender. About 32% of participants who received the male student with a disability ($n = 106$) and about 36% of those who received the female student with a disability ($n = 108$) reported feeling empathetic towards the student and therefore willing to help him/her. Common responses in this category were “I would want to be

helped if I was in his situation” and “If it were my brother or friend in that situation I would hope someone would help them.”

Altruism. Altruism was the most common response for participants with the female student without a disability. More than 36% of these participants were willing to help the student because it was “the right thing to do” or that they “would help the student no matter what.” Altruism was also the second most common theme (after empathy) among participants with the female student with a disability (26%). Thus, participants who had a female scenario, regardless of disability, gave an altruistic reason for helping.

Guilt. Although guilt was not seen as a major factor influencing participants’ willingness to help others, a few participants did mention guilt. About 3% of participants in the male with disability, female with disability, and female without disability conditions expressed their willingness to help another student based on feelings of guilt. Common responses included, “I know that if I did not help her, I would be eternally guilty,” and “I would feel guilty if I could hear someone call for help and didn’t respond to that person.”

Not willing to help. More participants expressed an unwillingness to help a male student without a disability (10.1%) than a female student with a disability (1.9%). The responses in this category mainly revolved around statements like, “I would only be willing to help the student if he is my best friend or if he is a family member,” and “I’m not willing to risk my life for someone else.”

Other. Participants’ responses that did not fit under any of the above mentioned themes were categorized as other. Common responses under this theme included, “I would only help her if I knew her personally” and “The only influence would be if I could not find her.”

Table 8

Willingness to Help (in Percentages)

Vignette	Theme 1 Personality	Theme 2 Physical	Theme 3 Own life in danger	Theme 4 Empathy	Theme 5 Altruism	Theme 6 Guilt	Theme 7 Not willing to help	Theme 8 Other
Male with disability (<i>n</i> = 106)	4.7	24.5	13.2	32.1	19.8	3.8	6.6	0.0
Male without disability (<i>n</i> = 110)	10.9	9.1	23.6	16.4	20.0	7.3	10.9	8.2
Female with disability (<i>n</i> = 108)	3.7	15.7	12.0	36.1	26.9	3.7	1.9	3.7
Female without disability (<i>n</i> = 112)	8.0	20.5	13.4	19.6	36.6	2.7	3.6	1.8

CHAPTER 5

Discussion

The intent of this study was to examine various factors associated with students' knowledge of emergency procedures and their willingness to help other students during times of crisis. The study specifically investigated whether gender and disability influenced one's knowledge of emergency procedures and willingness to help others during emergencies. In this chapter, the meaning and potential implications of the findings reported in Chapter 4 are addressed. Following this, the limitations of the study and implications for rehabilitation services practice, research and training are discussed. Finally some possible areas for future research are provided.

Hypotheses

Responsibility of Safety

This question investigated students' perceptions about who is most responsible for student safety during a fire emergency on campus. It was hypothesized that participants would rank university authorities as the most responsible party for student safety (Hypothesis 1a) and that the participants' view of who is responsible would vary depending on the disability status of the student requiring help (Hypothesis 1b). Hypothesis 1a was not supported. Instead participants ranked the student in the scenario to be the most responsible for his/her own safety. This result is consistent with the expectations laid out by agencies and authorities' in-charge of emergency preparedness, like FEMA and the American Red Cross. When participants were in the condition with the student a disability, the majority of the participants ranked that fellow students were most responsible for the safety of the student in the comparison to those with a student with no disability. However, the participants in the no disability condition ranked university police as

being most responsible for the safety of the student when compared to participants in the disability condition. Thus, Hypothesis 1b was supported as participants' view of who was most responsible for student safety differed based on the disability status of the student in the scenario. This result is consistent with the existing literature on individuals with disability and emergency preparedness, in which individuals often view individuals with disabilities as not being able to take care of themselves (Mintz, 2002). The literature shows that a common assumption about a person with a disability is that he or she is fragile or helpless (Mintz, 2002) and therefore needs help (Baldrige & Veiga, 2003).

Knowledge to Help

The focus of the second research question was on whether the disability status of the student requiring help would have an impact on the participant's knowledge about emergency procedures. It was hypothesized that participants' knowledge about emergency procedures would be greater for an individual without a disability than for a person with a disability. Similarly, it was expected that gender, previous experience in emergency situations, and previous training in emergency procedures would have a positive impact on participants' knowledge about emergency procedures.

Disability status. Hypothesis 2 was supported. The results from the study revealed that participants reported a higher level of knowledge regarding emergency procedures when the student requiring assistance did not have a disability. The participants' qualitative responses regarding knowledge were also in line with the results of the quantitative analyses. Specifically, some participants reported that they did not have the appropriate knowledge to help a person in a wheelchair. Some inappropriate ways noted in helping someone using a wheelchair were dragging the person down the stairs or taking the person out of the wheelchair and making them

lie down at floor level so that they could escape the smoke. This finding is consistent with information from agency reports and the current literature (Fox et al., 2007; National Organization on Disability SNAKE Report [NOD], 2005). NOD reported in recent emergency situations people have expressed apprehensions as well as a lack of knowledge about helping someone with a disability. According to the Department of Labor (2007), oftentimes organizations design emergency measures to safeguard their employees, especially employees with disabilities, but information about these measures is not communicated to the employees. This lack of dissemination often leads to employees not knowing what exactly is to be done during an emergency situation and how to help someone with special needs. Similarly, while the Department of Health and Human Services (2010) has laid out certain guidelines for assisting people with disabilities during emergency situations, the general public is typically not aware of these guidelines. These gaps in knowledge could prove to be catastrophic as research on disaster responses shows that spontaneous decisions are often faulty especially when assisting someone else.

Previous experience in emergency situations. The results revealed that participants who had previous experience with emergencies, specifically participants' whose family members or friends had been in an emergency situation in the past, reported having a higher level of knowledge to help others during emergency situations. This finding is consistent with the literature, which shows that any exposure to an emergency situation, either personally or through a family member, who has experienced it, may influence one's own knowledge of emergency procedures and knowledge to help others (Mulilis, Duval, & Rogers, 2003; Russell, Goltz, & Bourque, 1995). The results also showed that male participants reported having a higher level of knowledge to help others in emergency situations compared to female participants. Again this

result is consistent with what was found in the literature in that women consider themselves to have less knowledge to help others in comparison to men (Survey Finds Gender Gap in Attitudes Toward Disaster Preparedness, 2007, retrieved April 3rd, 2008 from <http://www.reuters.com/article/pressRelease/idUS146745+15-Jan-2008+PRN20080115>).

Training in emergency procedures. Previous training was not a significant predictor of knowledge to help others during emergency situations, even though the majority of the participants reported having some form of emergency training, such as participation in multiple fire drills, CPR training, etc. This result implies that existing training programs may not be very effective and that changes may need to occur in the content of such training programs. Future research studies could focus on investigating what participants' perceptions are of emergency training programs, how frequency of participation and student involvement in such programs can be increased, and what changes could make these programs more effective.

Willingness to Help Others

This research question investigated the personal and situational factors that may influence participants' willingness to assist another student during an emergency situation. The factors were drawn from existing literature and included personal factors, like empathy, altruism, social desirability and knowledge about emergency procedures, and personal characteristics (gender and disability status) of the person needing help. It was hypothesized that participants' with higher levels of empathy and altruism would have a greater willingness to help another person in an emergency situation (Hypothesis 3a). Further, it was hypothesized that participants with a greater knowledge of emergency procedures would be more willing to help another person asking for assistance (Hypothesis 3b). It was also hypothesized that if the person asking for assistance was female or had a disability, the participants would express more willingness to help

another person (Hypothesis 3c). Some of these hypotheses were supported, while others were not. The details are provided below.

Altruism. Results from the current study show that participants who scored higher on the altruism scale were more willing to help another student. This finding parallels the existing literature, which suggests that altruistic helping does not involve any self-fulfilling motives but is primarily carried out to reduce the discomfort that the person in need is experiencing (Eveland & Crutchfield, 2006). Similarly, research on people with disabilities and altruistic helping behaviors has found that people with disabilities are often helped more in comparison to people without disabilities (Batson, 1991).

Knowledge about emergency procedures. The results also revealed that individuals who reported having a higher level of knowledge about emergency procedures were more willing to help another student. Again, this finding is consistent with the literature, which shows that the concept of “willingness to help” is very closely related to knowledge about emergency situations (Kano, Ramirez, Ybarra, Frias, & Bourque, 2007). From the participants’ responses to the open-ended questions in the study – which will be discussed later in this chapter— provide possible explanations to support the linkage between knowledge level and willingness to help. Fear of putting one’s own life in danger was one of factors that participants voiced in determining whether to help or not. Possibly, individuals, who do not have adequate knowledge about a situation, may fear putting their life in danger when assisting someone else, thus decreasing the likelihood of helping. This qualitative response could, in part, explain why people with more knowledge of emergency procedures are more willing to help others.

Disability status. Another finding of the study was that participants expressed a higher level of willingness to assist a student with a disability than a student without a disability. This

finding is consistent with the existing literature. Individuals are often more willing to assist someone with a disability while they assume that people without disabilities can take care of themselves (Batson, 1991). The literature on psychosocial aspects of disability and helping behaviors also shows that individuals who have a more severe or a more visible disability are offered more help than others. Therefore, the visibility of the wheelchair in the scenario, could have also contributed to this finding. The results are also consistent with the existing stereotypes of people with disabilities: being helpless, needing more direction and even being dependent on people around them. Some of these assumptions were revealed in the open-ended responses provided by the participants, which will be discussed later.

Gender. Participants were more willing to help a female student than a male student. This result is in line with the existing literature, which suggests that the victim's gender has a major influence on an individual's willingness to help the victim (Eveland & Crutchfield, 2006). In a meta-analysis of 174 research articles on helping behaviors and the gender of the person receiving or giving help, Eagly and Crowley (1986) found that women received more help in situations of need in comparison to men. The results were attributed to existing stereotypes of women being helpless and weak, and needing additional assistance in a situation where help is required (Eagly & Crowley, 1986).

Empathy. One hypothesis that was not supported was the role of empathy on willingness to help. Empathy was not found to influence willingness to help. It is possible that other factors not included in the study played a role in the results. For example, there could be other personality characteristics, such as risk averseness that influence the role of empathy on one's willingness to help. Similarly self-efficacy could also moderate the impact of empathy on willingness to help. These additional linkages need to be examined in future research.

Responses to Open-Ended Questions

Participants' responses to the open-ended questions provided some meaningful insights into their assumptions and reactions to the emergency situation. The findings from the qualitative responses also shed more light on the quantitative results about willingness to help a fellow student. While the majority of the participants described how they would use their knowledge about emergency procedures to help another student, many of them also said that they would assist another student only if their own life was not in danger. As noted earlier, this response could be linked to the lack of knowledge to help others, especially someone with a disability, the majority of participants reported,

Assumptions about gender and disability. The responses also provided insights into assumptions about gender and disability. An analysis of the participants' responses revealed that when a male student asked for assistance, participants would work in collaboration with the student, whereas if a female student requested help they would take the lead and provide her direction. Similarly, if a student without a disability asked for assistance, participants suggested that they would collaborate with the student about an emergency plan, while for a student with a disability the typical participant response was to help without any mention of getting the student involved in the planning process. This tendency to help individuals with disabilities without actually asking for their input can at times be more harmful than helpful for them (Iggers, 1989). Often the assumption is that people with disabilities are helpless and definitely need assistance. For example, one common response was participants' intention to take the person with a disability out of the wheelchair and then take them down the stairs. In the absence of adequate knowledge of emergency procedures, and without input from the person with the disability, this action could cause more harm to the individual.

Willingness to help. Participants' willingness to help was influenced by a number of factors: empathy, physical and personality characteristics of the student asking for assistance, and danger of situation to one's own life. The responses involving physical and personality characteristics provided an interesting perspective to the research study as no personality or physical features were mentioned in the scenario. Responses such as the person being very heavy and being very demanding provided a glimpse into some of the assumptions made by the participants.

Limitations of the Research Study

A limitation of the study is that the sample was composed of only undergraduate students. Thus, it is difficult to generalize the results of this study to the larger US adult population. However, considering the large sample size, the views expressed by the participants can be considered fairly representative of the larger student population in the Northeast region of the US. However, geographical area could be a limitation. It is possible that if this study were conducted in a geographical location where emergency situations are common (like earthquake prone California), the views expressed might be different from those reported in the current study. Also, all the participants were majoring in business; thus, it is possible that their views may be different from participants from other majors, like special education. Students with exposure to courses and training for working with people with disabilities may have more awareness regarding disability related issues, which may result in their having different views about responding to people with disabilities.

A fire emergency was chosen for this study because it is the most common form of disaster that occurs in the United States and because there is a high level of awareness about the

basic emergency protocol to follow during a fire (American Red Cross, 2007). Despite this, it is possible that different individuals may be more aware of certain types of emergency than others.

Another limitation of the study is that the results and conclusions on participants' willingness to help are based on their reported levels of knowledge, altruism and empathy. Although, the literature shows a strong link between these factors, it also highlights how attitudes are often not the best predictor of behavior (Wray-Lake, Flanagan, & Osgood, 2010). Individuals may report a high level of knowledge and willingness to help others during emergency situations but this may not always translate into actual helping behaviors. As the literature suggests, there are a number of other factors that may influence one's actual behavior during an emergency situation, such as the personality of the helper and the recipient, the characteristics of the situation, and attitude strength (Rhodes, 2008).

Finally, a limitation of the study was the inadequate representation of students with disabilities in the sample. The majority of the students in the sample did not report having a disability. If the sample had more students with disabilities, the results may have been significantly different. This research study has helped in identifying some key factors that influence students' knowledge about emergency preparedness as well as their willingness to help other students, especially students with disabilities during an emergency situation. With the inclusion of more students with disabilities, the study could have provided the opportunity to examine whether knowledge levels about emergency procedures would have varied based on disability status of the participants.

Implications for Research, Training and Practice

Research

The current research study has implications for researchers who are interested in designing procedures to be followed during emergency situations. Although the current literature comprises of a number of reports developed by agencies in charge of emergency planning, there is a lack of empirical research in the application of emergency guidelines. Researchers can develop specific guidelines and programs, which individuals can use in emergency situations. In the current study the low effect size and the low R^2 value for the regression model used to predict knowledge to help others implies that other variables not included in the study could have an impact on knowledge of emergency procedures. Thus, more research is needed to investigate other predictors of knowledge of emergency procedures. This study highlights the fact that the participants do not have adequate knowledge to help others during an emergency. Therefore, it would be helpful if more research would be conducted on challenges faced by people in emergency situations and on the appropriate emergency protocols. This information can be used for developing more advanced emergency preparedness measures. Others can learn about the actual challenges faced by people and how they used available resources to save themselves and possibly even others.

The research study also has implications for researchers who are interested in emergency preparedness for people with disabilities. Every emergency situation presents its unique challenges. However some basic guidelines should be designed as well as promoted in order to better serve the needs of people with disabilities. In the current research study many participants expressed the willingness to help the student with a disability in the scenario but reported not having sufficient knowledge about how to help. Research studies need to be designed to

investigate how people with disabilities can be assisted during emergency situations. Such studies could also include the views and responses of people with disabilities regarding receiving assistance from others during emergency procedures.

Another interesting area of future research from this study is more in-depth investigation on how help is given based on the gender as well as the disability status of the person requiring assistance. Studies could be designed to investigate why people may prefer working with male victims while providing more directions and active help to female victims. Assumptions about gender roles could be explored through these research studies. Similarly the tendency of individuals to take charge of a situation where there is person with a disability requiring help, instead of getting the latter involved could also be studied in depth in future research studies.

This study also lays down the initial foundation for studies on psychosocial aspects of disability. The qualitative data gathered from this research study provided an insight into student perceptions regarding people with disabilities. Certain stereotypes like people with disabilities may be rude, angry or completely helpless emerged from this study. Participants were quoted saying “I’ll help him as long as he not mean or rude to me,” “depends on whether he is very angry and irritable,” and “ I’ll just have to tell him what to do and he has to just do what I say.” Statements like this highlight the need for researchers to focus more on dynamics between individuals with disabilities and individuals without disabilities, during stressful or challenging situations like an emergency situation. In the existing literature there are studies focusing on helping behaviors involving people with disabilities but there is a potential to develop research specifically in the area of helping behavior and emergency situations.

Research on helping behaviors has shown that factors like altruism and empathy can influence an individual’s willingness to help others (Batson, Duncan, Ackerman, Buckley, &

Birch, 1981). However, in this study, empathy was not seen as a statistically significant predictor of willingness to help. There could be more research done to explore the altruism-empathy theory in greater detail so as to gain a better insight into the relationship between empathy and willingness to help during an emergency.

People with disabilities are more vulnerable in emergency situations not just because of stereotypes but also because of external factors like technological failure (Shipley, 2001). For example, the vignette presented in the study describes an emergency fire situation where the person requiring help misplaces his/her cell phone and is therefore unable to call the police or other emergency personnel for assistance. According to Shipley (2001), people with disabilities become more vulnerable during emergency situations as they are most affected by factors like power failure. During severe weather conditions or fire emergencies, impaired technological services may prevent people with disabilities from making emergency calls, or using certain assistive technology devices. This makes them more vulnerable and susceptible to harm compared to people without disabilities. Therefore research needs to be done to assess how technology can be enhanced and made more accessible for people with disabilities so that it serves to help rather than hinder their efforts to stay safe during an emergency.

The current study also lays down the foundation for a number of future studies. For example, the current research study was conducted in one particular university and with students from one particular college. New research could be initiated with participants being recruited from different majors and from different geographical locations. It would be interesting to compare the results of the current study with results from newer studies to see how geographical locations or exposures to different majors may influence knowledge of emergency procedures and the willingness to help others. For example, participants from certain geographical areas may

be prone to a particular type of weather related emergency than participants from another area. This may influence their level of knowledge regarding emergency procedures.

Another possible area for future research is in helping behaviors and personality characteristics other than empathy and altruism. This study has provided a glimpse into emergency preparedness and disability and how empathy and altruism were crucial in determining helping behaviors were explored. Therefore, other personality characteristics such as risk averseness that may influence one's willingness to help others, particularly people with disabilities could be investigated in future research.

Future research could also include a study similar to the current research study but with more representation of people with disabilities in the sample as it would be interesting to look at how the responses and results would vary if the participants themselves had a disability. The study shows that female students are more likely to receive help than male students in an emergency situation. More research could be undertaken to investigate how factors other than willingness to help impact the vulnerability of female students in a campus emergency.

Training

The results of this research study show that previous training in fire drills or any other emergency situation was not a statistically significant predictor of knowledge regarding emergency procedures. In other words, the study revealed that even when many participants have experienced fire-drill trainings and training in First Aid and CPR, they reported not having sufficient knowledge to help another person during a fire emergency. This finding suggests that existing fire-drill and other emergency training are not sufficient or comprehensive enough to provide people with the appropriate skills required for an emergency situation. Individuals and agencies in charge of training programs need to develop more advanced programs which will

provide the public with comprehensive knowledge about emergency procedures and the required skills to deal with an emergency situation.

Practice

Participants in the current research study expressed certain apprehensions about helping people with disabilities as well as stereotypes about the student with the disability, such as being rude or uncooperative. It could be inferred that these stereotypes were based on their assumptions about people in wheelchairs since the scenario presented to the participants did not disclose any personality characteristics about the student with the disability. University students in certain majors may have opportunities to interact with individuals with disabilities more often than students from other majors. They may also have the opportunity to take more courses regarding disability issues than students in other majors. However university level programs like a Disability Awareness Week or presentations on Disability issues may provide university students an opportunity to increase their awareness and also address some stereotypes regarding people with disabilities (Skinner & Lindstrom, 2003). Practitioners in their role as advocates should initiate and promote such programs which would not only help in creating a greater awareness regarding disability issues on university campuses, but could also help in reducing stereotypes that students may have regarding people with disabilities.

Conclusion

The increasing frequency and severity of man-made and natural disasters across the globe, and the resulting human casualties have served to underscore the importance of emergency preparedness. Women and people with disabilities have been disproportionately affected by these emergencies because of factors, including inadequate knowledge of emergency procedures, stereotypes influencing helping behavior, and inadequate infrastructure. College

campuses are especially vulnerable to emergencies and with the increasing enrollment of women and people with disabilities in universities, it becomes important to understand students' knowledge levels regarding helping during emergencies and their willingness to help others in an emergency.

This study provides important insights into these issues. The findings suggest that one's previous experience with emergencies, one's gender and the disability status of the person requiring help all influence knowledge to help others during an emergency. Knowledge to help is an important variable because training could influence knowledge in helping. However, in the study, previous training in emergency procedures in the form of fire drills and other training methods was not found to have a statistically significant impact on knowledge to help others. This is an important finding since it implies that current training methods are inadequate and need to be modified to incorporate information on how to help others particularly those with disabilities. Another important finding is that knowledge is a statistically significant predictor of willingness to help. Thus, if knowledge levels are increased they are likely to impact helping behavior during an emergency. Other significant predictors of willingness to help included social desirability, altruism, and the disability status and gender of the person requesting help. While students may be more willing to help a person with a disability, the earlier finding suggests they may not have the knowledge to do so. In this study, participants were more willing to help a female student than a male student. The qualitative data also reveals that common stereotypes and assumptions are prevalent even in a college going population. Participants were less likely to take input from a person with a disability or a woman, and more likely to take charge while helping them. Similarly some responses mentioned personality of the person requesting help even though no information was given about personality to the participants.

The study is an important first step in investigating emergency situations on college campuses. It reveals interesting insights while raising some important questions that need to be studied through further research. Future areas for research include a similar study with multiple campuses and a more diverse population, application of other theories such as ambivalence-response amplification to emergency situations, and investigating the reasons for women reporting lower levels of emergency knowledge compared to men.

REFERENCES

- American Society of Safety Engineers. (2005). *On/off-campus fires: Statistics and causes. July 2005-1*, p. 1-2
- Anderson, K. M., & Manuel, G. (1994). Gender differences in reported stress response to the Loma Prieta earthquake. *Sex Roles, 30*(9-10), 725-733.
- Anonymous. (2008). Are campus emergency communications systems improving? *The Presidency, 11* (1), p. 8.
- Anonymous. (2010, 5 January). *CBM helps most vulnerable victims of Haiti earthquake*. Hematology Week, p. 507.
- Apostolakis, G. E., & Lemon, D. M. (2005). A screening methodology for the identification and ranking of infrastructure vulnerabilities due to terrorism. *Risk Analysis, 25*, 361-376.
- Arenson, K. (2001, October 2). Back to school at one college, but far from back to normal. *New York Times*, p. 2.
- Asia Pacific Forum on Women, Law and Development. (2005). *Why are women more vulnerable during disasters? Violations of women's human rights in the tsunami aftermath*. APWLD, 1-24.
- Axcess Point. (2007). AxcessPoints helps you create and manage your emergency plan. Retrieved on November, 1, 2009 from <https://www.axcesspoints.com/index.php>.
- Baldrige, D., & Veiga, J. (2003). *Anticipated consequences and decisions to request accommodation: The requester's perspective*. Paper presented at the Academy of Management.
- Ballard, R. (1992). Short forms of the Marlowe-Crowne Social Desirability Scale. *Psychological Reports, 71*, 1155-1160.

- Ballard, R., Crino, M. D., & Rubenfeld, S. (1998). Social desirability response bias and the Marlowe-Crowne Social Desirability Scale. *Psychological Reports, 63*, 227-237.
- Barger, S. D. (2002). The Marlowe-Crowne affair: Short forms, psychometric structure, and social desirability. *Journal of Personality Assessment, 79* (2), 286-305.
- Batson, C. D. (1991). *The altruism question: Towards a social-psychological answer*. Hillsdale, NJ: Erlbaum.
- Batson, C. D., Duncan, B., Ackerman, P., Buckley, T., & Birch, K. (1981). Is empathic emotion a source of altruistic motivation? *Journal of Personality and Social Psychology, 40* (2), 290-302.
- Beeble, M. L., Post, L. A., Bybee, D., & Sullivan, C. M. (2008). Factors related to willingness to help survivors of intimate partner violence. *Journal of Interpersonal Violence, 23* (12), 1713-1729.
- Bell, D. W. & Esses, V. M. (2002). Ambivalence and response amplification: A motivational perspective. *Personality and Social Psychology Bulletin, 28*, 1143-1152.
- Berenguer, J. (2007). The effect of empathy in proenvironmental attitudes and behaviors. *Environment and Behavior, 39* (2), 269-283.
- Beretvas, S. N., Meyers, J. L., & Leite, W. L. (2002). A reliability generalization study of the Marlowe-Crowne Social Desirability Scale. *Educational and Psychological Measurement, 62* (4), 570-589.
- Berg, V. D. B., Grievink, L., Velden, V. D., Yzermans, C. J., Stellato, R. K., Lebet, E., & Brunekreef, B. (2008). Risk factors for physical symptoms after a disaster: a longitudinal study. *Psychological Medicine, 38* (4), 499-510.

- Block, L. S. (1993). Students with learning disabilities. In S. Kroeger & J. Schuck (Eds.), *Responding to disability issues in student affairs* (pp. 69-78). Ann Arbor, MI: Jossey-Bas Inc.
- Boondi. (2001). Guide to disaster planning: Ten ways to make yourself safe at work. *ICan News Service*.
- Boston Globe. (2005, October 30). *Be vigilant about fire safety; Advocate raises awareness of campus hazards*, p. A. 32.
- Bukowski, T. J. (2009). *Risk perception and enrollment decisions following a crisis: Northern Illinois University and February 14, 2008*. Northern Illinois University, p. 103.
- Burling, W., & Hyle, A. (1997). Disaster preparedness planning: Policy and leadership issues. *Disaster Prevention and Management*, 6 (4), 234-244.
- Christie, R., & Geis, G. (Eds). 1968. *Studies in Machiavellianism*. Academic Press, New York.
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, N.J: Lawrence Erlbaum Associates.
- Collins, C. L. (2007). Threat assessment in the post-columbine public school system: The use of crisis management plans in the public school sector as a means to address and mitigate school gun violence. *International Journal of Educational Advancement*, 7 (1), 46-61.
- Crane, J. S. (2005). Assessment of the community healthcare providers' ability and willingness to respond to a bioterrorist attack in Florida. *Dissertation Abstracts International: Section B: The Sciences and Engineering*, 66 (3-B).
- David, W. S., Cotton, A. J., Simpson, T. L. & Weitlauf, J. C. (2004). Making a case for personal safety: Perceptions of vulnerability and desire for self-defense training among female victims. *Journal of Interpersonal Violence*, 19 (9), 991-1001.

- Davis, L. E., LaTourette, T., Mosher, D. E., Davis, L. M., & Howell, D. (2003). *Individual preparedness response to chemical, radiological, nuclear and biological terrorist attacks: A quick guide*. Santa Monica, CA: RAND Corp. Retrieved from <http://www.rand.org/publications/MR/MR1731.1/MR1731.1.pdf>
- Darley, J. M., & Daniel, B. C. (1973). "From Jerusalem to Jericho": A study situational and dispositional variables in helping behavior. *Journal of Personality and Social Psychology*, 27 (1), 100-108.
- Davis, M. H. (1983). Measuring individual differences in empathy: Evidence for a multidimensional approach. *Journal of Personality and Social Psychology*, 44, 113-126.
- Do, T. C. (2006). Impact of crime on victims: An evaluation study of victim awareness class based on a balanced and restorative justice model. *Dissertation Abstracts International: Section B: The Sciences and Engineering*, 67 (6-B).
- Eagly, A. H., & Crowley, M. (1986). Gender and helping behavior: A meta-analytic review of the social psychological literature. *Psychological Bulletin*, 100 (3), 283-308.
- Edwards, A. (1957). *The social desirability variable in personality assessment and research*. New York: Dryden
- Eisenman, D. P., Glik, D., Ong, M., & Zhou, Q. (2009). Terrorism-related fear and avoidance behavior in a multiethnic urban population. *American Journal of Public Health*, 99 (1), 168-174.
- Eisenman, D. P., Wold, C., Fielding, J., Long, A., Setodji, C., Hickey, S., et al. (2006). Differences in individual-level terrorism preparedness in Los Angeles county. *American Journal of Preventive Medicine*, 30, 1-6.

- Eveland, V. B., & Crutchfield, T. N. (2006). Understanding why people do not give: strategic funding concerns for AIDS-related nonprofits. *International Journal of Nonprofit and Voluntary Sector Marketing*, 12 (1), 1-12.
- Faul, F., Erdfelder, E., Lang, A., & Buchner, A. (2007). G*power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods*, 39 (2), 175-191.
- FEMA. (2004). *Are you ready?* Washington D.C: Federal Emergency Management Agency. Retrieved January 10, 2010, from <http://www.fema.gov/areyouready/>
- FEMA. (2010). Get disaster information. Retrieved on March 1, 2010 from <http://www.fema.gov/hazard/index.shtm>
- Ferrari, J. R., & Bristow, M. J. (2005). Are we helping them serve others? Student perceptions of campus altruism in support of community service motives. *Education*, 125 (3), 404-413.
- Fox, M. H., White, G. W., Rooney, C., & Rowland, J. (2007). Disaster preparedness and response for persons with mobility impairments: Results from the University of Kansas Nobody Left Behind Project, *Journal of Disability Policy Studies*, 17 (4), 196-205.
- Frieden, L. (2006). *The needs of people with psychiatric disabilities during and after Hurricanes Katrina and Rita: Position paper and recommendations*. Washington DC: National Council on Disability.
- Glancy, G. (2008, October 3). *Emergency drill puts students to the test*. Spartanburg Herald Journal, Spartanburg, S.C.
- Gomstyn, A. (2003). Minority enrollment in colleges more than doubled in past 20 years, study finds. *Chronicle of Higher Education*, 50.

- Grady, J., & Andrew, D. P. S. (2006). Emergency preparedness for people with disabilities. *Journal of Physical Education, Recreation & Dance, 77*, 10-11.
- Green, S., Davis, C., Karshmer, E., Marsh, P., & Straight, B. (2005). Living stigma: The impact of labeling, stereotyping, separation, status loss, and discrimination in the lives of individuals with disabilities and their families. *Social Inquiry, 75* (2), 197-215.
- Gault, B., Hartmann, H., Jones-DeWeever, A., Werschkul, M., & Williams, E. (2005). The women of New Orleans and the gulf coast: Multiple disadvantages and key assets for recovery part 1. Poverty, race, gender and class. *Institute for Women's Policy Research, 1-12*.
- Hammond, J. (2009). The Columbine tragedy ten years later. *School Administrator, 66* (4), 10-15.
- Hampson, R. B. (1981). Helping behavior in children: Addressing the interaction of a person-situation model. *Developmental Review, 1* (2), 93-112.
- Hathaway, S. R., & McKinley, J. C. (1943). *The Minnesota Multiphasic Personality Inventory*. Minneapolis: University of Minnesota Press.
- Henderson, C. (2001). College freshmen with disabilities, 2001: A biennial statistical profile. *American Council on Education*. Heath Resource Center, Washington, DC, 1-45.
- Heppner, P. P., Kivlighan, D. M., & Wampold, B. E. (1999). *Research design in counseling* (2nd ed.). Belmont, CA: Wadsworth.
- Ho, M., Shaw, D., Lin, S., & Chiu, Y. (2008). How do disaster characteristics influence risk perception? *Risk Analysis, 28* (3), 635-643.
- Hoffman, M. (1981). Is altruism part of human nature? *Journal of Personality and Social Psychology, 40* (1), 121-137.

- Horowitz, M., Wilner, N., & Alvarez, W. (1979). Impact of event scale: A measure of subjective stress. *Psychosomatic Medicine*, 41 (3), 209-218.
- Huenefeld, N. E. (1998). *Psychologists' attributions of responsibility for date rape*. Pennsylvania State University, University Park.
- Ikeda, K. (1995). Gender differences in human loss and vulnerability in natural disasters: A case study from Bangladesh. *Indian Journal of Gender Studies*, 2 (2), 171-193.
- Jackson, J. F. L., & Terrell, M. C. (2007). *Creating and maintaining safe college campuses*. Stylus Pub, LLC.
- Johnson, R. C., Danko, G. P., Darvill, T. J., Bochner, S., Bowers, J. K., Huang, Y., et al., (1989). Cross-cultural assessment of altruism and its correlates. *Personality and Individual Differences*, 10 (8), 855-868.
- Kano, M., Ramirez, M., Ybarra, W. J., Frias, G., & Bourque, L. B. (2007). Are schools prepared for emergencies? A baseline assessment of emergency preparedness at school sites in three Los Angeles county school districts. *Education and Urban Society*, 39 (3), 399-422.
- Karakashian, L. M., Walter, M. I., Christopher, A. N., & Lucas, T. (2006). Fear of negative evaluation affects helping behavior: The bystander effect revisited. *North American Journal of Psychology*, 8, 13-32.
- Keller, C., & Siegrist, M. (2010). Psychological resources and attitudes toward people with physical disabilities. *Journal of Applied Social Psychology*, 40 (2) 389-401.
- Kelley, B .T., & Torres, A. (2006). Campus safety: Perceptions and experiences of women students. *Journal of College Student Development*, 47 (1), 20-36.
- Kennedy, M. (2009). Crisis communication. *American School and University*, 81 (7), p. 16

- King, R. (2009). Women's fear of crime on university campuses. New directions? *Security Journal*, 22 (1), 87-99.
- Klotz, H. (2008). Higher education act addresses campus safety and security. *Security, Distributing and Marketing*, 38 (10), p.15
- Lathrop, D. (1994). *If you have a disability, the forces of nature can be meaner to you than anyone else. But you can fight back. Be prepared.* Unpublished manuscript.
- Lawry, L. (2007, April 10). *When disaster strikes, women suffer most.* International Medical corps. Washington, DC.
- Lehman, B. A. (1993, April 5). The hurtful stereotypes about the disabled. *Boston Globe*, p. 29
spacing problem
- Lenhardt, A. M. C., & Willert, H. J. (2002). *Linking all stakeholders to stem school violence.* The Education Digest, 68 (1), 37-44.
- Marjanovic, Z. (2006). *Judgments of victims' responsibility: Accounting for the discrepancy of support for victims of natural disasters.* Canada, York University.
- Marlowe, D., & Crowne, D. P. (1961). Social desirability and response to perceived situational demands. *Journal of Consulting Psychology*, 25, 109-115.
- Mechelen, I. V. (2009). A royal understanding the mechanisms underlying person-in-context behavior. *Journal of Research in Personality*, 43 (2), 179-186.
- Millstein, S. G., & Halpern-Felsher, B. L. (2002). Perceptions of risk and vulnerability. *Journal of Adolescent Health*, 31(1), 10-27.
- Mitroff, I. I. (1999, June 1). Pinpointing sole cause of tragedy is waste of time. *Start Tribune*, Metro Edition, p. 11.A.

- Mintz, S. B. (2002). Invisible disability: Georgina Kleege's sight unseen. *NWSA Journal*, 14 (3), 155-177.
- Miville, M. L., Carlozzi, A. F., Gushue, G. V., Schara, S. L., & Ueda, M. (2006). Mental health counselor qualities for a diverse clientele: Linking empathy, universal-diverse orientation, and emotional intelligence. *Journal of Mental Health Counseling*, 28 (2) 151-165.
- Mulilis, J., Duval, T. S., & Rogers, R. (2003). The effect of a swarm of local tornadoes on tornado preparedness: A quasi-comparable cohort investigation. *Journal of Applied Social Psychology*, 33(8), 1716-1725.
- National Organization on Disability. (2005). *Report on special needs assessment for Katrina evacuees (SNAKE) project*. NOD, p. 1-16.
- National Organization on Disability. (2001). People with disabilities unprepared for terrorist, other crises at home or at work, new poll finds. Harris Interactive Survey. Retrieved on January 1, 2010 from <http://www.nod.org/index.cfm?fuseaction=FeatureshowFeature&Feature ID=507>.
- Neyman, J. (2004, August 24). Colleges embrace homeland security curriculum. *USA Today*.
- O'Driscoll, P. (2006). Hurricane season begins today. Is everyone ready? Nine months after Hurricane Katrina blasted the Gulf Coast, the U.S. government's chief tropical weatherman doubts it. *USA Today*, p. 1A.
- Padgett, L. S., Strickland, D., & Coles, C. D. (2006). Case study: Using a virtual reality computer game to teach fire safety skills to children diagnosed with fetal alcohol syndrome. *Journal of Pediatric Psychology*, 31(1), 65-70.

- Paquette, T. S. (2005). *Ego strength, white racial identity, racial diversity attitudes, and cultural empathy in undergraduate students*. Purdue University, West Lafayette.
- Paulhus, D. L. (1991). Measurement and control of response bias. In J. B. Robinson, P. R. Shaver & L. S. Wrightsman (Eds.), *Measure of Personality and Social Psychological Attitudes* (pp. 17-59). San Diego, CA: Academic Press.
- Peter, K., Horn, L., & Carroll, C. D. (2005). *Gender differences in participation and completion of undergraduate education and how they have changed over time*. U.S Department of Education Institute of Education Sciences, NCES2005-169, 1-67.
- Piliavin, J. A. (2009). Altruism and helping: The evolution of a field: The 2008 Cooley-Mead presentation. *Social Psychology Quarterly*, 72 (3), 209-225.
- Porter, S., & Whitcomb, M. (2005). E-mail subject lines and their effect on web survey viewing and response. *Social Science Computer Review*, 23(3), 380-387.
- Reynolds, W. M. (1982). Development of reliable and valid short forms of the Marlowe-Crowne Social Desirability Scale. *Journal of Clinical Psychology*, 38, 119-125.
- Rogers, K., Dziobek, I., Hassenstab, J., Wolf, O. T., & Convit, A. (2007). Who cares? Revisiting empathy in Asperger syndrome. *Journal of Autism and Developmental Disorders*, 37, 709-715.
- Rushton, J. P., Chrisjohn, R. D., & Fekken, G. C. (1981). The altruistic personality and the self-report altruism scale. *Personality and Individual Differences*, 2 (4), 293-302.
- Russell, L. A., Goltz, J. D., & Bourqu, L. B. (1995). Preparedness and hazard mitigation actions before and after two earthquakes. *Environment and Behavior*, 27 (6), 744-770.
- Scalora, M., Simons, A., VanSlyke, S. (2010). Campus safety: Assessing and managing threats. *FBI Law Enforcement Bulletin*, 79 (2), 1-10.

- Seabrook, H.L. (2001). *Elements for the development of a safe school plan*. Pepperdine University, p. 158.
- Shipley, T. (2001). Telecommunications services: Access by disabled people. Tiresias. Retrieved January 5th, 2010, from <http://www.tiresias.org/research/reports/emergency.htm>
- Simpson, B., & Willer, R. (2008). Altruism and indirect reciprocity: The interaction of person and situation in prosocial behavior. *Social Psychology Quarterly*, 71(1), 37-52.
- Skinner, M. E., & Lindstrom, B. D. (2003). Bridging the gap between high school and college: Strategies for the successful transition of students with learning disabilities. *Preventing School Failure*, 47, 132-137.
- Smeltz, A. (2007). Emergency cell phone alert system to expand. *Knight Ridder Tribune*, p. 1.
- Staub, E. & Vollhardt, J. (2008). Altruism born of suffering: The roots of caring and helping after victimization and other trauma. *American Journal of Orthopsychiatry*, 78 (2), 267-280.
- Stebnicki, M. A., Sibrava, M., & Rice-Mason, J. (1998). Disability awareness activities on college campuses: A national study of campuses with undergraduate and graduate programs in rehabilitation counseling. *Journal of Applied Rehabilitation Counseling*, 29, 30-34.
- Stocks, E. L., Lishner, D. A., & Decker, S. K. (2009). Altruism or psychological escape. Why does empathy promote prosocial behavior? *European Journal of Social Psychology*, 39 (5), 649-665.
- Strahan, R., & Gerbasi, K. C. (1972). Short, homogenous versions of the Marlowe-Crowne Social Desirability Scale. *Journal of Clinical Psychology*, 191-193.

- Ta, V. M., Frattaroli, S., Bergen, G., & Gielen, A. C. (2006). Evaluated community fire safety interventions in the United States: A review of current literature. *Journal of Community Health, 31*(3), 176-197.
- Tabachnick, G. G., & Fidell, L. S. (2007). *Using multivariate statistics*. Boston: Allyn and Bacon.
- Tatman, A. W., Swogger, M. T., Love, K., & Cook, M.D. (2009). Psychometric properties of the Marlowe-Crowne Social Desirability Scale with adult male sexual offenders. *Sex Abuse, 21* (1), 21-34.
- Traustadottir, R., & Harris, P. (1997). *Women with disabilities: Issues, resources, connections revised*. The Center on Human Policy. Syracuse University, 1-92.
- United Nations Environment Program. (2010). 2009 Annual report: Seizing the green opportunity. Retrieved on March 1, 2010 from http://www.unep.org/PDF/UNEP_AR_2009_FINAL.pdf
- Urbina, I. (2009, December 5). *Virginia Tech faulted anew on shootings*. New York Times, p. A1.
- Weber, G. N. (2005). *Heterosexist events, internalized homophobia, and substance use and abuse for lesbian, gay, and bisexual individuals: Implications for counseling*. Pennsylvania State University, University Park.
- West, D., & Orr, M. (2007). *Race, gender, and communications in natural disasters*. *Policy Studies Journal, 35* (4), 569-586.
- Wilson, J. (1976). Motivation, modeling, and altruism: A person x situation analysis. *Journal of Personality and Social Psychology, 34* (6), 1078-1086.

Wilson, J. P., & Petruska, R. (1984). Motivation, model attributes and prosocial behavior.

Journal of Personality and Social Psychology, 46, 458-468.

Wray-Lake, L., Flanagan, C. A., & Osgood, W. (2010). Examining trends in adolescent environmental attitudes, beliefs, and behaviors across three decades. *Environment and Behavior*, 42 (1), 61-85.

Yoeli, E. (2009). Does social approval stimulate prosocial behavior? Evidence from a field experiment in the residential electricity market. *The University of Chicago*, p.70.

Zhe, E. J. (2006). Effects of a crisis drill on children's knowledge, anxiety, and perceptions of school safety. *Dissertations Abstracts International Section A: Humanities and Social Sciences*, 67, (6-A).

APPENDIX A

Vignette 1 (Male Student without Disability)

The scenario below describes a situation in your campus. After reading the scenario, please answer the questions that follow.

It was late evening and John was going across campus to meet with his group for a class assignment when he realized he had forgotten his cell phone in class. He turned around and went back to the building where his class had been held earlier that day. When John reached the building he noticed that there were only a few students in the lobby since most students had left for the day.

John took the elevator to the sixth floor where his classroom was located. He saw a couple of other students chatting in the hallway. John entered his class and started searching for his cell phone. He noticed it was still there on his desk. He quickly grabbed it and was about to step out of the classroom when he heard a loud sound, and a few seconds later, thick clouds of smoke started filling the hallway. John couldn't see anything around him because of the smoke. In the background he heard the fire alarm go off. He was about to dial 911 from his cell phone when he realized that he was not getting the network signal in the building and would not be able to use the phone.

1. From the list below rank who is responsible for ensuring that John is able to make it safely out of the building, using the following scale: 1 = Most Responsible to 5 = Least Responsible

- ___ University Authorities
- ___ Fellow Students
- ___ Firefighters
- ___ John
- ___ University Police

Using the scale below, indicate your agreement/disagreement with statements 2 and 3:

Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
1	2	3	4	5	6	7

2. ___ It is important for cell phones to have good network coverage in university buildings.

Imagine that you are one of the students trapped on the same floor as John. Using the same scale, indicate your agreement/disagreement with the following statement.

3. ___ I have enough knowledge about what to do in such an emergency to get out safely.

Describe what you would do to maintain your safety.

The fire is spreading quickly and you're trying to get away, when John asks you to help him escape from the building. Using the scale below indicate your agreement/disagreement with the following statements.

Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
1	2	3	4	5	6	7

4. ____ I have enough knowledge about what to do to help John in this situation.

5. ____ I would be willing to help John in this situation.

6. Describe what you would do to respond to John in this situation?

7. What might influence your willingness to help John in this situation?

APPENDIX B

Vignette 2 (Male Student with Disability)

The scenario below describes a situation in your campus. After reading the scenario, please answer the questions that follow.

It was late evening and John was going across campus in his wheelchair to meet with his group for a class assignment when he realized he had forgotten his cell phone in class. He turned around and went back to the building where his class had been held earlier that day. When John reached the building he noticed that there were only a few students in the lobby since most students had left for the day.

John took the elevator to the sixth floor where his classroom was located. He saw a couple of other students chatting in the hallway. John entered his class and started searching for his cell phone. He noticed it was still there on his desk. He quickly grabbed it and turned his wheelchair to leave the classroom when he heard a loud sound, and a few seconds later, thick clouds of smoke started filling the hallway. John couldn't see anything around him because of the smoke. In the background he heard the fire alarm go off. He was about to dial 911 from his cell phone when he realized that he was not getting the network signal in the building and would not be able to use the phone.

1. From the list below rank who is responsible for ensuring that John is able to make it safely out of the building, using the following scale: 1 = Most Responsible to 5 = Least Responsible

- University Authorities
- Fellow Students
- Firefighters
- John
- University Police

Using the scale below, indicate your agreement/disagreement with statements 2 and 3:

Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
1	2	3	4	5	6	7

2. It is important for cell phones to have good network coverage in university buildings.

Imagine that you are one of the students trapped on the same floor as John. Using the same scale, indicate your agreement/disagreement with the following statement.

3. I have enough knowledge about what to do in such an emergency to get out safely.

Describe what you would do to maintain your safety.

The fire is spreading quickly and you're trying to get away, when John asks you to help him escape from the building. Using the scale below indicate your agreement/disagreement with the following statements.

Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
1	2	3	4	5	6	7

4. ____ I have enough knowledge about what to do to help John in this situation.

5. ____ I would be willing to help John in this situation.

6. Describe what you would do to respond to John in this situation?

7. What might influence your willingness to help John in this situation?

APPENDIX C

Vignette 3 (Female Student without Disability)

The scenario below describes a situation in your campus. After reading the scenario, please answer the questions that follow.

It was late evening and Jennifer was going across campus to meet with her group for a class assignment when she realized she had forgotten her cell phone in class. She turned around and went back to the building where her class had been held earlier that day. When Jennifer reached the building she noticed that there were only a few students in the lobby since most students had left for the day.

Jennifer took the elevator to the sixth floor where her classroom was located. She saw a couple of other students chatting in the hallway. Jennifer entered her class and started searching for her cell phone. She noticed it was still there on his desk. She quickly grabbed it and was about to step out of the classroom when she heard a loud sound, and a few seconds later, thick clouds of smoke started filling the hallway. Jennifer couldn't see anything around her because of the smoke. In the background she heard the fire alarm go off. She was about to dial 911 from her cell phone when she realized that she was not getting the network signal in the building and would not be able to use the phone.

1. From the list below rank who is responsible for ensuring that Jennifer is able to make it safely out of the building, using the following scale: 1 = Most Responsible to 5 = Least Responsible
 - ___ University Authorities
 - ___ Fellow Students
 - ___ Firefighters
 - ___ Jennifer
 - ___ University Police

Using the scale below, indicate your agreement/disagreement with statements 2 and 3:

Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
1	2	3	4	5	6	7

2. ___ It is important for cell phones to have good network coverage in university buildings.

Imagine that you are one of the students trapped on the same floor as Jennifer. Using the same scale, indicate your agreement/disagreement with the following statement.

3. ___ I have enough knowledge about what to do in such an emergency to get out safely.

Describe what you would do to maintain your safety.

The fire is spreading quickly and you're trying to get away, when Jennifer asks you to help her escape from the building. Using the scale below indicate your agreement/disagreement with the following statements.

Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
1	2	3	4	5	6	7

4. ____ I have enough knowledge about what to do to help Jennifer in this situation.

5. ____ I would be willing to help Jennifer in this situation.

6. Describe what you would do to respond to Jennifer in this situation?

7. What might influence your willingness to help Jennifer in this situation?

APPENDIX D

Vignette 4 (Female Student with Disability)

The scenario below describes a situation in your campus. After reading the scenario, please answer the questions that follow.

It was late evening and Jennifer was going across campus in her wheelchair to meet with her group for a class assignment when she realized she had forgotten her cell phone in class. She turned around and went back to the building where her class had been held earlier that day. When Jennifer reached the building she noticed that there were only a few students in the lobby since most students had left for the day.

Jennifer took the elevator to the sixth floor where her classroom was located. She saw a couple of other students chatting in the hallway. Jennifer entered her class and started searching for her cell phone. She noticed it was still there on her desk. She quickly grabbed it and turned her wheelchair to leave the classroom when she heard a loud sound, and a few seconds later, thick clouds of smoke started filling the hallway. Jennifer couldn't see anything around her because of the smoke. In the background she heard the fire alarm go off. She was about to dial 911 from her cell phone when she realized that she was not getting the network signal in the building and would not be able to use the phone.

1. From the list below rank who is responsible for ensuring that Jennifer is able to make it safely out of the building, using the following scale: 1 = Most Responsible to 5 = Least Responsible

- University Authorities
- Fellow Students
- Firefighters
- Jennifer
- University Police

Using the scale below, indicate your agreement/disagreement with statements 2 and 3:

Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
1	2	3	4	5	6	7

2. It is important for cell phones to have good network coverage in university buildings.

Imagine that you are one of the students trapped on the same floor as Jennifer. Using the same scale, indicate your agreement/disagreement with the following statement.

3. I have enough knowledge about what to do in such an emergency to get out safely.

Describe what you would do to maintain your safety.

The fire is spreading quickly and you're trying to get away, when Jennifer asks you to help her escape from the building. Using the scale below indicate your agreement/disagreement with the following statements.

Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
1	2	3	4	5	6	7

4. ____ I have enough knowledge about what to do to help Jennifer in this situation.

5. ____ I would be willing to help Jennifer in this situation.

6. Describe what you would do to respond to Jennifer in this situation?

7. What might influence your willingness to help Jennifer in this situation?

APPENDIX E

Demographic Questionnaire

1. Age (in years) _____
2. Gender _____
3. Race/Ethnicity: Please check (✓) all that apply:
 - White or Caucasian _____
 - Black or African American _____
 - Hispanic or Latino/Latina _____
 - Native American _____
 - Asian or Pacific Islander _____
 - Multi racial _____
 - Other _____
4. Educational Information:
 - Current student status:
 - i) First year student _____
 - ii) Sophomore _____
 - iii) Junior _____
 - iv) Senior _____
 - v) Master's student _____
 - vi) Ph.D. Student _____
 - vii) Other: _____

Your current major(s): _____
5. Do you have a disability/disabilities?
 - i) Yes _____
 - a) Please identify your disability/disabilities _____
 - b) How long have you had your disability/disabilities? _____
 - ii) No _____
6. Do you have a family member with a disability/disabilities?
 - Yes _____ No _____

If yes, please proceed to Question 7, if no; please go directly to Question 8.

7. Please identify his or her disability/disabilities _____

Using the scale below, indicate your agreement with the following statements

Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
1	2	3	4	5	6	7

8. _____ I have been involved in a fire emergency situation
9. _____ I have been involved in an emergency situation other than a fire

10. If you've been involved in an emergency situation please identify the emergency situation you were *most recently involved in*

- | | | |
|---------------------------|---------------------|-----------------|
| a) Severe storms | e) Terrorist attack | h) Landslide |
| b) Flooding/flash flood | f) Wildfire | i) Tsunami |
| c) Blizzards/winter storm | g) Severe heat wave | j) Hurricane |
| d) Earthquake | | k) Tornado |
| | | l) Other: _____ |

Using the scale below, indicate your agreement with the following statements

Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
1	2	3	4	5	6	7

11. ____ One of my family members or friends has been involved in an emergency situation.

12. If one of your family members or friends has been involved in an emergency situation, please identify the emergency situation your family member or friend was most recently involved in, else go to question 13

- | | | |
|---------------------------|---------------------|-----------------|
| a) Severe storm | e) Terrorist attack | h) Landslide |
| b) Flooding/flash flood | f) Wildfire | i) Tsunami |
| c) Blizzards/winter storm | g) Severe heat wave | j) Hurricane |
| d) Earthquake | | k) Tornado |
| | | l) Other: _____ |

13. Approximately how many fire-drills have you ever been part of, at your work place or in your school in the last 5 years? _____

14. Other than fire-drills, approximately how many training programs for emergency preparedness have you participated in, in the last 5 years? _____

If you have participated in training programs for emergency preparedness, please specify the types of training programs you've participated in _____

APPENDIX F

Marlowe- Crowne Social Desirability Scale

Please circle the appropriate response for each of the statements below.

Statement	True or False	
I sometimes feel resentful when I don't get my way.	True	False
On a few occasions, I have given up doing something because I thought too little of my ability.	True	False
There have been times when I felt like rebelling against people in authority even though I knew they were right.	True	False
No matter who I'm talking to, I'm always a good listener.	True	False
I can remember "playing sick" to get out of something.	True	False
There have been occasions when I took advantage of someone.	True	False
I'm always willing to admit when I make a mistake.	True	False
I sometimes try to get even rather than forgive and forget.	True	False
When I don't know something I don't at all mind admitting it.	True	False
There have been times when I was quite jealous of the good fortune of others.	True	False
I almost never felt the urge to tell someone off.	True	False
I am sometimes irritated by people who ask favors of me.	True	False
I never deliberately said something that hurt's someone's feelings.	True	False

APPENDIX G

The Self-Report Altruism Scale

Check (√) the category on the right that conforms to the frequency with which you have carried out the following acts

Statement	Never	Once	More than once	Often	Very Often
I have helped push a stranger's car out of the snow.					
I have given directions to a stranger.					
I have made change for a stranger.					
I have given money to a charity.					
I have given money to a stranger who needed it (or asked me for it).					
I have donated goods or clothes to a charity.					
I have done volunteer work for a charity.					
I have donated blood.					
I have helped carry a stranger's belongings (books, parcels, etc.)					
I have delayed an elevator and held the door open for a stranger.					
I have allowed someone to go ahead of me in a lineup (at Xerox machine, in the supermarket).					
I have given a stranger a lift in my car.					
I have pointed out a clerk's error (in a bank, at the supermarket) in undercharging me for an item.					
I have let a neighbor whom I didn't know too well borrow an item of some value to me (e.g. a dish, tools etc.)					
I have bought 'charity' Christmas cards deliberately because I knew it was a good cause.					
I have helped a classmate who I did not know that well with a homework assignment when my knowledge was greater than his or hers.					
I have before being asked, voluntarily, looked after a neighbor's pets or children without being paid for it.					
I have offered to help a handicapped or elderly stranger across a street.					
I have offered my seat on a bus or stranger to a stranger who was standing.					
I have helped an acquaintance to move households.					

APPENDIX H

The Interpersonal Reactivity Index

The following statements inquire about your thoughts and feelings in a variety of situations. For each item, indicate how well it describes you by choosing the appropriate number on the scale at the top of the page: 0, 1, 2, 3, or 4. Put an X next to the statement and under the number that best describes you.

	0	1	2	3	4
Does not describe me well					Describes me very well
Statement	0	1	2	3	4
I daydream and fantasize, with some regularity, about things that might happen to me.					
I often have tender, concerned feelings for people less fortunate than me.					
I sometimes find it difficult to see things from the "other person's" point of view.					
Sometimes I don't feel very sorry for other people when they are having problems.					
I really get involved with the feelings of the characters in a novel.					
In emergency situations, I feel apprehensive and ill-at-ease.					
I am usually objective when I watch a movie or a play, and I don't often get completely caught up in it.					
I try to look at everybody's side of a disagreement before I make a decision.					
When I see someone being taken advantage of, I feel kind of protective towards them.					
I sometimes feel helpless when I am in the middle of a very emotional situation.					
I sometimes try to understand my friends better by imagining how things look from their perspective.					
Becoming extremely involved in a good book or movie is somewhat rare for me.					
When I see someone get hurt, I tend to remain calm.					
Other people's misfortunes do not usually disturb me a great deal.					
If I'm sure I'm right about something, I don't waste much time listening to other people's arguments.					
After seeing a play or movie, I have felt as though I were one of the characters.					
Being in a tense emotional situation scares me.					
When I see someone being treated unfairly, I sometimes don't feel very much pity for them.					
I am usually pretty effective in dealing with emergencies.					
I am often quite touched by things that I see happen.					
I believe that there are two sides to every question and try to look at them both.					
I would describe myself as a pretty soft-hearted person.					
When I watch a good movie, I can very easily put myself in the place of a leading character.					
I tend to lose control during emergencies.					
When I'm upset at someone, I usually try to "put myself in his/her shoes" for a while.					

When I am reading an interesting story or novel, I imagine how I would feel if the events in the story were happening to me.					
When I see someone who badly needs help in an emergency, I go to pieces.					
Before criticizing somebody, I try to imagine how I would feel if I were in their place.					

In order to maintain the integrity of this research study please do not discuss the questionnaire with any classmates. Thank you so much for your help with this study!

APPENDIX I

Recruitment Email

Dear BA 303 students,

Hello. My name is Susan Varghese and I am a doctoral student in the Department of Counselor Education at The Pennsylvania State University. I want to invite you to participate in my research study, which is a part of my doctoral dissertation. You will have the opportunity to earn extra-credit in return for participating in a 25 minute research study. The purpose of this study is to assess student responses during a crisis situation on campus. Your responses are very important and could provide inputs on increasing student safety on campus.

Participation in this survey is very simple. You just need to **sign-up for any one 25-minute slot in the first two weeks of November**. The sign-up sheet is attached with this email. All the information provided by you will be kept confidential. The information you provide will be used only for research purposes. Also the questionnaire does not ask you to provide any identifying information and therefore your identity will not be tied to your responses.

Any student who is 18 years of age or older is eligible to participate in the study. Participation in this survey is voluntary. If you have any questions regarding the study, please do not hesitate to contact me. My contact information is given below:

Susan Varghese
Pennsylvania State University
Email: szv102@psu.edu

I really appreciate your support for my study!

Thank you,
Susan Varghese

APPENDIX J

Informed Consent Form

IMPLIED INFORMED CONSENT FORM FOR SOCIAL SCIENCE RESEARCH

The Pennsylvania State University

Title of Project: Students' responses to crisis situation

Investigator: Susan Varghese, 327 Cedar Bldg.
The Pennsylvania State University, University Park. PA16802
szv102@psu.edu
(714) 993-0762

Advisor: Dr. Liza Conyers, 302 Cedar Bldg.
The Pennsylvania State University, University Park. PA16802
lmc11@psu.edu
(814) 863-6115

ORP USE ONLY: IRB# 29248 Doc.# 1

The Pennsylvania State University

Office for Research Protections

Approval Date: 10-08-2008 ARS

1. **Purpose of the Study:** The purpose of this research study is to explore how students perceive risk and prepare for emergencies.
2. **Procedures to be followed:** You will be asked a series of questions in this survey. You will be asked to answer questions about your reactions to an emergency situation on campus.
3. **Discomforts and Risks:** There are no risks in participating in this research beyond those experienced in everyday life. Some of the questions are personal and might cause discomfort.
4. **Benefits:** The research will help in a better understanding of students' perceptions of emergencies on campus.
5. **Duration:** It will take about 25 minutes to complete the survey.
6. **Statement of Confidentiality:** Your responses will be kept confidential. If this research is published, no information that would identify you will be included. Penn State's Office for Research Protections, the Social Science Institutional Review Board and the Office for Human Research Protections in the Department of Health and Human Services may review records related to this research study. In the event of any publication or presentation resulting from the research, no personally identifiable information will be shared because your name is in no way linked to your responses.
7. **Right to Ask Questions:** Please contact Susan Varghese at (714) 993-0762 with questions, complaints or concerns about this research. You can also call this number if you feel this study has harmed you. Questions about your rights as a research participant may be directed to Penn State University's Office for Research Protections at (814) 865-1775.
8. **Payment for participation:** Participants will receive extra credit for their BA 303 course. There is another option to participating to receive the extra credit. This option is to either write a paper about a new product idea or read an article of popular press and write a paper commenting about the article.
9. **Voluntary Participation:** Your decision to be in this research is voluntary. You can stop at any time. You do not have to answer any questions you do not want to answer. Refusal to take part in or withdrawing from this study will involve no penalty or loss of benefits you would receive otherwise.

You must be 18 years of age or older to consent to participate in this research study.

Completion and return of the survey implies that you have read the information in this form and consent to take part in the research.

Please keep this form for your records.

VITA

Susan Varghese

Educational Background

Ph.D	The Pennsylvania State University	2010	Counselor Education
M.Ed	The Pennsylvania State University	2004	Counselor Education
M.A.	Tata Institute of Social Science, India	2002	Social Work
B.A.	University of Delhi, India	2000	Sociology (Honors)

Certifications

Certified Rehabilitation Counselor (C.R.C.), since 2004

Publication

Conyers, L.M., Odes, E., **Varghese, S.**, Grower, S., & Reynolds, A. (Forthcoming). Education outcomes of students with learning disabilities from the Chicago longitudinal study: Implications for transition. *Journal of Minority Disability Research and Practice*.

Teaching Experience

CNED 197A: Introduction to Disability Studies: Disability and Culture, as part of teaching practicum in Spring 2005 at Penn State University, University Park.

CNED 560: Psychosocial Aspects of Disability in Spring 2005 at Penn State University, University Park.

Work Experience

Graduate Intern. Special Education, Anaheim Union High School District, Fall 2009.

Undergraduate Students Advisor, (Graduate Assistant), Department of Counselor Education, Counseling Psychology, and Rehabilitation Services, Fall 2004-Spring 2006

Clinical Supervisor (Practicum), Cedar Clinic, The Pennsylvania State University, Spring 2006

Counselor (Practicum), Cedar Clinic, The Pennsylvania State University, 2004

Counselor (Intern), The Second Mile, State College, PA, Spring, 2004

Substance Abuse Counselor, Kripa Foundation, Mumbai, India, 2001- 2002.

Awards and Honors

The Rose Drexel Award in Education (2003), College of Education, Pennsylvania State University.