

2013

Human resources and natural disaster preparedness: Is your workplace prepared?

Samantha Jo Perry
Iowa State University

Follow this and additional works at: <https://lib.dr.iastate.edu/etd>

 Part of the [Business Administration, Management, and Operations Commons](#), and the [Public Administration Commons](#)

Recommended Citation

Perry, Samantha Jo, "Human resources and natural disaster preparedness: Is your workplace prepared?" (2013). *Graduate Theses and Dissertations*. 13499.

<https://lib.dr.iastate.edu/etd/13499>

This Thesis is brought to you for free and open access by the Iowa State University Capstones, Theses and Dissertations at Iowa State University Digital Repository. It has been accepted for inclusion in Graduate Theses and Dissertations by an authorized administrator of Iowa State University Digital Repository. For more information, please contact digirep@iastate.edu.

Human resources and natural disaster preparedness: Is your workplace prepared?

by

Samantha Jo Perry

A thesis submitted to the graduate faculty

in partial fulfillment of the requirements for the degree of

MASTER OF PUBLIC ADMINISTRATION

Major: Public Administration

Program of Study Committee:

Mack Shelley, Major Professor

Steffen Schmidt

Gloria Jones-Johnson

Iowa State University

Ames, Iowa

2013

Copyright © Samantha Jo Perry, 2013. All rights reserved.

TABLE OF CONTENTS

	Page
LIST OF FIGURES.....	iv
LIST OF TABLES.....	v
ABSTRACT.....	vi
CHAPTER 1: INTRODUCTION.....	1
CHAPTER 2: REVIEW OF LITERATURE.....	5
Contingency Planning.....	6
Establishing Communication with Displaced Workers.....	7
Job Protection and Staffing During and After a Disaster.....	7
Flexible Leave Policies.....	8
Payments of Wages and Hourly Concerns.....	9
Transferring Of Workers to Other Operations.....	10
Medical Insurance Coverage and Employee Assistance Programs.....	10
Immigration Issues.....	11
Donation of Coworker Leave.....	11
Layoffs and Business Closures.....	11
Iowa Human Resources Departments.....	12
CHAPTER 3: METHODS AND PROCEDURES.....	17
Institutional Review Board.....	19
Survey Summary.....	19
CHAPTER 4: RESULTS.....	23
General Information Results.....	23
Interesting Relationships.....	26
Special Disaster Topics Results.....	31
HR Act Familiarity Results.....	33
CHAPTER 5: CONCLUSION.....	35

REFERENCES..... 37

APPENDIX..... 39

LIST OF FIGURES

	Page
Figure 1: Iowa Counties Zone Map.....	18
Figure 2: Iowa Counties Zone Map from the Iowa Department of Natural Resources.....	18
Figure 3: Type of Organization Responding.....	24
Figure 4: Do you have an emergency/disaster contingency plan in place for your employees?.....	25
Figure 5: If you do have a plan is it easy to locate on your website?.....	26
Figure 6: Has your organization been affected by a disaster in the past?.....	26
Figure 7: Do you have a plan in place/Affected by a disaster in the past?.....	28
Figure 8: Type of organization/Have a plan in place.....	30
Figure 9: Disaster Topics Results.....	32
Figure 10: National Act Awareness Results.....	34

LIST OF TABLES

	Page
Table 1: Fair Labor Standards Act (FLSA).....	13
Table 2: Family Medical Leave Act (FMLA).....	14
Table 3: Americans with Disabilities Act (ADA).....	15
Table 4: Health Insurance Portability and Accountability Act (HIPAA).....	16
Table 5: Worker Adjustment and Retraining Notification Act (WARN).....	16
Table 6: Survey Summary.....	20
Table 7: Chi-square Analysis: Plan in place vs. been affected before.....	27
Table 8: Chi-square Analysis: Plan in place vs. organization type.....	30

ABSTRACT

The United States of America is the most severe weather-prone country on the planet. Deadly weather events impact every American. The state of Iowa is especially at risk, with high potential for natural disasters as the temperatures and weather vary greatly from season to season. Very little research has been conducted on the linkage of human resources with disaster preparedness and planning, but after the increase in the number of current devastating events it is becoming a more heavily researched topic. Employers need to become prepared for worst-case scenarios to minimize confusion and loss, from both financial resource and human resource standpoints, before, during, and after a disaster. This thesis looks at the preparedness of workplaces within the state of Iowa regarding human resources departments and disaster planning. The results of this research indicate that the majority of workplaces are prepared, but with some crucial exceptions of important topics that workplaces need to become more knowledgeable about and better prepared for in the future. This thesis found relationships between the likelihood of an established disaster plan within an organization and the past effect of a disaster on that organization. This study also found statistically significant relationships that show which types of workplaces statistically have the highest and lowest likelihood of having a contingency plan in place.

CHAPTER 1

INTRODUCTION

The United States of America is the most severe weather-prone country on the planet. Every year the country is impacted by an average of 10,000 thunderstorms, 2,500 floods, 1,000 tornadoes, and 6 deadly hurricanes. Deadly weather events impact every American (StormReady, 2012). Iowa is especially at risk, as the weather varies greatly from season to season; each year the temperature can range from -20° F to 100° F (SHG Resources, 2000). Iowa has the potential for natural disasters including earthquakes, floods/flash floods, heat, landslides/mudflows, severe thunderstorms, tornadoes, and winter weather.

Very little research has been conducted on the linkage of human resources (HR) with disaster preparedness and planning. After the devastating effects of hurricane Katrina and the tragic events of September 11th, 2001, it is becoming a more researched topic. Employers need to become prepared for worst-case scenarios to minimize confusion and even more loss, from both financial and HR standpoints, after a disaster.

Within the last few years other states in the U.S. have been formulating and establishing disaster plans and policies to prepare for a variety of disaster scenarios. The majority of these plans can easily be found online. Some governmental entities, such as the State of Maryland Judiciary, have a very comprehensive electronic Human Resources Policy for Emergency Disaster Preparedness, which includes information on back-ups of personnel files and information electronically, very detailed policies on payroll and compensation processes during a disaster and what to expect, temporary recruitment and staffing policies, flexible leave policies, communication and emergency contact during

and after a disaster, travel information, medical policies, and more (State of Maryland Judiciary, 2009). It appears that others, such as the State of Vermont Human Resources website, have more of an overview of what to do in case of emergencies and less of actual HR policies in regards to this (State of Vermont, 2013).

The U.S. Army has a fairly comprehensive website for “Emergency HR Guidance & Alert Information.” This website provides HR guidance and information for Civilian Personnel issues during natural disasters (CPOL.ARMY.MIL, 2012). This website has a section for current topics such as swine flu and the Japanese Tsunami and Earthquake and seems to be a great quick resource for personnel to click on to find detailed HR policies such as travel, evacuation, flexible leave, and pay guidelines.

For more general emergency preparedness information that can be useful to HR departments while planning their emergency polices, one of the most comprehensive on the web is the CDC Emergency Preparedness and Response website (CDC, 2013). This website contains pre, post, and during emergency and disaster procedures for almost every emergency situation a HR provider would need, including natural disasters and severe weather, chemical emergencies and bioterrorism, disease and infection outbreaks, terrorist attacks and radiation, and even a section regarding preparedness for a zombie apocalypse (CDC, 2013). Workplaces can find this website at www.bt.cdc.gov.

On a more global scale, other countries within the last few years are also looking to disaster and emergency preparedness within their government and for businesses within the country. For example, in the United Kingdom the city of London has a very helpful online resource within the Greater London Authority website regarding “London Resilience.” This page includes comprehensive emergency and disaster preparedness for

the city, people, and businesses in London. It includes weekly duty officer updates regarding latest preparedness advice for the city, information on citizen and family preparation, business preparation and planning, and information on organizations that assist with emergencies and disasters within London for more resources (LONDON.GOV.UK, 2013). The website also stresses the importance of communication of the plan and policies to personnel and of testing plans before an emergency to be sure they are successful. These are very important things to keep in mind for any HR manager planning and making policies regarding this topic.

On the other hand, some countries still lack emergency and disaster preparedness policies. For example, there is a lack of emergency and disaster preparedness information for the city of Rome in Italy. This is disconcerting, as “on average in Italy 240 people are killed and 75,000 affected by natural disaster each year. Italy bears the greatest risk of disaster in Europe” (Emergency-Planning.blogspot.com, 2008). Staffaroni (2012) looks at this lack of the Italian government's emergency and disaster preparedness planning and communication, and proposes guidelines of crisis communication plans for the country of Italy based on its most high-risk cities. Rome is very susceptible to high loss after a disaster due to its immense amount of important historic monuments and high volumes of tourists each year (Staffaroni, 2012).

This thesis is intended primarily to increase interest in research regarding natural disaster preparedness in the workplace and in all aspects of society, to save lives and decrease financial loss due to these disasters. Another intent of this thesis is to increase overall awareness for all who read this as to the dangers of these natural disasters and the crucial importance to prepare for these disasters to eliminate confusion and loss.

While writing this document and analyzing results many other questions and further research topics came to light regarding this fascinating topic. Hopefully increased awareness by the general public, researchers, and HR departments can lead to the further study of some of these topics and of related topics to ensure safety and competence in the workplace and in everyone's daily lives as to preparedness and knowledge of how to respond when a natural disaster affects them.

For this research I surveyed Iowa workplaces and HR offices to determine if Iowa workplaces overall are adequately prepared for natural disasters. The Iowa workplaces included are universities, K-12 schools, private businesses, government agencies, non-profit organizations, and hospitals in the state of Iowa.

CHAPTER 2

REVIEW OF LITERATURE

Barron, Phipps, and Steinmeyer (2005) compiled a helpful list of post-disaster issues for employers. These issues could be prepared for and dealt with pre-disaster, in the future. Barron et al. state that many employee handbooks do not include “game plans” on how to handle worst-case scenario situations similar to Hurricane Katrina in 2005. This type of devastation does not only happen on the nation’s Pacific, Atlantic, or Gulf of Mexico coasts or in large cities like New York, either. Inland tornados, floods, winter weather, earthquakes, and fires are among the other disasters for which personnel need to be prepared.

A devastating case of crisis management involving flooding occurred in 1990 in Alabama. This is the case of Dorsey Trailers, Inc. The business was located near a “until then, impenetrable” levee. After the levee broke and the town flooded under 10 feet of water the total damage was approximately \$16.5 million. Kenny Sawyer, the company’s HR director, stated that the company also lost all of their records and computer equipment. The business was completely unprepared for a disaster of that magnitude. They had in place preparedness plans for fire, chemical spills, and minor natural disasters such as tornados, but nothing that compared to this flood (Leonard, 1991). Sawyer set up a temporary office in a nearby motel and quickly started working on crisis management and emergency team plans. Sawyer stated that “The flood made me realize the importance of good emergency planning. It's important to have those plans written down, but it's vital that you understand the plans, practice them and that everyone knows and accepts their role” (Leonard, 1991).

The Epstein Becker Green law firm (2010) put together an informative presentation on contingency planning for HR departments. They state that issues make the press such as “workers fired for fleeing” and “300 out of work,” both of which are excerpts from news stories regarding HR departments not adequately prepared for disasters.

Contingency Planning

All workplaces should have in place a contingency plan for any type of emergency or disaster that could be confusing, for the employer and employee to work through issues like these and more. This can be a plan for evacuation, communication, payroll, personnel records, and shelter (Epstein Becker Green Law, 2010).

Castro (2011) describes how actions can be taken from a preventative standpoint. She states that it is very important to train employees on how to act and how to create crisis procedures. Employees should be prepared regarding how to act not only in the workplace but also at home. Asking for feedback from employees on performance before and after an emergency can help enhance disaster planning efficiency in the future.

Keeping copies of personnel records in an off-site location can be very helpful in the event of a disaster. In an event like the Dorsey Trailers flood all the personnel records were badly damaged or destroyed:

An improvised freeze-drying process salvaged some of Dorsey's personnel and sales files. The water- and mud-soaked papers were placed in several of Dorsey's refrigerated trailers and frozen. The files remained frozen in the trailers for about a month, until they could set up a paper-drying room—a room filled with heaters

and strung throughout with wires. The files were hung out to dry like laundry, and after the documents dried, workers had to peel them apart by hand (Leonard, 1991).

This was very tedious work that could be avoided if copies were kept off-site (Leonard, 1991).

Establishing Communication with Displaced Workers

After a disaster it may be some time before employees can communicate with their employers. This can be due to loss of communication or because of re-location due to evacuation. One plan of action for employers to expedite and improve this process can be to create a place online or on their Websites for employees to “check-in” or a toll-free phone number that the employees can call from any location (Barron, 2005). Naming one and only one voice to communicate with can be key to avoiding confusion and rumors regarding whom to contact and how to initiate and maintain contact after a disaster (Castro, 2011). In the Dorsey Trailers case the telephone lines were down and the best way to communicate was via word of mouth or through radio stations. As internet service may be down, it is important to have employees’ cellular phone numbers as well in case of an emergency.

Job Protection and Staffing During and After Disasters

Employers and employees need to be aware of the laws involving these issues. Adequate knowledge of the Fair Labor Standards Act (FLSA) (Table 1) is crucial for employers with these issues. Some laws prohibit firing employees for leaving work for

the purpose of participating in an evacuation. Some laws prohibit forcing an employee to work through a disaster. These laws may seem self-explanatory, but there is an exception for employees working for emergency services, firefighters, police, etc. There are also exceptions for what constitutes an official evacuation. An “official statement” must be made by a government body (Epstein Becker Green Law, 2010). This does not include the weatherman or other media outlets. Employers need to communicate clearly and in writing, both to the staff who are required to work throughout and after a disaster and to the staff who are not working related to the disaster, that there needs to be a plan for compensation of wages. The employer also needs to prepare a plan for shelter and supply (food, water, electric, gas, etc.) for critical employees (Epstein Becker Green Law, 2010).

Flexible Leave Policies

It should be decided and clearly communicated to employees how long the organization will wait to receive a communication from an employee before terminating his or her employment. There would be some flexibility in this area, though. Many employees will qualify for leave under the Family Medical Leave Act (FMLA) (Table 2) or the Americans with Disabilities Act (ADA) (Table 3). This could be due to mental stress or to conditions brought on by a disaster such as post-traumatic stress disorder (Barron, 2005).

An issue with these acts is whether the workplace is covered. The ADA covers workplaces with 15 or more employees and the FMLA covers workplaces with 50 or more employees. Employers should be very careful when making decisions regarding how long to wait before terminating an employee for not returning to work. In the event

of a pandemic, employees should be encouraged to stay home when they are sick or have a sick family member, and longer unpaid leaves should be considered. Health information privacy issues should be addressed in consultation with Health Insurance Portability and Accountability Act (HIPAA) (Table 4) policies (Epstein Becker Green Law, 2010). Travel policies should also be reviewed if employees are traveling to international locations that have experienced recent natural disasters. In travel involving potential disasters employers need to be prepared in advance regarding how to handle supporting the employee who is on travel. An organization may need to cancel travel for the safety of its employees (Castro, 2011).

Payment of Wages and Hourly Concerns

After a disaster the issue of payment of wages can be confusing for employees. Employers need to communicate clearly with employees what their policies are on this topic to avoid confusion, especially before a stressful time of post-disaster adjustment. Most importantly, employers must ensure the safety of payroll records and of the ability to process payroll, potentially from another location. “A charitable gift is different from an advance on future wages, and should be clearly communicated as such” (Barron, 2005). Some companies will choose to continue to pay salaries and some will decide to make a one-time fixed payment. If employers are not able to make payments to employees at all due to the disaster they still need to be aware of laws concerning deadlines for payment of wages. If the employee cannot be contacted to be given a payment, employers need to make a “good-faith” effort to pay wages owed. Another issue with wage and hourly concerns is that employees may wind up working long hours

due to low staffing. What will be counted as “work time” needs to be decided and communicated clearly to employees (Barron, 2005).

Transfer of Workers to Other Operations

It should be determined in advance what is to happen to employees if their place of work is completely destroyed or if extensive rebuilding is necessary before it will be possible to continue work. Will the employees be transferred to other operations in surrounding areas? Employers should be aware of relevant provisions of collective bargaining agreements for applicable employees (Barron, 2005).

Medical Insurance Coverage and Employee Assistance Programs

After a disaster many employees may need medical insurance to help recover. It is important for employers to have a section on the company website regarding benefits or to have available centers providing information regarding evacuation or what is available in surrounding cities. Employees may need information on how to use benefits that may be provided in another state or outside of the coverage area. Employee Assistance Programs (EAPs) are available, usually through health insurance benefits or separately. Employers need to communicate clearly with employees what these EAPs entail and what is included regarding, for example, counselors or other resources to help in returning their lives to normal (Barron, 2005).

Immigration Issues

One very large issue for employees after a disaster can be loss of paperwork and records proving they are legal to work in the country. It can be a challenge to employees to find a new job, but another to prove they are legally permitted to work. The United States Department of Homeland Security, in 2005, after hurricane Katrina, for victims of the hurricane and only for approximately 50 days, would not prosecute employees for not having proper documentation. But employees still needed to fill out I-9 forms and other verification of employment eligibility forms and had to provide documentation when it was re-acquired by the employee. Employers need to be aware of these types of emergency sanctions and laws so they are better positioned to assist employees after a disaster (Barron, 2005).

Donating Co-worker Leave

In 2005, the IRS issued Notice 2005-68, which allowed employees to donate unused paid leave in exchange for the employer donating cash payments to a charity. Some companies have allowed employees to donate their unused leave time directly to other employees who need it more than they do. Employers need to decide and communicate to employees what they will allow after a time of disaster and establish proper procedures and guidelines for this practice (Barron, 2005).

Layoffs and Business Closures

The worst-case scenario that no one likes to prepare for is the layoff of employees or closure altogether after a disaster. Doing this usually will cause legal and community

consequences. The employer must be very careful when making these big decisions. The federal Worker Adjustment and Retraining Notification Act (WARN Act) (Table 5) makes it mandatory for employers to notify employees of these unfortunate circumstances in advance “if employees are laid off or suffer a significant reduction in work hours for more than six months” (Barron, 2005). The employer needs to be aware as to whether this act is relevant to their disaster, as only some types of disasters are covered, although there are extenuating circumstances where this does not apply. Legal counsel should be consulted when making these types of decisions. The WARN act covers businesses with over 100 employees and requires that notice must be provided to employees within 60 days of closure. If appropriate notice is not given employers must pay employees what they would have received during the 60 days (Epstein Becker Green Law, 2010).

Iowa Human Resources Departments

How can Iowa HR departments start the process of becoming prepared for emergencies and disasters? A good place to start is the Iowa Homeland Security and Emergency Management (IHSEM) webpage (<http://www.iowahomelandsecurity.org/>). The section of the website “Be Ready Iowa” (www.beready.iowa.gov) is full of great resources on common Iowa disasters such as advisories/watches/warnings, earthquakes, floods/flash floods, hazardous materials, heat, house and building fires, landslides/mudflows, nuclear power plants, severe thunderstorms, terrorism, tornadoes, and winter weather (IHSEM, 2012). Workplaces can find this website at www.beready.iowa.gov.

Table 1: Fair Labor Standards Act General Information (United States Department of Labor, 2012)

Table 1 : Fair Labor Standards Act (FLSA)	
Overview: The FLSA establishes minimum wage, overtime pay, recordkeeping, and youth employment standards affecting employees in the private sector and in federal, state, and local governments. Covered nonexempt workers are entitled to a minimum wage of not less than \$7.25 per hour, effective July 24, 2009. Overtime pay at a rate not less than one and one-half times the regular rate of pay is required after 40 hours of work in a workweek.	
FLSA Minimum Wage:	The federal minimum wage is \$7.25 per hour, effective July 24, 2009. Many states also have minimum wage laws. In cases where an employee is subject to both state and federal minimum wage laws, the employee is entitled to the higher minimum wage.
FLSA Overtime:	Covered nonexempt employees must receive overtime pay for hours worked over 40 per workweek (any fixed and regularly recurring period of 168 hours — seven consecutive 24-hour periods) at a rate not less than one and one-half times the regular rate of pay. There is no limit on the number of hours employees 16 years or older may work in any workweek. The FLSA does not require overtime pay for work on weekends, holidays, or regular days of rest, unless overtime is worked on such days.
Hours Worked:	Hours worked ordinarily include all the time during which an employee is required to be on the employer's premises, on duty, or at a prescribed workplace.
Recordkeeping:	Employers must display an official poster outlining the requirements of the FLSA. Employers must also keep employee time and pay records.
Child Labor:	These provisions are designed to protect the educational opportunities of minors and prohibit their employment in jobs and under conditions detrimental to their health or well-being.

Table 2. Family Medical Leave Act (FMLA) General Information (United States Department of Labor, 2012)

Table 2 : Family Medical Leave Act (FMLA)	
The FMLA entitles eligible employees of covered employers to take unpaid, job-protected leave for specified family and medical reasons with continuation of group health insurance coverage under the same terms and conditions as if the employee had not taken leave. Eligible employees are entitled to:	
Twelve workweeks of leave in a 12-month period for:	the birth of a child and to care for the newborn child within one year of birth; the placement with the employee of a child for adoption or foster care and to care for the newly-placed child
	within one year of placement; care for the employee's spouse, child, or parent who has a serious health condition; a serious health condition that makes the employee unable to perform the essential functions of his or her job; any qualifying exigency arising out of the fact that the employee's spouse, son, daughter, or parent is a covered military member on "covered active duty;"
Twenty-six workweeks of leave during a	Covered service member with a serious injury or illness if the eligible employee is the service member's spouse, son,
single 12-month period to care for:	daughter, parent, or next of kin (military caregiver leave).

Table 3: Americans with Disabilities Act (ADA) General Information (United States Department of Labor, 2012)

Table 3: Americans with Disabilities Act (ADA)	
<p>The Americans with Disabilities Act (ADA) prohibits discrimination against people with disabilities in employment, transportation, public accommodation, communications, and governmental activities. The ADA also establishes requirements for telecommunications relay services.</p> <p>The Department of Labor's Office of Disability Employment Policy (ODEP) provides publications and other technical assistance on the basic requirements of the ADA. It does not enforce any part of the law.</p>	
<p>In addition to the Department of Labor, four federal agencies enforce the ADA:</p>	<p>The Equal Employment Opportunity Commission (EEOC) enforces regulations covering employment. The Department of Transportation enforces regulations governing transit. The Federal Communications Commission (FCC) enforces regulations covering telecommunication services. The Department of Justice enforces regulations governing public accommodations and state and local government services.</p>
<p>Another federal agency, the Architectural and Transportation Barriers Compliance Board (ATBCB), also known as the Access Board, issues guidelines to ensure that buildings, facilities, and transit vehicles are accessible and usable by people with disabilities.</p>	<p>Two agencies within the Department of Labor enforce portions of the ADA. The Office of Federal Contract Compliance Programs (OFCCP) has coordinating authority under the employment-related provisions of the ADA. The Civil Rights Center is responsible for enforcing Title II of the ADA as it applies to the labor- and workforce-related practices of state and local governments and other public entities. See the Laws & Regulations subtopic for specific information on these provisions.</p>

Table 4: Health Insurance Portability and Accountability Act (HIPAA) General Information (United States Department of Labor, 2012)

Table 4: Health Insurance Portability and Accountability Act (HIPAA)

The Health Insurance Portability and Accountability Act (HIPAA) provides rights and protections for participants and beneficiaries in group health plans. HIPAA includes protections for coverage under group health plans that limit exclusions for preexisting conditions, prohibit discrimination against employees and dependents based on their health status, and allow a special opportunity to enroll in a new plan to individuals in certain circumstances. HIPAA may also give you a right to purchase individual coverage if you have no group health plan coverage available, and have exhausted COBRA or other continuation coverage.

Table 5: Worker Adjustment and Retraining Notification Act (WARN Act) General Information (United States Department of Labor, 2012)

Table 5: Worker Adjustment and Retraining Notification Act (WARN Act)

Offers protection to workers, and their families and communities, by requiring employers to provide notice 60 days in advance of covered plant closings and covered mass layoffs. This notice must be provided to either affected workers or their representatives (e.g., a labor union), to the State dislocated worker unit, and to the appropriate unit of local government.

Throughout my literature review, five important national acts stood out as having direct impacts on disaster planning for HR departments. These include the: Fair Labor Standards Act (FLSA), Family Medical Leave Act (FMLA), Americans with Disabilities Act (ADA), Health Insurance Portability and Accountability Act (HIPAA), and Worker Adjustment Notification and Retraining Act (WARN). These acts are highlighted in this thesis as I found them to be essential acts related to HR that have specific implications to disaster preparedness in the workplace.

CHAPTER 3

METHODS AND PROCEDURES

For this study I chose to survey workplaces within the state of Iowa, including the following six categories: universities, K-12 schools, private businesses, government agencies, nonprofit organizations, and hospitals. I created a survey via SurveyMonkey (SurveyMonkey, 2013) to distribute to various workplaces within the state of Iowa. I determined the best way to gain the most accurate results for the entire state would be to survey multiple areas of the state. My hope was to collect information from a wide array of types of organizations, to get a more general overall view of HR aspects of disaster preparedness for the whole state of Iowa. I chose to use the Iowa Counties Zone Map from the Iowa Department of Natural Resources (DNR) (Figure 1 and Figure 2). This zone map separated the state of Iowa into three “zones,” the Northern Ecozone, the Central Ecozone, and the Southern Ecozone. I chose these zones as I believe they cover varied economic, cultural, and environmental cross sections of the state of Iowa.

From this approach participants were selected from each section of Iowa (north, central, and south) through Internet search of the type of organization in that area. For example, organizations were selected from categories such as “hospital and health care organization in northern Iowa” or “K-12 schools in southern Iowa.” The same proportion of workplaces was selected from each group. There were 45 workplaces from each category and 15 from each zone for that category; 270 workplaces were initially selected to be surveyed. Participants were given the incentive of participating in a drawing to receive a \$100 Staples gift card.

Figure 1: Iowa Counties Zone Map

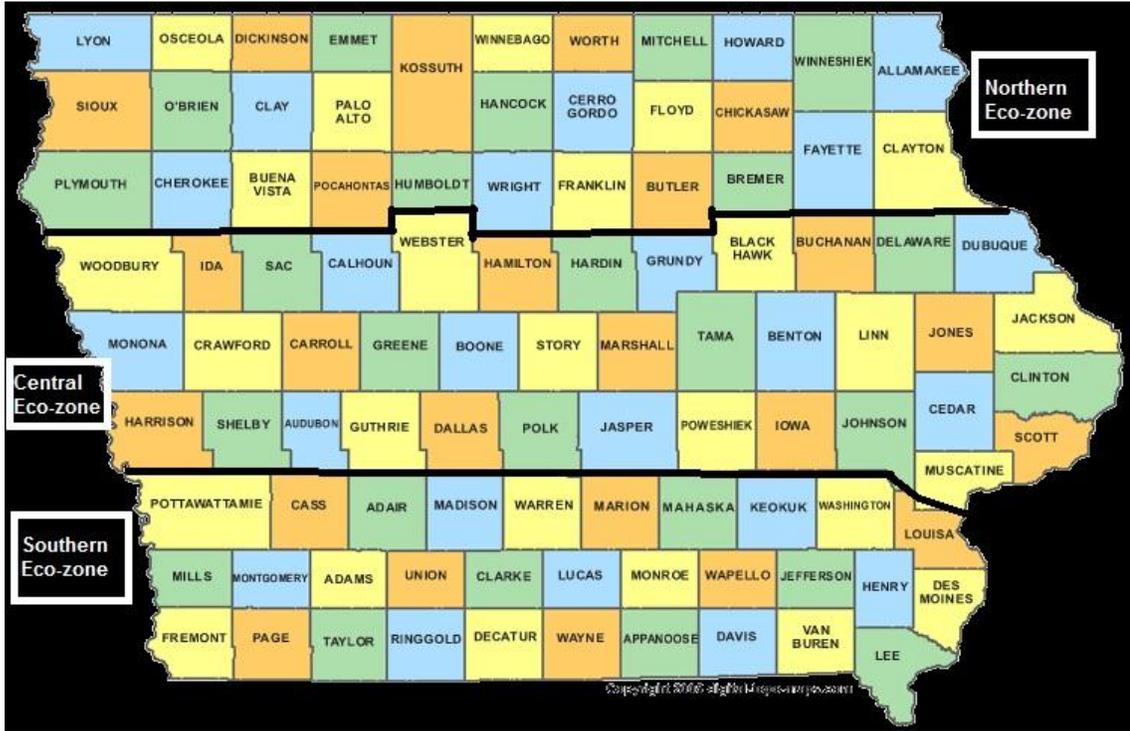


Figure 2: Iowa Counties Zone map from the Iowa Department of Natural Resources



Institutional Review Board

I completed and submitted the Institutional Review Board (IRB) Application for Approval of Research Involving Humans along with a copy of the informed consent, survey emails sent to participants, and the survey. My thesis was declared exempt from the requirements of the human subjects regulations because it met the federal requirements for exemption of a survey (see Appendix).

Survey Summary

The survey for this study is original and self-created by me using the topics from my literature review for this thesis. It was created using SurveyMonkey (SurveyMonkey, 2013). The survey included 20 questions, divided across three sections. Section 1 included organizational general information, section 2 included how knowledgeable or prepared the organization feels on a variety of topics regarding HR and natural disaster preparedness, and section 3 included questions regarding how familiar the organization is with important national acts regarding the topic. Table 6 shows a summary of the survey questions and the possible responses for each.

The questions for this survey were based on the literature review for this thesis. The first section, "General Information," consists of general demographic information regarding each organization, to provide a little bit more of the background of Iowa HR departments regarding their experience and overall preparedness for natural disasters. The questions in section 2 of the survey, "How Prepared Does Your Organization Feel About," came directly from findings in the literature review for this thesis regarding common topics that HR departments need to be prepared for in case of natural disaster. These included: establishing communication with employees after a disaster, job

protection and staffing after a disaster, flexible leave policies during and after a disaster, payment of wages after a disaster, transfer of workers to other operations, medical insurance coverage and employee assistance programs after a disaster, immigration paperwork after a disaster, donating co-worker leave after a disaster, layoff and business closures after a disaster, and backups of personnel records. Section 3 of the survey, “How Familiar is your HR Department with these Acts,” came from the literature review for this thesis on the topic and common federal acts that emerged as relevant to HR disaster preparedness. These included the fair Labor Standards Act (FLSA), Family Medical Leave Act (FMLA), Americans with Disabilities Act (ADA), Health Insurance Portability Act (HIPAA), and Worker Adjustment and Retention Act (WARN).

Table 6: Survey Summary

Table 6: Survey Summary	
Question	Possible Responses
SECTION 1: GENERAL INFORMATION	
1. Name of Organization	Open-ended
2. Type of Organization	<ul style="list-style-type: none"> • University • k-12 school • business, government agency • non-profit organization • hospital/healthcare organization
3. Do you have an emergency/disaster contingency plan in place?	<ul style="list-style-type: none"> • Yes • No • Comments
4. If you do have a plan is it easy to find on your website?	<ul style="list-style-type: none"> • Yes • No • n/a • comments

Table 6 continued

5. Has your organization been affected by a disaster in the past?	<ul style="list-style-type: none"> • Yes • No • Comments
SECTION 2: HOW PREPARED DOES YOUR ORGANIZATION FEEL ABOUT:	
6. Establishing communication with employees after a disaster	<ul style="list-style-type: none"> • very prepared • prepared • unprepared • very unprepared • no opinion
7. Job protection and staffing after a disaster	<ul style="list-style-type: none"> • very prepared • prepared • unprepared • very unprepared • no opinion
8. Flexible leave policies during and after a disaster	<ul style="list-style-type: none"> • very prepared • prepared • unprepared • very unprepared • no opinion
9. Payment of wages after a disaster	<ul style="list-style-type: none"> • very prepared • prepared • unprepared • very unprepared • no opinion
10. Transfer of workers to other operations	<ul style="list-style-type: none"> • very prepared • prepared • unprepared • very unprepared • no opinion
11. Medical insurance coverage and employee assistance programs after a disaster	<ul style="list-style-type: none"> • very prepared • prepared • unprepared • very unprepared • no opinion
12. Immigration paperwork after a disaster	<ul style="list-style-type: none"> • very prepared • prepared • unprepared • very unprepared • no opinion

Table 6 continued

13. Donating co-worker leave after a disaster	<ul style="list-style-type: none"> • very prepared • prepared • unprepared • very unprepared • no opinion
14. Layoff and business closures after a disaster	<ul style="list-style-type: none"> • very prepared • prepared • unprepared • very unprepared • no opinion
15. Backups of personnel records	<ul style="list-style-type: none"> • very prepared • prepared • unprepared • very unprepared • no opinion
SECTION 3: HOW FAMILIAR IS YOUR HR DEPARTMENT WITH?	
16. Fair Labor Standards Act	<ul style="list-style-type: none"> • very familiar • familiar • unfamiliar • very unfamiliar • no opinion
17. Family Medical Leave Act	<ul style="list-style-type: none"> • very familiar • familiar • unfamiliar • very unfamiliar • no opinion
18. Americans with Disabilities Act	<ul style="list-style-type: none"> • very familiar • familiar • unfamiliar • very unfamiliar • no opinion
19. Health Insurance Portability and Accountability Act	<ul style="list-style-type: none"> • very familiar • familiar • unfamiliar • very unfamiliar • no opinion
20. Worker Adjustment and Retraining Notification Act	<ul style="list-style-type: none"> • very familiar • familiar • unfamiliar • very unfamiliar • no opinion

CHAPTER 4

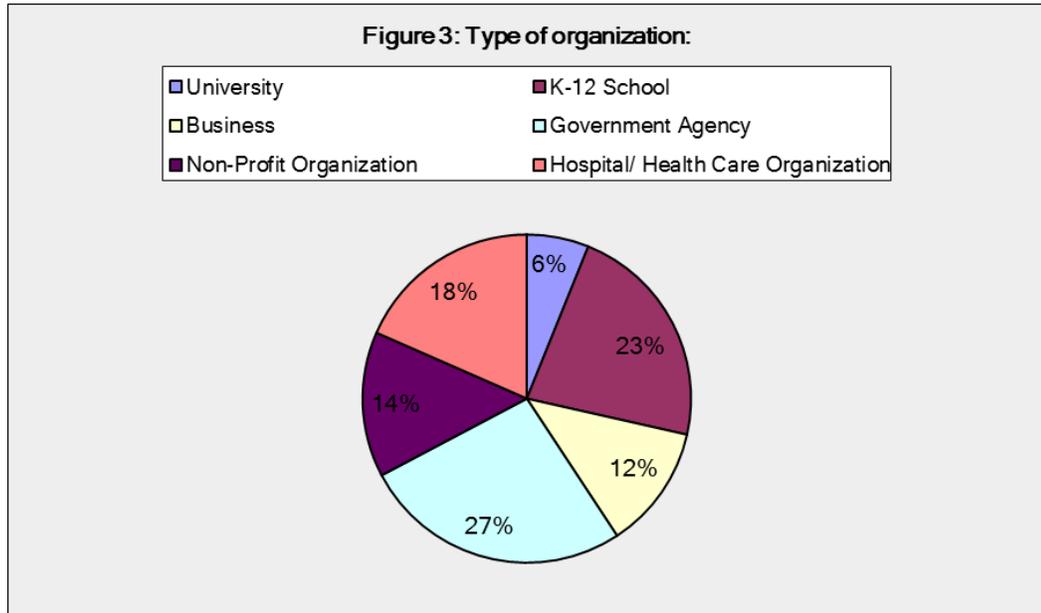
RESULTS

After initiating the survey with SurveyMonkey, due to incorrect contact information and opting out 266 workplaces were ultimately emailed the survey. I received 49 responses from the survey. With a 18% response rate, the sample is not large enough to be statistically representative of all workplaces in the state of Iowa, but can still be generalized to the 49 respondents, as responses included results obtained from each category surveyed. A reason for these low response rates could have been the small sample size of the dispensed surveys. The survey was open for approximately one month; another reason for the low response rate may have been that the time the survey was open was too short to obtain an increased number of responses.

General Information Results

The largest number of responses came from government agencies (27% of all responses). The next-most frequent set of responses were from K-12 schools (23% of all responses), then hospitals and health care organizations (18%), non-profit organizations (14%), businesses (12%), and universities (6%) (see Figure 3).

Figure 3: Type of Organization Responding



The response rates for each category were: 13 out of 45 government departments, for a response rate of 29%; 11 out of 45 K-12 schools, for a response rate of 24%; 9 out of 45 hospitals and health care organizations, for a response rate of 20%; 7 out of 43 nonprofit organizations, for a response rate of 16%; 6 out of 45 businesses, for a response rate of 13%; and 3 out of 43 universities, for a response rate of 7%. The best-represented groups in this study were government departments, K-12 schools, and hospital and health care organizations. The lesser-represented groups included non-profit organizations and businesses. The least-represented group were the universities.

A positive finding of the study was that the majority of the respondents, 86%, said they did in fact have an emergency/disaster contingency plan in place for their employees. Only 14% said they did not (Figure 4).

However, that finding is dampened by the results for the question regarding information being available on the organizational website, in case of damages to

communications, paperwork, or structure, so that employees may access it anywhere at any time (Figure 5). Of all respondents, 64% said “no,” 15% said “not applicable” (“n/a”), and only 21% said “yes.” Interesting comments in this section included security concerns for employees and/or students if security information were made public. This brings up a new issue and possible remedy: to have this information located online for employees to view, but with restricted access.

The last question in the general information section was regarding whether the organization had been affected by a disaster in the past. Respondents were slightly more likely not to have been affected, with 57% indicating that they had not been affected compared to 43% indicating that their organization had been affected (see Figure 6).

Figure 4: Do you have an emergency/disaster contingency plan in place for your employees?

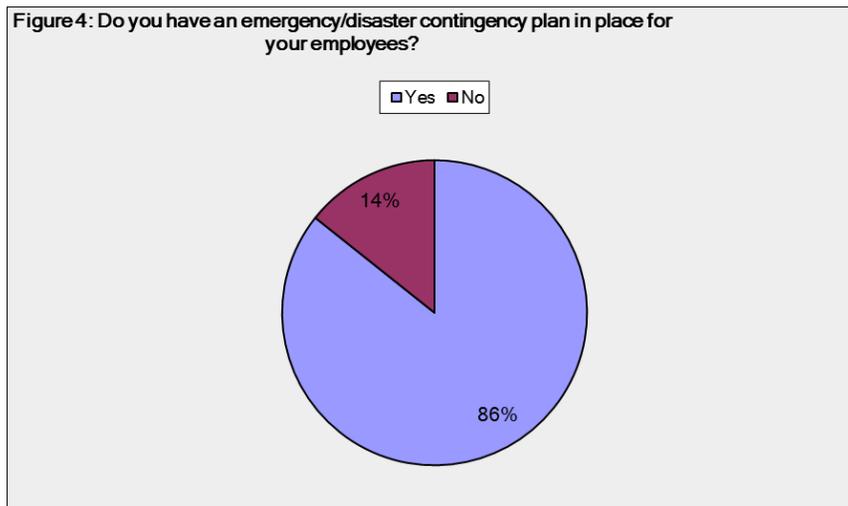


Figure 5: If you have a plan, is it easy to locate on your website?

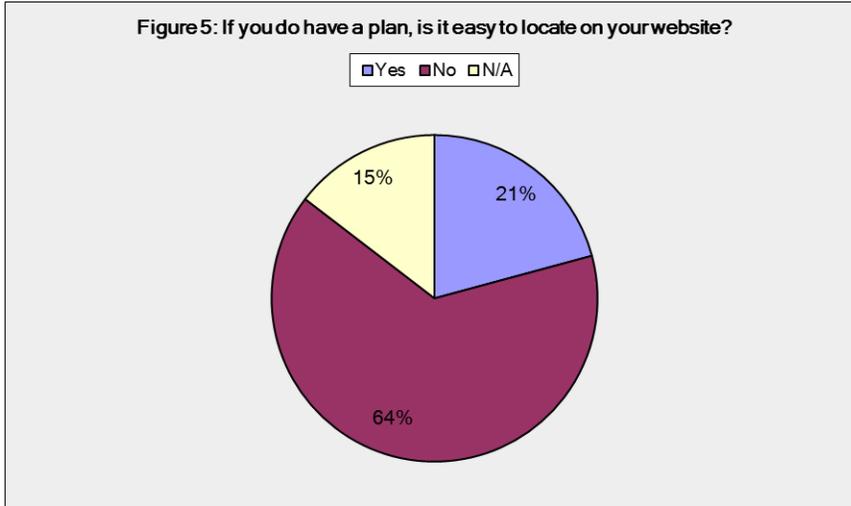
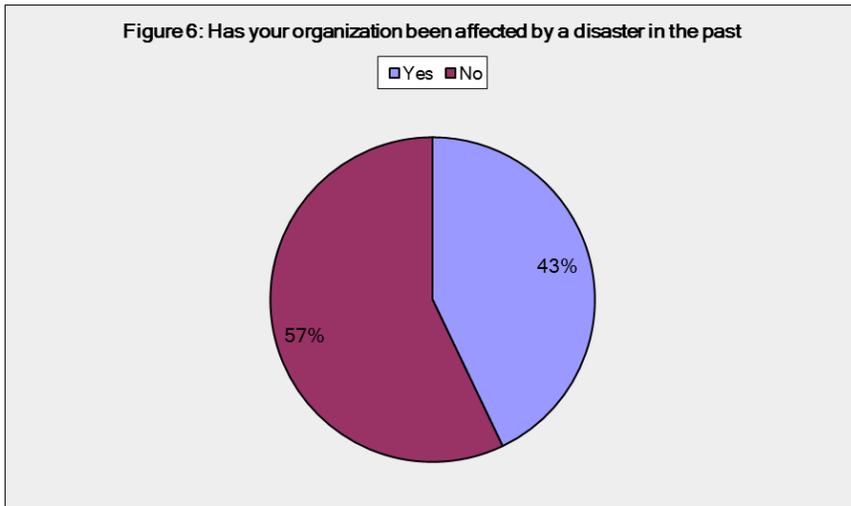


Figure 6: Has your organization been affected by a disaster in the past?



Interesting Relationships

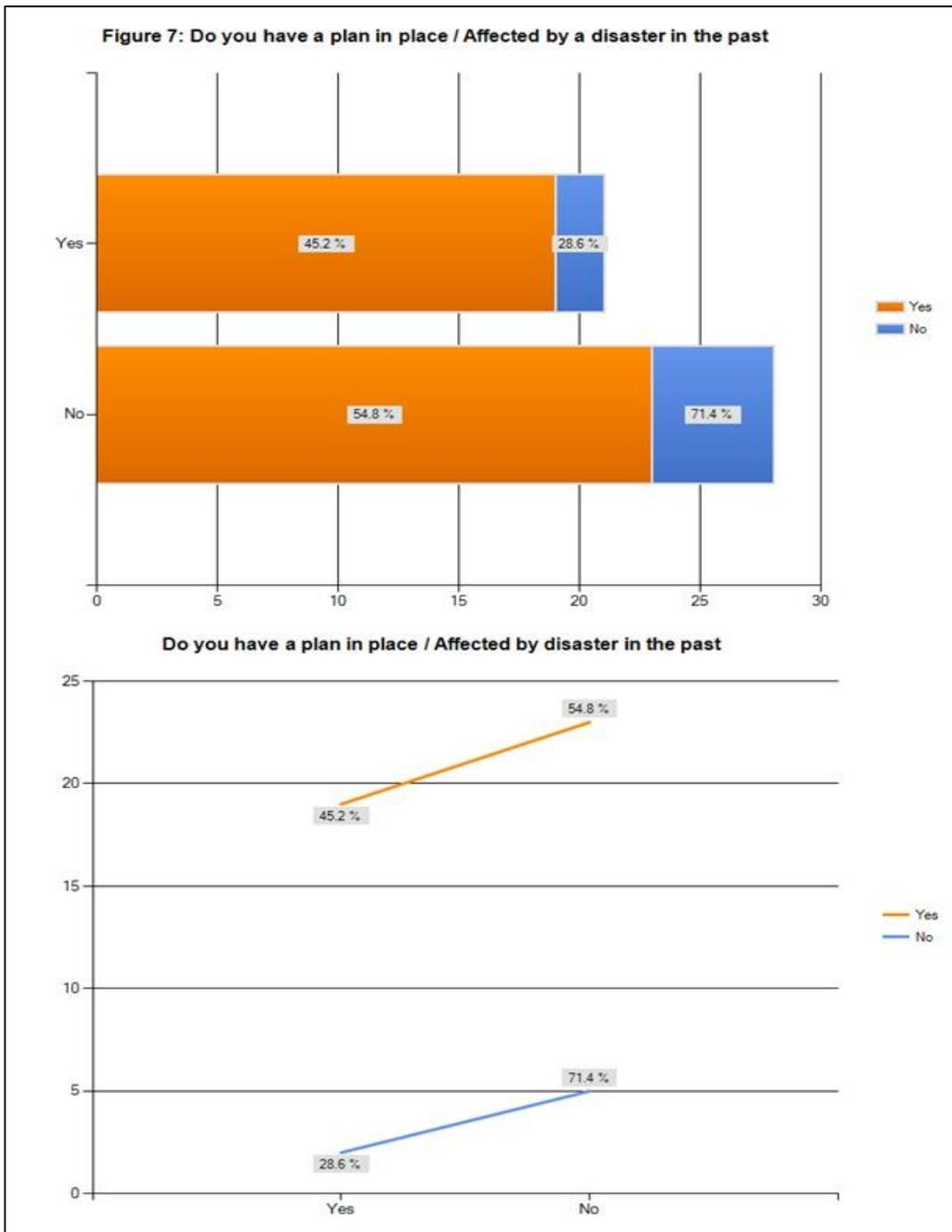
The visual evidence suggests that there may be a relationship between whether an organization has a plan in place and whether it had been affected by a disaster in the past (see Figure 7). The figure suggests that organizations are learning to increase preparedness measures, but potentially, and unfortunately, only after they have been

affected by a disaster already. Of the respondents who reported they have a plan in place, 29% had not been affected by a disaster and 45% had been affected. Among the respondents with no plan in place, 71% had not been affected and 55% had been affected. A chi-square statistical analysis was conducted (Table 7) to test the null hypothesis that “Plan in place is independent of having been affected before” against the alternative hypothesis that “Plan in place is associated with having been affected before.” The value of chi-square is 0.681, with $df=1$ and p -value of .409. The p -value is above the usual Type I error value of .05, resulting in failure to reject the null hypothesis. Thus, we conclude that there is no statistically significant relationship between the two variables.

Table 7: Chi-square: Plan in place vs. been affected before

Ho: Plan in place is independent of having been affected before H1: Plan in place is associated with having been affected before			
Chi Square = .681 $df = 1$ p -value = .409		Affected Yes	Affected No
	Plan Yes	19	2
	Plan No	23	5

Figure 7: Do you have a plan in place/Affected by a disaster in the past?



Another interesting result demonstrated the relationship between the level of preparation in each category that was surveyed and whether the organization had a disaster plan in place (Figure 8). Universities, K-12 schools, government agencies, and health care organizations all responded with 100% “yes,” that they did have some type of plan in place. Interestingly, business and nonprofit organizations are extremely unprepared, based on these results. Of those organizations reporting no plan, 57% were businesses and 43% were nonprofits. These are very disconcerting statistics for these categories.

A chi-square statistical analysis was conducted (Table 8), with the null hypothesis being “Plan in place is independent of organization type” and the alternative hypothesis being “Plan in place is associated with organization type.” The estimated chi-square value is 24.111, with $df=5$. The p -value falls below .01, so we can reject the null hypothesis with a high degree of confidence. Based on these findings, there is a statistically significant relationship between whether the organization has a plan in place and what type of organization it is.

Figure 8: Type of organization/Have a plan in place?

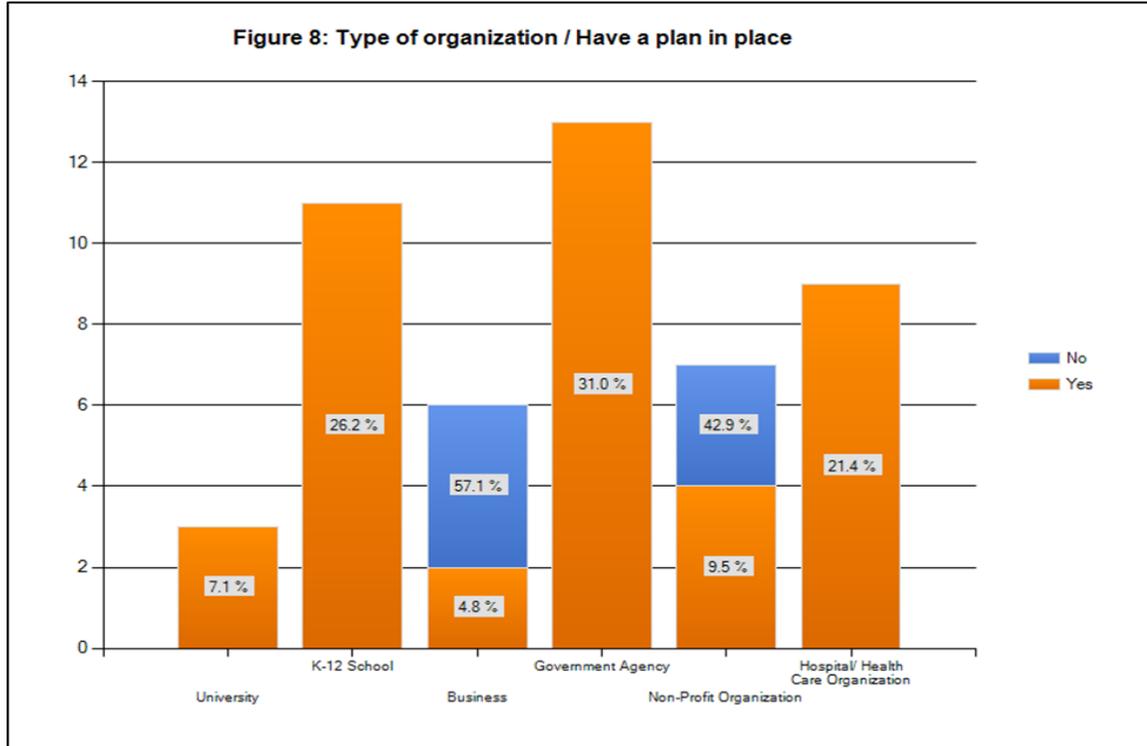


Table 8: Chi-square: Plan in place vs. organization type

Ho: Plan in place is independent of organization type			
H1: Plan in place is associated with organization type			
		Affected Yes	Affected No
Chi Square = 24.111 <i>df</i> = 5 <i>p</i> -value = .0002	University	3	0
	K-12	11	0
	Business	2	4
	Government	13	0
	Non-profit	4	3
	Hospitals	9	0

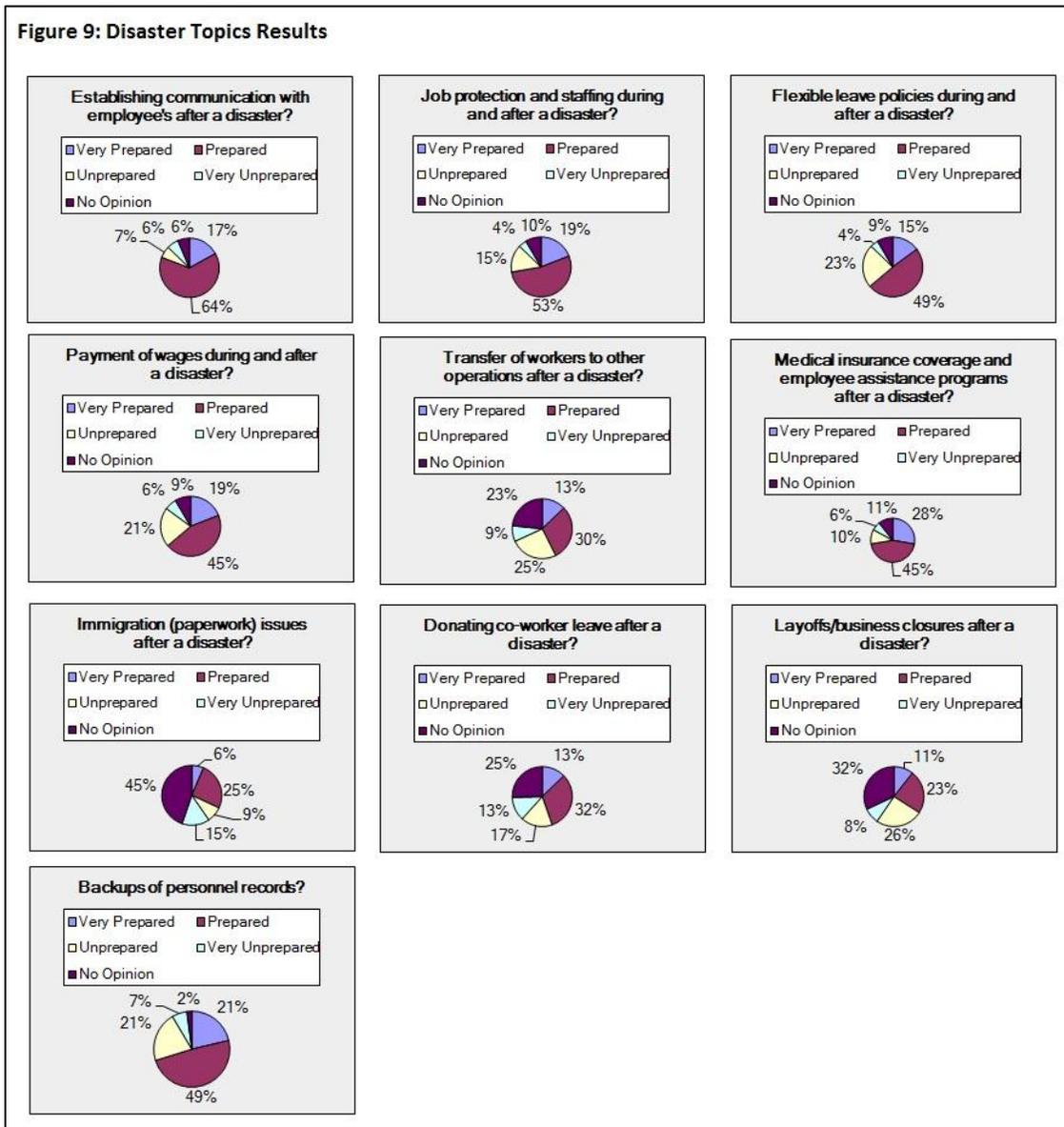
Special Disaster Topics Results

Summaries for each of the responses to the special topics questions can be seen in Figure 9. For question 6, which addresses establishing communication with employees after a disaster, the majority of workplaces (64%) stated they were “prepared.” Question 7, regarding job protection and staffing after a disaster, yielded responses showing that the majority (53%) of workplaces answered “prepared.” Question 8, involving flexible leave policies after a disaster, found that 49% of workplaces reported that they felt “prepared.” Question 9, regarding payment of wages during and after a disaster, resulted in 45% stating they were “prepared.” Question 10 responses, regarding transfer of employees to other operations after a disaster, were all over the board but resulted in 30% stating that they were “prepared.” Question 11, regarding medical insurance coverage and employee assistance programs, resulted in 45% stating that they felt prepared. Question 12, regarding immigration paperwork (I-9 forms, etc.), resulted in 45% stating no opinion. Question 13, regarding donating co-worker leave, was another question with highly varying answers, but 32% answered “prepared.” Question 14, involving layoffs and business closures after a disaster, resulted in 32% responding “no opinion.” Finally, question 15, regarding backups of personnel records, resulted in 49% reporting that they were “prepared.”

In summary, it seems that regarding these special topics workplaces in Iowa are generally prepared. However, it appears that the topics of “transferring employees to other workplaces after a disaster,” “immigration paperwork after a disaster,” and “layoffs and business closures after a disaster” need to be reviewed in more detail by Iowa workplaces. These are among the areas about which they need to become more

knowledgeable and to be better prepared regarding the occurrence of a disaster that affects their workplace.

Figure 9: Disaster Topics Results

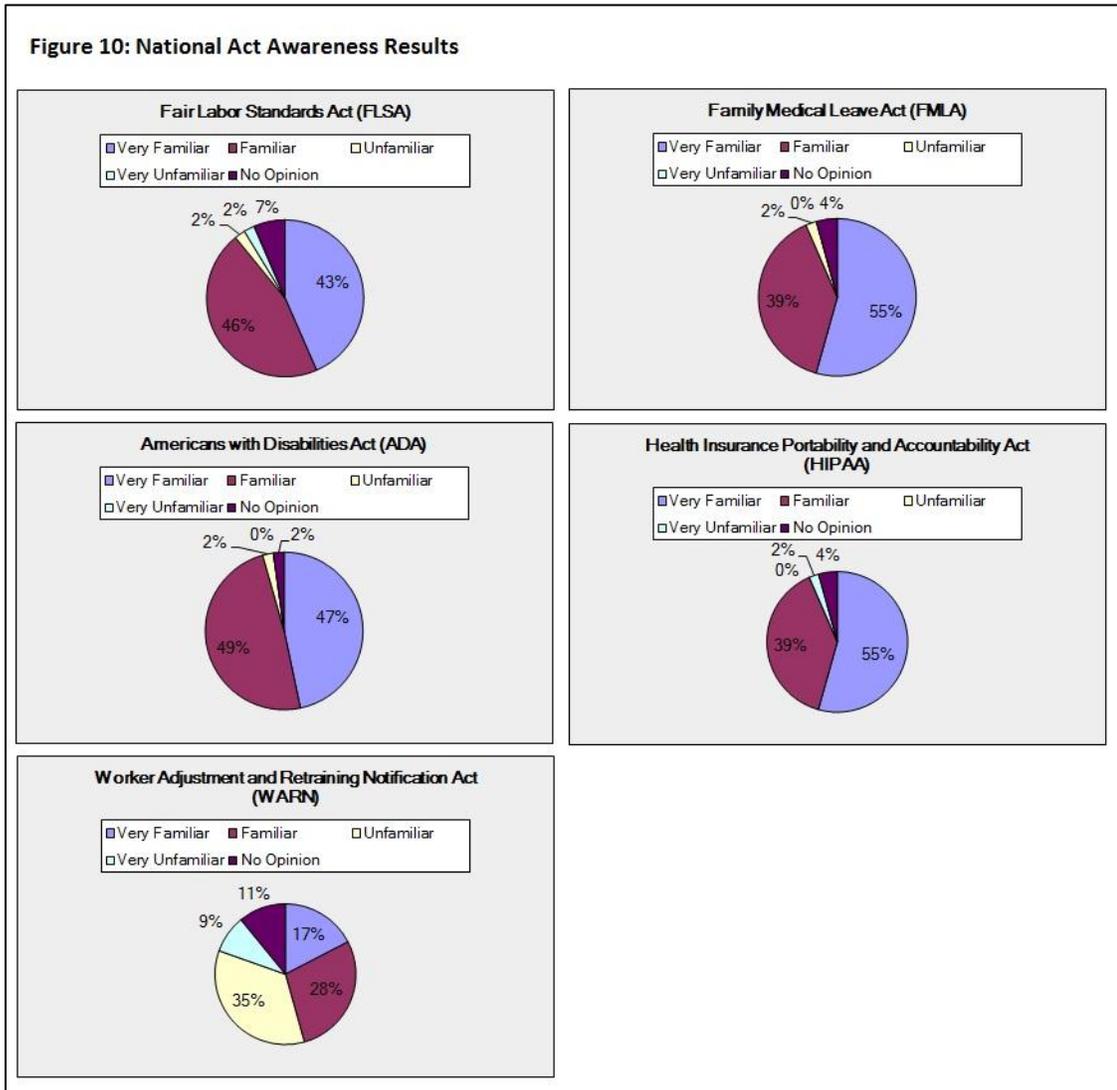


HR Act Familiarity Results

Question 16, regarding the Fair Labor Standards Act, resulted in 46% responding that they were “familiar” with the law. Question 17, regarding the Family Medical Leave Act, resulted in a majority of 54% responding “very familiar.” Question 18, regarding the Americans with Disabilities Act, resulted in 49% responding “familiar.” Question 19, regarding the Health Insurance Portability and Accountability Act, resulted in a majority of 55% responding “very familiar.” Finally, Question 20, regarding the Worker Adjustment and Retraining Notification Act, resulted in the lowest rate of familiarity, with 35% responding “unfamiliar.”

The summaries for each of the HR Act familiarity questions can be seen in Figure 10. The response for familiarity with important national acts overall was very good, and respondents seem to be “very familiar,” or at least “familiar,” with nearly all of the important acts. The only exception is for the WARN Act, with which Iowa workplaces should become more familiar.

Figure 10: National Act Awareness Results



CHAPTER 5

CONCLUSION

Natural disaster preparedness is an increasingly important topic, especially within workplaces and HR departments. The state of Iowa, being especially susceptible to severe weather and disasters, needs to increase preparedness for these types of devastating events, to reduce loss of financial resources and human resources.

The main disaster planning topics for which workplaces need to be knowledgeable and prepared include: having a contingency plan, establishing communication with displaced workers, job protection and staffing during and after a disaster, flexible leave policies, payments of wages and hourly concerns, transferring of workers to other operations, medical insurance coverage and employee assistance programs, immigration issues, donation of coworker leave, and layoffs and business closures.

Important national acts that have direct impact on disaster planning in the workplace, of which HR administrators and workplaces need to be aware, include the: Fair Labor Standards Act (FLSA), Family Medical Leave Act (FMLA), Americans with Disabilities Act (ADA), Health Insurance Portability and Accountability Act (HIPAA), and Worker Adjustment Notification and Retraining Act (WARN).

Overall the workplaces in the state of Iowa seem to be prepared for natural disasters. There are a few topics that this study shows need to be reviewed and for which training needs to be conducted by workplaces in the state of Iowa to attain full disaster preparedness in the future. These include the topics of: “transferring employees to other

workplaces after a disaster,” “immigration paperwork after a disaster,” “layoffs and business closures after a disaster,” and the WARN Act.

The results seen in this study demonstrate several important relationships among the variables measured through a survey questionnaire. There is an apparent relationship between the organization being affected by a disaster in the past and the organization having a contingency plan in place. This is a sign that for the most part organizations will not have a plan in place until after they are negatively affected by a disaster already. This leads to the conclusion that workplaces in Iowa need to prepare for the worst-case scenario before it happens to them, not after they have experienced loss. There is another issue with the statistically significant relationship showing that private businesses and nonprofit organizations have very low numbers of contingency plans in place. These types of workplaces should try to implement contingency plans to reduce loss for the future in case of disasters.

Future research could be conducted on why it takes the majority of workplaces to be negatively affected by a disaster before they put a contingency plan in place. Also, more research could be done on why private businesses and nonprofit organizations have the lowest probability of having a contingency plan in place.

Every year there are an average of 10,000 thunderstorms, 2,500 floods, 1,000 tornadoes, and 6 deadly hurricanes in the United States. Deadly weather events impact every American (StormReady, 2012). The state of Iowa is especially at risk. Whether you are an employee or an employer, ask yourself: Is your workplace prepared for a disaster?

REFERENCES

- Barron, D., Phipps, V., & Steinmeyer, P. (2005). *After the disaster: 10 issues for employers*. Retrieved June 29, 2012 from: <http://www.workforce.com/article/20051123/NEWS02/311239984#>.
- Castro, M. (2011). *When disaster strikes: How HR can prepare your workforce for crisis*. Retrieved June 29, 2012 from: <http://www.humanresourcesiq.com/business-strategies/articles/whendisaster-strikes-how-hr-can-prepare-your-work>.
- CDC. (2013). Centers for Disease Control and Prevention: Emergency Preparedness and Response. Retrieved July 30, 2013 from <http://www.bt.cdc.gov/>
- CPOL.ARMY.MIL. (2012). Emergency HR Guidance & Alert Information. Retrieved July 30, 2013 from <http://cpol.army.mil/library/emergency>
- Emergency-Planning.blogspot.com. (2008). Disaster Planning and Emergency Management: Emergency Command in Italy. Retrieved June 29, 2012 from: <http://emergency-planning.blogspot.com/2008/11/emergency-command-in-italy.html>
- Epstein Becker Green. (2010). *Hurricanes, pandemics and natural disasters: Is your HR department prepared?* The Association of Contingency Planners, presentation by Charles Wilson. Retrieved June 29, 2012 from: southtx.acp-international.com pdf: <http://tinyurl.com/76nknx7>.
- Iowa Homeland Security & Emergency Management (IHSEM). (2012). Retrieved June 29, 2012 from: <http://www.iowahomelandsecurity.org/index.html>.
- Leonard, B. (1991). *Battling natural disaster*. The Free Library. Retrieved June 29, 2012 from http://www.thefreelibrary.com/Battling_natural_disaster.-a011593345
- LONDON.GOV.UK (2013). Greater London Authority: London Resilience. Retrieved July 30, 2013 from: <http://www.london.gov.uk/mayor-assembly/mayor/london-resilience>
- SHG Resources. (2000). *Iowa almanac: State facts and figures*. Retrieved June 29, 2012 from <http://www.shgresources.com/ia/almanac/>.
- Staffaroni, Sara. (2012). Crisis communication & natural disasters: Communication plan for Rome, Italy in the case of an earthquake. MAI/ 51-01M(E). Retrieved July 30, 2013 from: <http://gradworks.umi.com/15/14/1514176.html>
- State of Maryland Judiciary. (2009). Human Resources Policy on Emergency Disaster Preparedness. Retrieved July 30, 2012 from <http://www.courts.state.md.us/hr/pdfs/policies/emergencypreparedness.pdf>

- State of Vermont, (2013). Area Safety and Security Action Plan. Retrieved July 30, 2013 from <http://bgs.vermont.gov/sites/bgs/files/pdfs/security/BGS-SEC-Vermont-ASAP-Manual.pdf>
- StormReady. (2012). *Storm Ready, National Weather Service. What it means to be a Storm Ready university*. Retrieved July 30, 2013 from <http://www.ehs.iastate.edu/publications/factsheets/stormready.pdf>.
- SurveyMonkey. (2013). Retrieved May 29, 2012 from www.surveymonkey.com.
- United States Department of Labor. (2012). *The Fair Labor Standards Act (FLSA)*. Retrieved June 29, 2012 from: <http://www.dol.gov/compliance/laws/comp-flsa.htm>
- United States Department of Labor. (2012). *The Family and Medical Leave Act (FMLA)*. Retrieved June 29, 2012 from: <http://www.dol.gov/compliance/laws/comp-fmla.htm>
- United States Department of Labor. (2012). *Americans with Disabilities Act (ADA)*. Retrieved June 29, 2012 from: <http://www.dol.gov/odep/topics/ADA.htm>
- United States Department of Labor. (2012). *The Health Insurance Portability and Accountability Act (HIPAA)*. Retrieved June 29, 2012 from: <http://www.dol.gov/dol/topic/health-plans/portability.htm>
- United States Department of Labor. (2012). *The Worker Adjustment and Retraining Notification Act (WARN)*. Retrieved June 29, 2012 from: <http://www.dol.gov/compliance/laws/comp-warn.htm>

APPENDIX

IOWA STATE UNIVERSITY
OF SCIENCE AND TECHNOLOGY

Institutional Review Board
Office for Responsible Research
Vice President for Research
1138 Pearson Hall
Ames, Iowa 50011-2207
515 294-4566
FAX 515 294-4267

Date: 6/7/2012

To: Samantha Perry
2713 Bristol Dr
Ames, IA 50010

CC: Dr. Mack Shelley
1413 Snedecor Hall
Steffen Schmidt
549 Ross Hall

From: Office for Responsible Research

Title: Human Resources for Natural Disaster Preparedness

IRB ID: 12-285

Study Review Date: 6/6/2012

The project referenced above has been declared exempt from the requirements of the human subject protections regulations as described in 45 CFR 46.101(b) because it meets the following federal requirements for exemption:

- (2) Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey or interview procedures with adults or observation of public behavior where
 - Information obtained is recorded in such a manner that human subjects cannot be identified directly or through identifiers linked to the subjects; or
 - Any disclosure of the human subjects' responses outside the research could not reasonably place the subject at risk of criminal or civil liability or be damaging to their financial standing, employability, or reputation.

The determination of exemption means that:

- **You do not need to submit an application for annual continuing review.**
- **You must carry out the research as described in the IRB application.** Review by IRB staff is required prior to implementing modifications that may change the exempt status of the research. In general, review is required for any modifications to the research procedures (e.g., method of data collection, nature or scope of information to be collected, changes in confidentiality measures, etc.), modifications that result in the inclusion of participants from vulnerable populations, and/or any change that may increase the risk or discomfort to participants. Changes to key personnel must also be approved. The purpose of review is to determine if the project still meets the federal criteria for exemption.

Non-exempt research is subject to many regulatory requirements that must be addressed prior to implementation of the study. Conducting non-exempt research without IRB review and approval may constitute non-compliance with federal regulations and/or academic misconduct according to ISU policy.

Detailed information about requirements for submission of modifications can be found on the Exempt Study Modification Form. A Personnel Change Form may be submitted when the only modification involves changes in study staff. If it is determined that exemption is no longer warranted, then an Application for Approval of Research Involving Humans Form will need to be submitted and approved before proceeding with data collection.

Please note that you must submit all research involving human participants for review. **Only the IRB or designees may make the determination of exemption**, even if you conduct a study in the future that is exactly like this study.

Please be aware that **approval from other entities may also be needed.** For example, access to data from private records (e.g. student, medical, or employment records, etc.) that are protected by FERPA, HIPAA, or other confidentiality policies requires permission from the holders of those records. Similarly, for research conducted in institutions other than ISU (e.g., schools, other colleges or universities, medical facilities, companies, etc.), investigators must obtain permission from the institution(s) as required by their policies. **An IRB determination of exemption in no way implies or guarantees that permission from these other entities will be granted.**

Please don't hesitate to contact us if you have questions or concerns at 515-294-4566 or IRB@iastate.edu.