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Internal Organizational Communication during Crisis Situations: The Effect of Supportive Messages on Employee Stress Levels

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Paper Presented in Partial Fulfillment of the Master of Science Degree in Communication & Media Technologies

Rochester Institute of Technology

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Gina,
I don't know how I would have made it through this experience without you. Thank you for your support, your advice, and for all those free meals and a place to stay when I needed one. Most importantly though, thank you for being a friend!

Mom and Dad,
Your support (both emotionally and financially) has allowed me to pursue the education I have always wanted. Thank you for understanding my decisions and for letting me accomplish this at my own pace. I love you.

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Internal Organizational Communication during Crisis Situations:
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Abstract

This study investigates the effects of supportive messages from immediate supervisors or CEO's on employees during crisis situations. Supportive messages are hypothesized to decrease the stress levels of employees. The extent to which supportive messages from managers or executives during crisis situations affect employee perceptions of support from their organization, their CEO, and their immediate supervisor is also explored. During the research process, 78 volunteer participants received one of three messages from a hypothetical organization following a hypothetical crisis situation. Spearman's ranked correlations comparing reported support with reported stress levels indicate that, for the group studied, there is a negative correlation between perceived organizational support and employee stress levels.

Internal Organizational Communication during Crisis Situations: The Effect of Supportive Messages on Employee Stress Levels

Organizational crises occur often and to a myriad of organizations. No organization is safe from crisis situations. In 2002, the news was saturated with reports of corporate financial crimes. Arthur Andersen, Enron, WorldCom, Halliburton, Qwest, and AOL Time Warner were just a few corporations that found themselves facing such charges and, as a result, receiving negative press (Vence, 2002). In past years, news reports have not only told of financial incidents threatening corporations, but of other types of incidents that threatened corporate reputations: The environmental impact of the Exxon Valdez accident, the Jack in the Box E. coli outbreak, the allegations of racial discrimination within Texaco, and the ValuJet crash are examples of organizations in crisis (Ulmer & Sellnow, 1997). Depending upon how an organizational crisis is managed, the organization involved can improve their image, survive the crisis, or be completely destroyed.

Because of their prevalence, the potential damage, and the skill required to manage crises, a tremendous amount of research has been conducted exploring the strategies and tactics used by organizations to address crisis situations. Most of this research uses case study methodology and focuses on how organizations in crises retain customers and maintain or produce positive public images. Rarely has the literature investigated how an organization addresses its internal public during crisis situations. Employees are crucial to the survival of an organization both during and after a crisis situation (Pearson,

2002). Employees are expected to perform their usual duties under often extreme conditions and pressures during a crisis and are then expected to perform and function as their organization makes massive changes after the crisis. Because of the importance of the employees during organizational crisis, it is vital to investigate how organizations communicate with their employees and what messages organizations communicate to their employees. This paper investigates the relationship between internal organizational communication with employees during and immediately following an organizational crisis and the levels of stress employees feel. Some specific areas to be investigated are how organizations address concerns that employees may have, show support for employees, and decrease any psychological dissonance an employee may feel during crisis situations.

Research Questions

1. What effect do supportive messages from managers or executives have on employee stress levels during and immediately following crisis situations?
2. To what extent do supportive messages from managers or executives during crisis situations affect employees' perceptions of support from their organization as a whole?
3. To what extent do supportive messages from managers or executives during crisis situations affect employees' perceptions of support from the CEO or president of their organization?

4. To what extent do supportive messages from managers or executives during crisis situations affect employees' perceptions of support from their immediate supervisor?

Rationale

Because organizational crises are inevitable it is imperative that people in organizations, especially those holding upper-level executive positions, know how to deal with crises when they occur. There are numerous resources for these people to consult. However, the majority of these resources fail to address the topic of the organization's internal public when faced with a crisis situation. For this very reason, it is important that such research be conducted. Research investigating internal organizational communication during crisis situations needs to be conducted because there are no current studies concentrating solely on this specific topic. This area of research should be expanded.

Research in this area would benefit the majority of society. If organizations were better informed about how to communicate with employees in general and especially during crisis situations every employee's life could possibly be less stressful. This research would also benefit the owners, presidents, and CEO's of organizations. These individuals could potentially help their organization through crises and lower employee stress levels resulting in a more productive and committed workforce.

Personally, this research is important because I intend to pursue a career in organizational communication. In this role I will eventually find myself and the

organization for which I work in a crisis situation, and I will need to know what and how to communicate with the other employees of the organization.

Review of Literature

The Definition of "Crisis"

With the amount of research that has been conducted on crisis management, it is not difficult to come up with a working definition of what a crisis is. The problem lies in choosing which definition to use. David Guth (1995) discusses many of the attempts to define a crisis[1] and settles on a definition supplied by Laurence Barton. Guth (1995) claims that Barton's definition is one of the most refined definitions of crisis in the available literature. I agree and will therefore utilize Laurence Barton's definition as the working definition for crisis situations for the remainder of the research. Guth (1995) cites Laurence Barton as he writes, "A crisis is a major, unpredictable event that has potentially negative results. The event and its aftermath may significantly damage an organization and its employees, products, services, financial condition, and reputation" (p. 124).

Who Should Communicate with Employees during Organizational Crisis

When it comes to communicating with employees during crisis situations there are many opinions on "who" should be in charge of, or even do, the communicating. Vence (2002) feels that a crisis situation is an opportunity for the

[1] Guth cites Holsti's (1978) definition of crisis as situations "characterized by surprise, high threat to important values, and a short decision time" (p. 124), Pauchant and Mitroff's (1992) definition suggests that a crisis is "a disruption that physically affects a system as a whole and threatens its basic assumptions, its subjective sense of self, its existential core" (p. 124), and Fink (1986) "characterizes crises as prodomal (forewarning) situations that run the risk of escalating in intensity, falling under close media or government scrutiny, interfering with normal operations, jeopardizing organizational image and damaging a company's bottom line" (p. 124).

marketing department of an organization to enhance their role within the company and argues that the marketing department would be capable of communicating with employees during tough times. Vence suggests that the marketing department should focus on internal marketing efforts during crisis situations, "keeping employees in the loop about policies and conditions at their place of employment" (p. 13).

Others feel that internal crisis communication should be the job of the public relations department. An acceptable definition of public relations would be "a planned management function that fosters two-way communication between an organization and the publics important to its success" (Guth, 1995, p. 123). It seems preferable that the public relations department should handle crisis communication with employees because they are better equipped to use media outlets to make their case.

Another part of an organization that might take part in crisis communication with employees is the human resources department. An article published in the journal *HR Focus* (Crisis survival, 2002) points out that crises "commonly demand HR to be a key player in or driver of programs to manage internal and external operations and information" p. 13). With the growth of the human resources department's involvement in crisis management and communication, Patrick Kiger (2001) asserts that "HR professionals have to be aware that evacuation drills and first-aid kits aren't enough. One of the most crucial – but too often neglected – parts of a disaster plan is how to communicate with the company's workforce in a crisis" (p. 29). With the broad role that the HR

department plays in every employee's work life it is understandable that this department would also serve in helping employees through crisis situations.

There is also a strong following in the belief that communication with employees during crisis situations should come from and only from the chief executive of an organization or from some other high ranking official Pincus and DeBonis (1994) assert that when it comes to conducting crisis communications with employees, only the CEO will do. Further, Pincus and DeBonis suggest that "When a crisis begins to unfold, and things are unclear and changing from minute to minute, employees need emotional reassurance from their 'leader-father/mother' figure that things are or soon will be under control and all is being done to protect their livelihood" (pp. 274-275). Not only do employees need to hear from the chief executive and other members of the management team, but it is also necessary that these key people make themselves available to their employees. Sherman (2001) suggests that managers and executives take every opportunity to talk and listen to co-workers and employees, preferably in face-to-face conditions. Sherman terms this the "management by walking around" (p. 30) style of management. He encourages executives and managers to talk one-on-one with employees to let the employees know that they care about the concerns of employees and they care about what employees have to say during the time of crisis. It is almost common sense that the employees of an organization would want to hear from and possibly even have contact with "the one in charge" during a crisis situation.

A final suggestion about crisis communication with employees is that the organization should bring in a specialist from outside the organization. This specialist would ideally be a psychologist or counselor of some type. Walkup (2002) asserts that "to help distressed employees deal with a crisis, psychological counseling often is advised" (p. 68). Walkup goes on to state that it is important that a counselor should be provided to talk to all of the employees at one time, but also be available for small group or individual discussions for those employees who are having an especially difficult time dealing with the crisis situation. Bringing in a psychologist or a counselor of some type is often reserved for only the most severe crisis situations where employees have been directly involved. By providing such a service to employees, an organization conveys the message that they truly care about the well being of their employees during the difficult time they are dealing with.

What to Communicate to Employees during Organizational Crisis

Just as there are many opinions about who should do the communicating during crisis situations, there are also numerous opinions about what should be communicated and how it should be communicated to employees during crisis communication. This research approaches crisis communication with employees as a separate entity from crisis communication with an organization's external publics. While these are two different fields of study, the two often utilize the same techniques and share similar goals. External crisis communication and internal crisis communication both have the goal of preserving the image of the organization in mind. Lerbinger (1997) asserts that the image of the organization

needs to be maintained in the eyes of all publics including the consumers, the media, the government agencies, the stockholders, and the employees. These are the publics that have to be kept in mind when managing crisis communication. Also, there are some basic rules that should be followed when conducting both internal and external crisis communication. Lerbinger (1997) suggests that these rules include being prepared and honest and acting efficiently, quickly, and appropriately. While these are some basic rules of any crisis communication, specific areas of crisis communication, including communicating with employees, have specific guidelines and techniques that should be followed.

While there has not been a great deal of research conducted specifically on the topic of internal crisis communication, what little is available offers a myriad of techniques that organizations could and should employ when they find themselves in a crisis situation. Some of these techniques overlap those of external crisis communication while some techniques are specific to internal crisis communication.

One of the first and most important actions an organization should take when faced with a crisis is to, as Peter V. Stanton points out, "interact with key publics during the situation" (p. 19). The internal public, or the employees, is one of these key publics. An article from *HR Focus* (Crisis survival, 2002) concurs by saying that "communicating with employees is often overlooked during a crisis, but it can be critical to your success ... brief them as soon as you can" (p. 14). It is obvious that the employees should be one of the first of an organization's

publics to be addressed when a crisis arises, but there are still the questions of what should be said and through which channels the messages should come followed by an analysis of feedback from employees in order to measure how the employees are responding to the communication they are receiving.

There are few steadfast rules that have been established when it comes to crisis communications with employees, but of the few, the number one rule is to be honest. Pearson (2002) accentuates the rule "NEVER lie" (p. 72) and observes that we live in an age where it is becoming increasingly easier to uncover the truth. Because of this, if an organization lies to any of its publics, internal or external, it is very likely that they will eventually be caught. What lying can do to restore the employees' faith in the organization, the revelation of this lie can and will completely reverse. Sherman (2001) supports this rule and states that "being direct and truthful about any question will build your credibility and enhance your leadership status" (p. 30). This statement is crucial because during a crisis situation everyone can benefit from building their credibility and leadership status.

When a crisis situation occurs, the employees of the organization demand and deserve to know what is going on. Often, such demands result in hasty responses that can actually worsen the situation for the employees. Because of this serious risk, those in charge of conducting the communications for the organization must carefully prepare what they are going to say to the employees. Stanton (2002) asserts that "responding at the appropriate level without evading the media, employees or other constituencies who need to hear from you will

stand the company in much better stead" (p. 20).This statement stresses the fact that even though a crisis situation often occurs unexpectedly, the organization should take some time to prepare before they begin communicating with any of their publics. Kiger (2001) suggests that "companies have to develop strategies for providing employees with up-to-date information about the [crisis] ... and they must convey messages from top executives, reassuring employees that they and the company will make it through the ordeal" (p. 29). Kiger cites a case study of Aon Corporation for an example of two key messages that should be conveyed within crisis communications. These two messages are "one, that the company was concerned about its employees and doing everything possible to help them and, two, that [the company] was in solid financial shape and moving to restore its business operations as quickly as possible" (p. 31). While not every organization can use these exact messages, every organization should attempt to convey the general feelings of these messages. First, the organization should express concern, sympathy, or empathy for the employees. This helps the organization come across as having a human side. Second, the organization should attempt to make some sort of reassuring statement. While not every organization will be able to assure employees that they will have a future with the organization, it would be beneficial to at least assure employees that the organization is taking actions that would be in the interest of its employees. When communicating with employees it is best to be honest, empathetic, reassuring, and timely.

How to Communicate with Employees during Organizational Crisis

While it is often obvious that something needs to be said to the employees during a crisis situation, it is not always clear which would be the best channel for this communication to take place. Sherman (2001) stresses the importance of face-to-face communication during crisis situations. Face-to-face communication gives executives and managers the opportunity to acknowledge employees and empathize with them. This also is an excellent opportunity for executives and managers to listen to their employees and receive often beneficial feedback. Sherman explains that executives and, especially, managers will have many opportunities to address employees and co-workers. He insists that "whether it be at a formal meeting or a small gathering by the water cooler" (p. 31) executives and managers should seize every opportunity to communicate with employees and, most importantly, listen to what they are saying in response.

Not every executive has the opportunity to conduct face-to-face meetings with his or her employees when a crisis situation arises. Therefore, executives and managers must be able to utilize other means to communicate with employees. In his case study of the Aon Corporation, Patrick Kiger (2001) examines the corporation's effective use of the Internet and the corporation's Web site to conduct crisis communication with the employees. The Aon Corporation was able to supply an enormous amount of information on their Website during the crisis they were facing. They set up the site so that the essential facts about the organization were on the home page and they then provided links to other specific areas. Virtually every piece of information that an

employee needed was found on the Web page. This was an extremely effective format for crisis communication because the employees of the Aon Corporation were not all housed in the same location. The Website was able to efficiently disperse the pertinent information to thousands of Aon employees located in Chicago and in two offices in Manhattan.

Crisis communication should have some sort of a personal or human aspect to it. Because relying on a web site to distribute information during a crisis removes any personal or human aspect, Aon chairman and chief executive Patrick G. Ryan also opted to conduct a telephone conference. He chose the telephone conference because it was impossible to gather all employees in one area and, under the circumstances of the crisis, he was unable to relocate himself. Ryan's telephone conference was simultaneously Webcast so that those with the capabilities could listen and view the conference using a media package on their computer. Ryan chose to conduct the telephone conference because, as Kiger (2001) cites, "It really helps to hear an executive's voice" (p. 31). According to the case study, this telephone conference and simultaneous Web cast was extremely popular and well received by the employees.

While there are many options available as to who should do the communicating, what should be communicated, and how the communication should take place with employees during crisis situations, the overwhelming rule is that communication with employees should take place. Theoretically, if an organization takes the time to carefully consider and craft the message, the sender and the channel for their internal crisis communications they will

undoubtedly be performing a positive action. Organizations should, however, carefully consider the situation in which they find themselves before conducting such communications. Also, the organization should consider what the employees are expecting and demanding during the crisis. The crisis communication should strive to fulfill these expectations and demands to the highest level possible. If an organization carefully considers all aspects of the crisis, artfully crafts a communication message, and then delivers it via the appropriate channel and from the proper sender, the organization can alleviate employee stress even during the most difficult crisis situation.

Occupational Stress

Occupational stress has been extensively researched in the last quarter of the 20th century (Quick, 1998) because of its link to impaired performance in the workplace (Vagg & Spielberger, 1998). Quick (1998) emphasizes that stress is often an ambiguous word that not many people understand. Therefore, he defines stress response as, "the normal, generalized psychophysiological response to emergencies and to environmental and interpersonal demands placed on an individual." Vagg and Spielberger (1998) suggest that stress that is too intense, too frequent, too prolonged, or mismanaged can lead to "health problems [for employees], absenteeism, turnover, industrial accidents, the use of drugs and alcohol on the job, and counterproductive behaviors such as spreading rumors, doing inferior work on purpose, stealing from employers, purposely damaging property, equipment and products, and various kinds of white collar crimes" (p. 294). Because of the numerous negative effects of stress,

it is important that organizations measure employee stress levels and make every attempt to decrease the level of stress that employees experience. Occupational stress levels can be measured by the Job Stress Survey (JSS), the Occupational Stress Indicator (OSI) or its successor, the Pressure Management Indicator (PMI), or the Job Content Questionnaire (JCQ) (Quick, 1998). Vagg and Speilberger's (1998) research suggests that there are often two core dimensions that emerge as sources of occupational stress: job pressures and lack of organizational support. Because it is one of the major sources of occupational stress, the present research study will also focus on some aspects of organization support.

Perceived Organizational Support

Perceived organizational support, or "employees' perceptions concerning the extent to which the organization values their contributions and cares about their well-being" (Eisenberger, Fasolo, & Davis-LaMastro, 1990), has become increasingly important during the past few decades. Eisenberger, Fasolo, and Davis-LaMastro's research not only suggests that the lack of organizational support can contribute to employee stress, but that organizational support is an important factor in employee dedication and retention to an organization. Perceived organizational support is often measured by the Survey of Perceived Organizational Support (SPOS) and/or the Survey of Perceived Supervisory Support (SPSS) (Kottke & Sharafinski, 1988).

While occupational stress and perceived organizational support are important subject areas, the present study focuses mainly on the effects of

internal organizational communication during crisis situations. Occupational stress levels and perceived organizational support are factors that are often exaggerated but can be measured during crisis situations to determine the effectiveness of the internal crisis communication.

Method

This experiment and the surveys associated with the experiment were administered over a five week period from November 3, 2003 through December 4, 2003 at a manufacturing facility in New York State. All of the participants in the experiment were working the day shift (7:00 AM until 3:00 PM) at the manufacturing facility and their participation was completely voluntary. Approximately three to five individuals took part in the experiment each day for the five weeks in which the experiment was administered. The experiment was administered at the manufacturing facility by a researcher's assistant who was carefully and thoroughly trained and instructed about all aspects of the experiment and the research being conducted.

The participants were brought into the break room of the manufacturing facility in groups of three to five and were briefed about what would happen during the experiment process. Participants were told that they would be given a hypothetical crisis situation to consider. They would then receive a message in response to the hypothetical situation. Finally, they would be asked to fill out a short questionnaire about their feelings during the hypothetical crisis situation.

After being briefed, the participants were presented with the hypothetical crisis situation. Appendix C provides a sample of the "Hypothetical Crisis

Situation Script." Participants were instructed to think about the feelings that they would experience if they were actually involved in the hypothetical crisis situation. The crisis situation that was used in the experiment was designed for many reasons. In the hypothetical crisis situation, participants were told to imagine themselves at home instead of at the site of the crisis and they would be learning about the crisis at their place of employment through news reports. This was specifically designed to evoke greater feelings of uncertainty. The participants would not be at the site and therefore would not have first-hand experience of what happened. They would not know the conditions of their coworkers; they would not know the extent to which the facility had been damaged. They would be left with numerous questions and very few answers. The crisis situation was also designed to create uncertainty about the status and future of the participant's hypothetical job with the hypothetical organization. In the crisis situation, the facility at which the participant works would be severely damaged. This would potentially cause the participants to worry about being out of a job and without pay for an extended amount of time, if not indefinitely. By evoking feelings of uncertainty, generating unanswered questions, and putting the participant's job at risk I intended to create elevated stress levels in the participants.

After receiving the "Hypothetical Crisis Situation Script," participants were randomly assigned to one of three experimental treatment groups. Participants who were assigned to "Experimental Treatment One" were given a message that has been deemed the least supportive of the three possible treatments by a

panel of experts. Appendix D provides a sample of "Experimental Treatment One" that was delivered to participants in this experimental group. The "Experimental Treatment One" script was designed to provide a straightforward, factual message to the participant, but it has been deemed to be the least supportive of the three experimental messages. It is not as supportive as the other two messages because it is very short, it provides limited information about the crisis situation, and it does not express care or concern for the participant.

Participants who were assigned to "Experimental Treatment Two" received a message that has been deemed more supportive than "Experimental Treatment One," but not as supportive as "Experimental Treatment Three." Appendix E provides a sample of "Experimental Treatment Two" that was delivered to the participants in this experimental group. The "Experimental Treatment Two" message was designed to provide communication to the participant that is factual, straightforward, and has been deemed to be more supportive than "Experimental Treatment One" by a panel of experts. The "Experimental Treatment Two" script can be considered more supportive because it addresses the participant by name, it comes from an immediate supervisor, it provides more information about the crisis situation, it provides a method for feedback from the receiver, it provides an invitation to face-to-face communication, and it expresses care and concern for the participant.

Participants who were assigned to "Experimental Treatment Three" were given a message that has been deemed more supportive than both "Experimental Treatment One" and "Experimental Treatment Two." Appendix F

provides a sample of "Experimental Treatment Three" that was delivered to participants in this experimental group. The "Experimental Treatment Three" message was designed to provide a factual message that provides more details than either of the other two experimental treatments. "Experimental Treatment Three" can be considered more supportive than the other two experimental treatments for the following reasons: It comes from an immediate supervisor; it provides more detailed information about the crisis situation; it targets the two specific areas of employee concern, time off from work and compensation; it provides two methods of feedback from the recipient; it provides an invitation to two face-to-face communication settings; and it expresses care and concern for the participant.

After participants received their assigned experimental treatment, they were asked to fill out the "Post-Treatment Questionnaire." Appendix G provides a sample of "Post-Treatment Questionnaire" that was provided to each participant. The "Post-Treatment Questionnaire" begins with 12 items that will evaluate the participants' perceptions of the levels of support they are receiving from their organization, their immediate supervisor, and the president or CEO of their organization as a result of the message they received during the treatment section of the research study. The 12 items were taken from Eisenberger, Fasolo, and Davis-LaMastro's Survey of Perceived Organizational Support (SPOS) (Kottke & Sharafinski, 1988) and Kottke and Sharafinski's (1988) Survey of Perceived Supervisory Support (SPSS). Both of these surveys use the same Likert format and wording and have been shown to be very reliable (Kottke &

Sharafinski, 1988). Items were chosen from both the SPOS and the SPSS in order to determine participants' perceptions of support from three distinct sources: 1) the organization as a whole, 2) their immediate supervisor, and 3) the president or CEO of their organization. It is important to test these three different aspects because anecdotal reports suggest that employees differentiate support from the organization as a whole from their immediate supervisors and from leaders of the organization. All three are important in assessing employee perceptions of being supported (Kottke & Sharafinski, 1988).

The first 12 questions of the "Post-Treatment Questionnaire" will investigate participants' perceptions of the levels to which their organization, immediate supervisor, and the president or CEO of their organization take their best interests into account, make help available, show care for the individual, show concern for the individual, and keep the individual informed. These are all important aspects of organizational support, and the participants' responses to these 12 questions will be used to answer research questions two, three, and four of the present research. Participant questionnaire questions one through six will provide answers for research question four, and participant questionnaire questions seven through twelve will provide answers for research question three. Participant questionnaire questions one through twelve all together will provide answers for research question two.

Items 13 through 20 on the "Post-Treatment Questionnaire" consist of eight items taken from the Pressure Management Indicator (http://www.resourcesystems.co.uk). The Pressure Management Indicator is a

tool used by organizations to assess the sources and levels of stress their employees are experiencing. The PMI has been developed and formatted so that it is acceptable for all employees of an organization (Williams & Cooper, 1998). The PMI has also been shown to be effective across numerous occupational settings and across cultural boundaries (Williams & Cooper, 1998). Because the entire PMI scale, consisting of 120 items, has demonstrated acceptable reliability and validity, it was used to generate items for the "Post-Treatment Questionnaire" for this research study. While the eight items selected from the PMI for use in this research study alone can neither be considered reliable nor valid, they were chosen because they closely fit the crisis situation the participants will be presented with. These eight items, "Post-Treatment Questionnaire" items 13 through 20, will be used to assess the sources and levels of stress that participants report after they have received communication from the hypothetical organization following the crisis situation. The results of these eight items will be used to answer the first research question of this study investigating the effects of supportive messages on employee stress levels.

The "Post-Treatment Questionnaire" concludes with two questions that will inquire about the participant's age and gender. This information will be used to categorize the participants' responses when the data are analyzed at the end of the research process.

Following the "Post-Treatment Questionnaire" participants were debriefed. This debriefing session consisted of the researcher's assistant explaining to the participants the exact purpose and design of the research session. The assistant

then went over the participants' responses and allowed time for the participants to ask questions about the research that was being conducted. The participants were provided with the contact name and phone number of the researcher so that the participants could obtain further information about the research study in the future

Analysis and Summary of Data

A total of 78 individuals participated in this research. Of the participants, 19.26%, or 15, were female while 80.74%, or 63, were male. The age of the participants ranged from 19 to 54 with the average age of all participants equaling 35.73 years of age. There were 26 participants in each of the three experimental treatment groups. Group A, which received Experimental Treatment One, consisted of five females (19.23%) and 21 males (80.77%). The ages of the participants in Group A ranged from 19 to 54 and Group A had an average age of 35.31. Group B, which received Experimental Treatment Two, consisted of five females (19.23%) and 21 males (80.77%). The participants in Group B ranged in age from 19 to 52 and had an average age of 32.73. Group C, which received Experimental Treatment Three consisted of five females (19.23%) and 21 males (80.77%). This group had an age range from 19 to 54 and the average age for the participants in Group C was 39.15. A summary of the demographic information for this study is found in Table 1.

Participants in the study were asked to indicate the level of support they felt was given through the experimental scripts they read. The participants responded on a scale ranging from one to seven with one being the lowest level

of support and seven being the highest level of support. Participants in Group A, which received Experimental Treatment One, responded with an average of 1.66 out of a possible seven for overall support. These same participants indicated that the support they received from their immediate supervisor averaged 1.49 out of seven. When the participants in Group A were asked to indicate the level of support they felt they received from the president or CEO of the organization in the hypothetical situation they responded with an average of 1.83 out of seven. Participants in Group B, which received Experimental Treatment Two, indicated that for overall support, they felt they received a level of 3.42 out of seven. These participants indicated that they received an average level of support equaling 3.96 out of seven from their immediate supervisor, while the president or CEO of the hypothetical organization provided an average level of support equaling 2.88 out of seven. Participants in Group C, which received Experimental Treatment Three, responded that they felt an average level of 4.55 out of seven for overall support. When asked to indicate the level of support they felt they received from the immediate supervisor, these participants responded with an average level of support of 4.97 out of seven. Group C participants also indicated that they felt they received a level of support averaging 4.12 out of seven from the president or CEO of the hypothetical organization. Table 2 provides a summary of the reported levels of support.

An analysis of variance was conducted using the average levels of overall support, support from immediate supervisor, and support from the president or CEO for each f the three experimental groups to determine if the supportive

messages delivered to the research participants elicited statistically significant differences. When the average levels of overall support for each of the experimental groups were analyzed the ANOVA produced an F-Value of 66.46 with a P-Value of 0.000. The ANOVA that compared the average levels of support from the immediate supervisor for each of the experimental groups resulted in an F-Value of 94.77 with a P-Value of 0.00. The analysis of variance conducted using the average levels of support from the president or CEO for each of the experimental groups resulted in an F-Value of 30.55 with a P-Value of 0.000. The results from the three ANOVA tests are summarized in Table 3.

Participants in this study were also asked to indicate the amount of stress they felt during the hypothetical crisis situation after they received the message from their organization. Responses to this set of questions could range from one to four with one indicating the least amount of stress and four indicating the greatest amount of stress. Participants in Group A, which received Experimental Treatment One, indicated that they felt an average stress level of 3.65 out of a possible four. The stress level experienced by participants in Group B, which received Experimental Treatment Two, averaged 2.77 out of a possible four. The participants in Group C, which received Experimental Treatment Three, reported an average stress level of 2.21 out of four. The average stress levels for the three experimental groups are summarized in Table 4.

An analysis of variances was conducted to determine if the stress levels for the three experimental groups are statistically different. The analysis was conducted by comparing the mean stress levels reported in each experimental

group. The results of the ANOVA were an F-Value of 55.90 with a P-Value of 0.000.

To determine if there were statistically significant correlations between the levels of support and the levels of stress reported by each experimental group, Spearman's ranked correlation calculations were run. These correlations were run comparing the average overall stress level reported by each participant in each experimental group with the average stress level reported by each participant in the given experimental group. Another correlation was investigated by comparing the average level of support from the immediate supervisor reported by each participant in each experimental group with the average level of stress reported by each participant in each experimental group. The correlation was again run comparing the average level of support from the president or CEO of the organization reported by each participant in each experimental group with the average stress level reported by each participant in the experimental groups. Finally, a question by question correlation was investigated by comparing each participant's response to each question investigating support levels with the average stress level of each participant in each of the three experimental groups. Table 5 offers a summary of the results from the Spearman's ranked correlation calculations.

Experimental Group A, which received Experimental Treatment One, did not return many statistically significant correlations. The comparisons of average overall support level, average support level from the immediate supervisor, and average support level from the president or CEO with average stress level all

returned findings that were not statistically significant. The same was true of most of the question by question correlations. The exceptions occurred when survey question number three ("I feel that my immediate supervisor at XYZ Manufacturing really cares about my well being") was compared with the average stress level resulting in a correlation coefficient of -0.439 with a P-value of 0.025. When survey question eight ("I feel that help is available from the President/CEO of XYZ manufacturing when I need it") was compared with the average stress level the result was a correlation coefficient of -0.407 with a P-value of 0.039. Survey question 11 ("I feel that the President/CEO of XYZ Manufacturing shows a lot of concern for me") compared with the average stress levels also returned a significant finding with a correlation coefficient of -0.490 with a P-Value of 0.011. The other survey questions, when compared with the average stress levels, did not return statistically significant correlations.

Unlike experimental Group A which returned very few statistically significant correlations, all of the correlations tested for Group B proved to be statistically significant. When the averages for overall support were compared with the average stress level a correlation coefficient of -0.878 was returned with a P-Value of 0.000. The comparison between the average level of support from the immediate supervisor and the average stress level resulted in a correlation coefficient of -0.852 with a P-Value of 0.000 and the comparison of the average level of support from the president or CEO with the average stress level returned a correlation coefficient of -0.827 with a P-Value of 0.000.

All of the question by question correlations that were tested for Group B resulted in significant results with all but one correlation returning P-Values of 0.000. Some of the strongest correlations existed with questions two, four, and 12. When the responses given by participants in Group B to question two ("I fell that help is available from my immediate supervisor at XYZ Manufacturing when I need it") were compared with the average stress levels of the participants in Group B, a correlation coefficient of -0.856 with a P-Value of 0.000 was returned. The responses given to question four ("I feel that my immediate supervisor at XYZ Manufacturing is willing to help me when I am in need of it") by participants in Group B also resulted in a strong correlation, with a correlation coefficient of -0.850 with a P-Value of 0.000, when compared with the average stress levels reported by Group B participants. A strong correlation of -0.832 with a P-Value of 0.000 was also found when the responses from survey question 12 ("I feel that the President/CEO of XYZ Manufacturing makes an effort to keep me informed") were compared with the group B participants' average stress levels.

As previously stated, all of the other survey question responses, when compared with the average stress levels, resulted in statistically significant correlations. Question one resulted in a correlation coefficient of -0.689 with a P-Value of 0.000, question three had a correlation coefficient of -0.765 with a P-Value of 0.000, question five returned a correlation coefficient of -0.797 with a P-Value of 0.000, question six resulted in a correlation coefficient of -0.710 with a P-Value of 0.000, a correlation coefficient of -0.522 with a P-Value of 0.006 was returned far question seven, question eight had a correlation coefficient of -0.784

with a P-Value of 0.000, question nine returned a correlation coefficient of -0.729 with a P-Value of 0.000, a correlation coefficient of -0.687 with a P-Value of 0.000 was the result for question ten, and question 11 had a correlation coefficient of -0.708 with a P-Value of 0.000.

Running correlations with the data from experimental Group C resulted in 14 out of 15 statistically significant correlations. When the average overall support levels of Group C were compared with the average stress levels of Group C a correlation coefficient of -0.763 with a P-Value of 0.000 was found. The correlation between the average level of support from the immediate supervisor and the average stress level for Group C returned a correlation coefficient of -0.589 with a P-Value of 0.002. A correlation coefficient of -0.749 with a P-Value of 0.000 was found when the average level of support from the President or CEO as reported by group C participants was compared with the average stress level of group C participants.

When considering the results from the question by questions correlations with the average stress level, the three strongest correlations were produced with survey questions nine, eleven, and one. When results of survey question nine ("I feel that the President/CEO of XYZ Manufacturing really cares about my well being") were compared with the average reported stress levels of Group C participants, a correlation coefficient of -0.737 with a P-Value of 0.000 was found. A similar correlation coefficient of -0.734 with a P-Value of 0.000 was found when the responses from survey question eleven ("I feel that the President/CEO of XYZ Manufacturing shows a lot of concern for me") were compared with the

average stress level for the participants in Group C. Another strong correlation was found when the responses to survey question one ("I feel that my immediate supervisor at XYZ Manufacturing takes my best interests into account when he/she makes a decision that will affect me") were compared with the average stress level for Group C resulting in a correlation coefficient of -0.725 with a P-Value of 0.000. The only comparison of the data from Group C that did not return a statistically significant correlation occurred when the responses from survey question six ("I feel that my immediate supervisor at XYZ Manufacturing makes an effort to keep me informed") were compared with the average stress level of Group C.

The other questions that returned statistically significant results from Group C include question two which returned a correlation coefficient of -0.479 with a P-Value of 0.013, question three resulted in a correlation coefficient of -0.495 with a P-Value of 0.010, question four had a correlation coefficient of -0.435 with a P-Value of 0.026, question five resulted in a correlation coefficient of -0.600 with a P-Value of 0.001, question seven returned a correlation coefficient of -0.661 with a P-Value of 0.000, question eight had a correlation coefficient of -0.651 with a P-Value of 0.000, question ten resulted in a correlation coefficient of -0.645 with a P-Value of 0.000 and question 12 returned a correlation coefficient of -0.575 with a P-Value of 0.002.

Discussion

The first aspect of this study that warrants discussion is the average level of support for each of the three experimental groups. The overall support

averages, or the average of all participants' responses to all of the survey questions regarding support from any source, for each of the three experimental groups supports the design of the three experimental treatments. When the study was designed, Experimental Treatment One was intended to provide the least amount of support while Experimental Treatment Two provided a moderate level of support and Experimental Treatment Three was to provide the highest level of support. The averages calculated for overall support for each of the three experimental groups show that the three treatments did indeed have the intended effect. Treatment One did receive the lowest average overall support ranking as well as receiving the lowest average rankings for support from the immediate supervisor and for support from the President or CEO of the organization. Treatment Three received the highest average ranking for overall support as well as receiving the highest average rankings for support from the immediate supervisor and support from the President or CEO of the organization. As intended, Treatment Two received an average ranking for overall support that was higher than treatment one, yet lower than treatment three. This middle ranking was also true for the average ranking of support from the immediate supervisor as well as support from the President or CEO of the organization. While these averages appear to be different, an analysis of variance was conducted to determine if the averages between the groups were statistically different. The results from the ANOVA indicate that the averages for each of the three types of support were statistically different for each of the three experimental groups. These statistically significant averages show that the

experimental treatments were designed appropriately and were received by the participants as the researcher had intended.

The averages for the level of support from the immediate supervisor and the level of support from the President or CEO of the organization as reported by each experimental group also support the design of the experimental treatments. In Experimental Treatment One, the message is delivered by the CEO of XYZ Manufacturing while the immediate supervisor is not even mentioned in the message. While the participants in Experimental Group A, all of whom received this message, reported the lowest average of overall support, they did indicate that the level of support the received from the President or CEO of the organization was greater than the level of support they received from the immediate supervisor. This finding was consistent with the design of Experimental Treatment One and suggests that the participants in Group A received the treatment as it was intended.

The message for Experimental Treatment Two was delivered by the manufacturing manager at XYZ Manufacturing. According to the hypothetical situation, this message would therefore have been delivered by the participants' immediate supervisor. Participants in Experimental Group B, which received Treatment Two, reported that the immediate supervisor provided an average level of support that was greater than the average level of support provided by the president or CEO of the organization. Because the message for this treatment was delivered by the immediate supervisor, these findings support the

design of Experimental Treatment Two and indicate that this treatment was received by the participants as intended by the researcher.

For Experimental Treatment Three, the message was delivered by the manufacturing manager (the immediate supervisor), but participants were also informed in the message that they would have an opportunity to interact with and gain information from the CEO of XYZ Manufacturing at a later date. After receiving this message, the participants of Group C indicated that they received a higher average level of support from the immediate supervisor than from the president or CEO of the organization. However, the difference between these two averages was not as great as between the two averages for Group B. Participants in Group B indicated an average level of support of 3.962 from their immediate supervisor and an average support level of 2.885 from the President or CEO. On average, the participants of Group B rated support from the immediate supervisor 1.077 higher than the support from the president or CEO. Participants in Group C who were told they would have access to the CEO of the organization gave the immediate supervisor an average support level ranking of 4.974 and the President or CEO an average support ranking of 4.122, an difference of 0.852. This difference is lower than the difference from Group B. These findings support the design of Experimental Treatment Three and indicate that it was received by the participants of Experimental Group C as intended by the researcher.

Another set of averages that is important to consider are the average stress levels as reported by each of the three experimental groups. These

averages indicate whether or not the three different experimental treatments had an effect on the stress levels and what effect they have. After calculating the average stress level for each of the three experimental groups it appeared as though the three groups did have different stress levels. An analysis of variance was then conducted to determine if these differences are statistically significant. The results of the ANOVA indicated that the three average stress levels, as reported by each of the three experimental groups, are statistically different. This indicates that the three different experimental treatments did have an effect on the stress levels reported by the participants.

Experimental Group One had the highest average stress level (3.646) while Experimental Group Two's stress level was lower (2.769) and Experimental Group Three had the lowest average stress level (2.207). These averages indicate that not only did the experimental treatments have an effect on stress levels, but that the more support participants felt, the less stress they felt. Experimental Group A was given Treatment One. This treatment was intended to provide the lowest level of support, which it did as confirmed by the participants. The results also indicate that participants in Group A also report the highest stress level. Participants in Group B were given Experimental Treatment Two which they reported having a medium level of support. Group B participants also were found to report an average stress level that was lower than Group A, but higher than Group C. The lowest average stress level was reported by participants in Group C who also received Treatment Three which they deemed to be the treatment providing the highest level of support. On the surface, and

looking solely at these sets of averages, it appears that supportive messages do have an effect on stress levels during and immediately following organizational crises. According to this set of data, the more supportive the message delivered to employees the lower the level of stress the employee will experience.

While examining the support and stress level averages for each of the three groups can be very informative and suggest trends in the data, these relationships that the averages may suggest are only preliminary until they are found to be statistically significant. Spearman's ranked correlation calculations were used to determine if the relationships between the levels of support and the stress levels were significant. By comparing the support levels with the stress levels reported by each of the participants in each of the experimental groups using Spearman's, the researcher was able to determine if supportive messages have a statistically significant effect on stress level. The data was examined further when the responses to each of the 12 questions concerning support were compared with the average stress level of each participant in each of the three experimental groups.

When the average levels of support and stress for Experimental Group A were examined it appeared that there was a relationship between the level of support and the stress level. However, as the data was analyzed using the Spearman's ranked correlation calculations, there were very few statistically significant findings. The preliminary assumptions made when looking at the averages were not completely off base as some of the correlations were approaching statistical significance. When the average levels of overall support

for Group A were compared with the average levels of stress for this group the result was a correlation coefficient of -0.362 with a P-Value of 0.069. While this result was not statistically significant, it is approaching a significant P-Value of 0.05. Another P-Value that was not statistically significant, but is approaching significance was found when the average support levels of support from the president or CEO were compared with the average levels of stress from Group A. This comparison resulted in a correlation coefficient of -0.364 with a P-Value of 0.067. While these results were not statistically significant they are still important to discuss because they are approaching significance. While a correlation can not be reported with this data, it does suggest that with some minor modifications or under different conditions, a statistically significant correlation is very likely to occur.

Group A produced two interesting results when the question by question comparisons were run. While these results were no where near statistically significant, questions two ("I feel that help is available from my immediate supervisor at XYZ Manufacturing when I need it") and ten ("I feel that the President/CEO of XYZ Manufacturing is willing to help me when I am in need of it") returned positive correlation coefficients while all other results indicated negative correlation coefficients. These results, even though not statistically significant, suggest that it is possible that the more support an individual feels from their organization, immediate supervisor, or President/CEO the higher their stress levels. This may indicate that in some crisis situations employees would experience high levels of stress no matter how supportive their organization was.

It may also indicate that organizational and supervisory support during crisis situations may actually increase stress levels.

The data collected from participants in experimental Group B returned all statistically significant results as well as the strongest correlation coefficients and the lowest P-Values. These results show that with the use of experimental treatment two there is definitely a correlation between the supportive message and stress levels. The negative correlation coefficients that resulted from the data gathered from experimental Group B indicate that as perceived organizational support increases, stress levels decrease and the opposite, as perceived organizational support decreases, stress levels increase. These strong correlations would indicate that the more supportive an organization is of their employees during a crisis the more likely those employees are to experience lower levels of stress and perhaps be more productive and more loyal to their organization.

Similar results were gained when the data from Experimental Group C were analyzed. This data returned almost all statistically significant correlation with the exception of one question. Like the results from Experimental Group B, the correlation coefficients from Group C were very strong and the P-Values were very low. There was one question on the survey that when compared with the average stress level of the group returned a result that was not statistically significant. When the results from Group C participants to survey question six ("I feel that my immediate supervisor at XYZ Manufacturing makes an effort to keep me informed") were compared with the average stress level of Group C a finding

that was not statistically significant was returned. This result was surprising because experimental treatment three was not only the most supportive message, but it offered the most information to the recipient. Also, it was an assumption of the researcher that providing employees with information and making an effort to let them know what is happening would result in a decrease in employee stress level. According to these results, being kept informed is not related to stress level. It is possible that when employees are given too much information about the situation it actually increases their stress because they know the negative aspects as well as the positive aspects of the situation. It is also possible that being informed has no effect on stress levels. Some individuals may expect their organization to let them know what is going on so when they do receive that information it does not affect their stress levels. It is also possible that the question was misinterpreted by the participants in experimental Group C and an accurate result was not obtained. Whatever the reason for the result that was not statistically significant, the numerous other statistically significant results gained from experimental Group C are enough to draw the necessary conclusions.

While the information gained through statistical information is perhaps the most important aspect of the research, the anecdotal information gained throughout the experimental process is also very important. Possibly the most obvious, but also the most important thing that can be gained from this research is that every person is different. This is not good news for organizations who are attempting to communicate with their employees during crisis situations,

however. Every individual has a different idea of what a crisis is and how they deal with a crisis. In this experiment, an individual who has a spouse who holds a job with a steady and adequate income may not see being out of work as a crisis. They may view it as a needed vacation or time to do things around the house. In contrast, a single parent who relies on his or her income and insurance to take care of the children may view this as a severe crisis. It is often difficult for the leaders of an organization to empathize with their employees and understand what the employees consider a crisis. In this study it was difficult to design a hypothetical situation that all individuals would consider to be a crisis.

Another piece of information gained from this experience is that people have different ideas of what is supportive. Some participants in Experimental Group A (those who received the least supportive message) indicated that they were receiving a considerable amount of support from the organization by giving rankings of five out of seven for questions inquiring about support levels. Participants in Experimental Groups B and C (middle and high support messages) responded with the lowest rankings for questions about support. These responses show different people view support very differently. These results may indicate that for some individuals any message from their organization during crisis would be considered supportive. We may also be able to assume that for some people may never view their organization as supportive. Another suggestion is that some people may view supportive messages as propaganda and may not trust any communication coming from their organization during a crisis. There are numerous possibilities about why people view

communication the way they do, but one thing is for certain, people differ in their opinions about organizational support.

Just as people differ in their opinions about support, they also differ in their opinions about stress. For many people, stress is extremely difficult to define. Many people only know that they are experiencing stress, but they don't know what the source of that stress is. Some people do not get "stressed out" over anything while others are very sensitive to stressors. The results of this study indicate that different people have different opinions about the stress that is caused by an event.

Even though people differ significantly in their opinions about organizational support and stress levels, this study indicates that a relationship does exist between the two. The numerous statistically significant results along with the anecdotal evidence collected during the study show that there is a negative correlation between perceived organizational support and employee stress levels. If an employee perceives their organization as supportive during the time of the crisis they report a lower level of stress. Therefore, supportive messages affect stress levels by decreasing them.

It is also important to consider how messages delivered during crisis situations affect employee perceptions of organizational support. This study has shown that in general, the more supportive the message the more supportive the individual perceives his or her organization to be. The results from this study indicate that those participants who received the least supportive messages perceived not only their organization as a whole, but also the immediate

supervisor and the president or CEO of that organization as providing the lowest level of support. Participants who received the most supportive message perceived their organization, the immediate supervisor and the president or CEO as providing the highest level of support. This indicates that employees will perceive their organization, immediate supervisor and president or CEO as supportive when the message they receive is supportive.

Participants in this study also indicated that their perceptions of support are also affected by the sender of the message. The participants who received the supportive message from the president or CEO perceived the president or CEO to be more supportive than the immediate supervisor. Those participants who received the message from the immediate supervisor perceived the immediate supervisor to be more supportive. Participants who received experimental treatment three, which included a message that was delivered by the immediate supervisor, but also indicated that the president or CEO would be available, did perceive the immediate supervisor to be more supportive than the president or CEO, but they perceived the president or CEO to be almost as supportive as the immediate supervisor.

The extent to which supportive message affect employee perceptions of support depend on how supportive the message is and who delivers the message. The more supportive the message, the more supportive the organization, immediate supervisor and president or CEO will be perceived to be. The individual who is delivering the message, or from whom the message is sent will be perceived as more supportive. Finally, individuals mentioned in the

message, while not perceived as most supportive, will have a higher level of perceived support than if they are not mentioned.

Limitations

The experimental design crafted for this research does have numerous limitations. First and foremost, this research uses an experimental design. Experimental designs are not necessarily reflective of "real world" situations. This is especially true in this experimental design during which the participants are exposed to a hypothetical crisis situation, not a real crisis situation. Feelings, reactions, and most importantly stress levels and perceptions of support could and most likely would be very different in a real crisis situation. Another limitation of this research design is the sampling method. The sample of participants consists of volunteers and consequently is not a random sample. Because this research is conducted using an experimental design with a hypothetical crisis situation and a sample of volunteers, the results cannot be generalized to the entire population of employees. In fact, the results of this research will only be applicable to the specific sample exposed to the specific hypothetical crisis situation.

Other limitations occur as a result of the questionnaire used. While the surveys from which the items of the questionnaire were taken have acceptable reliability and validity, the questionnaire that this research employs has not been deemed reliable or valid. In other words, the researcher has not determined that the questionnaire will give consistent results and that it measures accurately what it claims to measure. This research is being conducted despite these

limitations because it will provide some insight into the topics being researched. Other limitations of the questionnaire include too few questions, some questions that include forced choice response possibilities and response scales that change from one to four ranges to one to seven ranges. Because there were so few questions on the questionnaire this study does not go into depth about the issues. However, because this study was conducted at a manufacturing facility during employee break time it was important to keep the research session as concise as possible to avoid consuming all of the break time. When considering the response options given to the participants, an even number of possibilities seems advantageous because the researcher is taking away the neutral response. However, this can also be criticized for that very same reason. By providing an even number of possible responses to some of the questions on the questionnaire the participants were not able to express a neutral opinion and some critics view this as the researcher forcing the participant to make a choice that he or she may not want to make. Using questions with different numbers of possible responses can cause problems in two areas. First, the participant may become confused when they have become accustomed to responding on one scale and that scale changes. They are forced to familiarize themselves with the new scale and the new options provided on the scale. Changing scales can also be a problem when running statistics on the data that has been collected. It can be difficult to accurately compare responses based on a four point scale with responses based on a seven point scale. The researcher used statistics that would accommodate for this change in scale when analyzing the data.

Suggestions for Future Research

Little research has been conducted focusing solely on internal organizational communication during crisis situations. Because of this, there are numerous possibilities for future research. This specific research could be expanded to include the effect of supportive messages on other employee variables including loyalty, morale, turnover, and commitment. It would also be interesting to use the same basic study, but to include a fourth experimental group that does not receive a message from the organization. This study could also be used to investigate the communication medium that employees would prefer their organization to use. Messages could be delivered via phone, email, mail, or in person. This study could be vastly improved if the participants actually felt that they were experiencing some sort of crisis situation. Perhaps a role play situation where participants were playing the role of an employee, immediate supervisor, or president or CEO would help participants to feel more invested in the situation and they may provide more realistic data. Finally, this research could also be improved by giving participants to respond in their own words and by expressing their own feelings. By providing questions and possible responses the participants are limited to providing a certain amount of information when they may have a great deal of applicable insight to add to the study.

I intend to continue to conduct research on this topic and one day develop a software program for organizations to use during a crisis situation that will inform them of the appropriate techniques of internal communication based on the type of crisis, the size of the organization, the distribution of the organization,

the type of industry involved, the average age of the employees, and numerous other factors. The present research is barely a drop in an ocean of possibilities that should be explored in the future.

Summary and Conclusions

This project brings together numerous disciplines including communication, industrial and organizational psychology, business, public relations, human resources, and others as it investigates how messages can affect employee stress levels during crisis situations. The results indicate that organizations can take measures to help alleviate the stress that their employees endure during crisis situations. As organizations realize the importance of their employees they will also realize the importance of creating a supportive and enjoyable work environment where their employees can work to their potentials. This study is merely a step towards determining how to create the ideal work environment which will result in happy and productive employees and in turn will benefit the organization.

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Appendix A
Sources Searched

Computer Literature Search

Wallace Library, Rochester Institute of Technology, Rochester, New York

December 2002 through February 2003

The following databases were searched:

ABI-Inform: beginning 1971

Keywords: crisis, crisis communication, crisis management, stress

Academic Search Elite: beginning 1985

Keywords searched: crisis, crisis communication, crisis management, internal communication, organizational crisis, stress, occupational stress, organizational support.

Business Source Premiere: beginning 1984

Keywords: crisis, crisis communication, crisis management, organizational crisis, stress.

COM Abstracts: beginning 1966

Keywords: crisis, crisis communication, crisis management, organizational communication, stress, support.

Einstein **(RIT Library Catalog)**

Keywords: crisis, crisis management, crisis communication, stress, occupational stress, occupational health, organizational support

ERIC: beginning 1966

Keywords: crisis, crisis communication, crisis management, stress

OmniFile: Full Text Mega via WilsonWeb: beginning 1984

Keywords: crisis, crisis communication, crisis management, organizational crisis, internal communication, organizational communication, stress, occupational stress, support.

PsychInfo: beginning 1887

Keywords: crisis, stress, occupational stress, support.

Psych Articles: beginning 1988

Keywords: crisis, stress, occupational stress, support.

Roaring Cat **(Rochester Area Libraries Catalog)**

Keywords: crisis, crisis communication, crisis management, stress, occupational stress, organizational support, Laurence Barton.

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Indices (dates are inclusive)

Communication Abstracts: 13 (1990) – 22 (1999)

Keywords: crisis, crisis management, crisis communication, stress.

Appendix B
Letter to Research Participant

Dear Research Participant,

Thank you for volunteering to participate in this research study. You are helping me to complete the requirements for the Master of Science degree from RIT.

The experiment you will be participating in is relatively simple. Attached, you will find a packet of papers. I ask that you read and follow the instructions very carefully, as they will guide you as you complete the research packet. The experiment will begin with a hypothetical situation that you are to read. I ask you to read this carefully and try to put yourself in this situation. Imagine the feelings you might have if you found yourself in such a situation. You will then read a message in response to the situation. The experiment concludes with a brief questionnaire. Please reflect on the hypothetical situation and the message that was provided in response to the situation when you are filling out the questionnaire. You should consider the thoughts and feelings you might have if you were actually experiencing the hypothetical situation and the thoughts and feelings you might experience upon receiving the message and use them to guide your responses to the questions. Please remember that this experiment deals strictly with a hypothetical situation. The situation is in no way relater to your current work situation and your answers should not be based on any experiences that are happening or have happened at your current workplace. This experiment should take a maximum of fifteen minutes for you to complete,

but if at any time you feel uncomfortable answering any of the questions or with the research you may discontinue your participation in the study.

After you complete all of the materials for the research study my assistant will fully explain the intent of the research and will answer any questions you may have.

Sincerely,

Carin L. Kosmoski

Rochester Institute of Technology

Appendix C
Hypothetical Crisis Situation

Hypothetical Situation

You are a full time employee of XYZ Manufacturing who is paid an hourly wage. Therefore, if you do not work, you do not get paid. Your benefits package includes five paid vacation days, 3 paid sick days, and 2 paid personal days per year. Also, your insurance coverage is contingent on you working at least 32 hours per week. If you happen to work for less than 32 hours per week for a period of more than three weeks your health insurance will be dropped. So far this year you have used 2 vacation days, 1 sick day, you are using your first personal day today.

You are at home on a Tuesday because you have opted to take a personal day from work. Around 11:00 AM you turn on your television set and see breaking news coverage on the local station. The news reports that there has been an accident at your place of employment, the XYZ Manufacturing Plant. From the news report, you learn that the majority of the manufacturing facility has been destroyed by fire. Initial news reports indicate that there are some injuries, but there are no further details. The news reporter then issues a statement from James Smith, the CEO of XYZ Manufacturing, that urges you and all employees to return or stay home and wait for further communication from the organization as it becomes available. The news report ends and you are left knowing only that the XYZ Manufacturing facility at which you work has been destroyed. You are unsure about the status of your closest coworkers and friends, and you realize

that without having a place to go to work you will not get paid and your health insurance is in jeopardy.

Later that evening you receive a telephone call from XYZ Manufacturing. Upon answering the phone you receive a pre-recorded message. A transcript of that message is on the next page.

Appendix D
Experimental Treatment One

Transcript of the Telephone Message From XYZ Manufacturing

Good evening. My name is James Smith, and as you probably know, I am the CEO of XYZ Manufacturing. I am phoning to inform you that this morning a situation occurred during which the XYZ Manufacturing facility was severely compromised. Because of this, you are being instructed not to report to work until further notice. For more information, please visit the XYZ Manufacturing website at www.XYZManufacturing.com or call the XYZ Manufacturing information hotline at 1-800-555-2345. Thank you and have a nice evening.

Appendix E
Experimental Treatment Two

Transcript of the Telephone Message from XYZ Manufacturing

Good evening my fellow employee. This is David Jones, Manufacturing Labor Manager at XYZ Manufacturing.

I am sure that you are aware of the incident that occurred at work today during which our XYZ Manufacturing facility was destroyed by fire. As your immediate supervisor, coworker, and friend, I understand that there are numerous questions and concerns running through all of our minds.

I will begin by giving you the good news. While there were a few minor injuries suffered today, none of your fellow employees were seriously hurt. Unfortunately, however, because there was significant damage done to our facility, employees will not be reporting to work for some time. At the moment, we are making every effort to find some other facility that we can use so that you and your fellow employees can return to work as soon as possible. Also at this time, the management team at XYZ Manufacturing is working together to address issues concerning compensation and insurance coverage for our hourly employees during this work stoppage. We don't have a lot of the specifics at the moment, but we have set up an information hotline and a special section of our company website that both contain information that you might want and need during this difficult time. The hotline number is 1-800-555-2345 and the web site address is www.XYZManufacturing.com. Please visit the website or use the hotline to obtain updates, or if you would like information about some support groups that are forming. If there is anything that you and your family need from

us at this time or any questions that I might be able to answer for you feel free to contact me via email at djones@xyzman.com. Thank you for your time and have a good evening. Good bye.

Appendix F
Transcript of the Telephone Message from XYZ Manufacturing

Message Three

Hello. My name is David Jones and I am the Manufacturing Labor Manager at XYZ Manufacturing. I am calling this evening to speak with, and provide support for, my fellow XYZ Manufacturing employee.

I am sure that you are aware of the incident that occurred at work today during which our XYZ Manufacturing facility was destroyed by fire. Our primary concern at this time is the safety, security, and well being of our employees. As your immediate supervisor, coworker, and friend, I understand that there are numerous questions and concerns running through all of our minds and I hope to answer some of them for you.

Unfortunately, eleven of your fellow employees were taken to the Strong Memorial Hospital Emergency Department for treatment of minor injuries. Thankfully, they were all treated and released; no one was seriously hurt. The secretaries at the XYZ Manufacturing main office will be available to receive and redistribute get well cards if you wish to send them to your fellow coworkers.

The investigators at the XYZ Manufacturing facility scene have determined that the fire that destroyed 95% of the facility was caused by an explosion that occurred as a result of manufacturing machinery malfunction. This explosion was completely unpredictable. There were no warning signs that we could have acted on to prevent the explosion from occurring.

Because the facility was destroyed, employees will not be reporting to work for some time. As we search for an alternate facility that may be suitable for

our manufacturing needs, all of us at XYZ Manufacturing are hoping that this work stoppage will last no longer than one month, however, it is likely that it may last longer. I know that you are worried about your income during this time. Individual meetings will be scheduled next week so that compensation issues can be discussed in a one-on-one situation. I assure you that XYZ is doing everything in its power to ensure that employees are fully compensated for this period of lost time. XYZ Manufacturing also realizes that personal items may have been lost in the fire. You are encouraged to bring a list of personal items that you had at work that were lost in the fire. Employees will be compensated up to a set dollar amount for all reasonable items.

I hope that I have been able to answer some of your more pressing questions, but I am also sure that you have others that I have not addressed. For this reason, we will be holding an informational meeting on Friday evening at 7:00 PM at the Radisson Inn on Jefferson Road. James Smith, the CEO of XYZ Manufacturing, the department heads, and some of the outside investigators dealing with the situation will be conducting the information session. We urge you to attend and we welcome your spouse and children at this event. Along with providing refreshments for the evening, we also hope to provide you and your family with answers to your questions and reassurance that your future with this company is as bright as it was yesterday. We have set up an information hotline and a special section of our company website that both contain information that you might want and need during this difficult time. The hotline number is 1-800-555-2345 and the web site address is www.XYZManufacturing.com. Please visit

the website or use the hotline to obtain updates between now and Friday, or if you would like information about some support groups that are forming. If there is anything that you and your family need from us at this time or any questions that I might be able to answer for you, feel free to contact me via email at djones@xyzman.com or you may reach me via telephone at 555-9876 between the hours of 10:00 AM and 10:00 PM. I look forward to seeing you and your family on Friday evening. And again, please do not hesitate to contact me with any questions or concerns you may have before then. I wish you and your family a pleasant evening. Good night.

Appendix G
Post-Treatment Survey Instrument

Please respond to each of the following statements by indicating your level of agreement with each statement. Please remember that your responses should reflect the feelings you have developed during and resulting from this research session. Base your responses on the following **Seven (7) Point Scale**:

1 = Strongly Disagree
2 = Disagree
3 = Somewhat Disagree
4 = Neither Disagree nor Agree
5 = Somewhat Agree
6 = Agree
7 = Strongly Agree

1. I feel that **my immediate supervisor at XYZ Manufacturing** takes my best interests into account when he/she makes a decision that will affect me.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Somewhat Disagree	Neither Disagree nor Agree	Somewhat Agree	Agree	Strongly Agree

2. I feel that help is available from **my immediate supervisor at XYZ Manufacturing** when I need it.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Somewhat Disagree	Neither Disagree nor Agree	Somewhat Agree	Agree	Strongly Agree

3. I feel that **my immediate supervisor at XYZ Manufacturing** really cares about my well being.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Somewhat Disagree	Neither Disagree nor Agree	Somewhat Agree	Agree	Strongly Agree

4. I feel that **my immediate supervisor at XYZ Manufacturing** is willing to help me when I am in need of it.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Somewhat Disagree	Neither Disagree nor Agree	Somewhat Agree	Agree	Strongly Agree

5. I feel that **my immediate supervisor at XYZ Manufacturing** shows a lot of concern for me.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Somewhat Disagree	Neither Disagree nor Agree	Somewhat Agree	Agree	Strongly Agree

6. I feel that **my immediate supervisor at XYZ Manufacturing** makes an effort to keep me informed.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Somewhat Disagree	Neither Disagree nor Agree	Somewhat Agree	Agree	Strongly Agree

7 I feel that **the President/CEO of XYZ Manufacturing** takes my best interests into account when he/she makes a decision that will affect me.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Somewhat Disagree	Neither Disagree nor Agree	Somewhat Agree	Agree	Strongly Agree

8. I feel that help is available from **the President/CEO of XYZ Manufacturing** when I need it.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Somewhat Disagree	Neither Disagree nor Agree	Somewhat Agree	Agree	Strongly Agree

9. I feel that **the President/CEO of XYZ Manufacturing** really cares about my well being.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Somewhat Disagree	Neither Disagree nor Agree	Somewhat Agree	Agree	Strongly Agree

10. I feel that **the President/CEO of XYZ Manufacturing** is willing to help me when I am in need of it.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Somewhat Disagree	Neither Disagree nor Agree	Somewhat Agree	Agree	Strongly Agree

11. I feel that **the President/CEO of XYZ Manufacturing** shows a lot of concern for me.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Somewhat Disagree	Neither Disagree nor Agree	Somewhat Agree	Agree	Strongly Agree

12. I feel that **the President/CEO of XYZ Manufacturing** makes an effort to keep me informed.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Somewhat Disagree	Neither Disagree nor Agree	Somewhat Agree	Agree	Strongly Agree

-- CONTINUE ON TO THE NEXT PAGE --

Please respond to the following list of possible sources of pressure by indicating the degree to which you feel they would be a source of pressure after receiving the message in response to the hypothetical situation you just experienced. Base your responses on the following **Four (4) Point Scale**:

1 = Definitely WOULD NOT BE a Source of Pressure
2 = Generally WOULD NOT BE a Source of Pressure
3 = Generally WOULD BE a Source of Pressure
4 = Definitely WOULD BE a Source of Pressure

13. Lack of consultation and communication

1	2	3	4
Definitely **WOULD NOT BE** a Source of Pressure	Generally **WOULD NOT BE** a Source of Pressure	Generally **WOULD BE** a Source of Pressure	Definitely **WOULD BE** a Source of Pressure

14. Lack of social support by people at work

1	2	3	4
Definitely **WOULD NOT BE** a Source of Pressure	Generally **WOULD NOT BE** a Source of Pressure	Generally **WOULD BE** a Source of Pressure	Definitely **WOULD BE** a Source of Pressure

15. Feeling isolated

1	2	3	4
Definitely **WOULD NOT BE** a Source of Pressure	Generally **WOULD NOT BE** a Source of Pressure	Generally **WOULD BE** a Source of Pressure	Definitely **WOULD BE** a Source of Pressure

16. A lack of encouragement from superiors

1	2	3	4
Definitely **WOULD NOT BE** a Source of Pressure	Generally **WOULD NOT BE** a Source of Pressure	Generally **WOULD BE** a Source of Pressure	Definitely **WOULD BE** a Source of Pressure

17. Having to take risks

1	2	3	4
Definitely **WOULD NOT BE** a Source of Pressure	Generally **WOULD NOT BE** a Source of Pressure	Generally **WOULD BE** a Source of Pressure	Definitely **WOULD BE** a Source of Pressure

18. Factors not under your control

1	2	3	4
Definitely **WOULD NOT BE** a Source of Pressure	Generally **WOULD NOT BE** a Source of Pressure	Generally **WOULD BE** a Source of Pressure	Definitely **WOULD BE** a Source of Pressure

19. Characteristics of the organization's structure and design

1	2	3	4
Definitely **WOULD NOT BE** a Source of Pressure	Generally **WOULD NOT BE** a Source of Pressure	Generally **WOULD BE** a Source of Pressure	Definitely **WOULD BE** a Source of Pressure

20. Lack of support from supervisors

1	2	3	4
Definitely **WOULD NOT BE** a Source of Pressure	Generally **WOULD NOT BE** a Source of Pressure	Generally **WOULD BE** a Source of Pressure	Definitely **WOULD BE** a Source of Pressure

-- CONTINUE ON TO THE NEXT PAGE --

Please provide the following personal information. This information will be used to categorize the responses you have provided throughout the research session.

21. Gender: Male Female

22. Year of Birth:

Thank you for taking the time to participate in this research study.

Table 1:
Summary of Demographic Information for Research Participants

	Whole Study	Experimental Group A	Experimental Group B	Experimental Group C
Total Number of Participants	78	26	26	26
Number of Male Participants	63	21	21	21
Percentage of Participants Male	80.77	80.77	80.77	80.77
Number of Female Participants	15	5	5	5
Percentage of Participants Female	19.23	19.23	19.23	19.23
Age Range	19-54	19-54	19-52	19-54
Average Age	35.73	35.31	32.73	39.15

Table 2:
Summary of Support Level Averages from the Three Experimental Groups

	Experimental Group A	Experimental Group B	Experimental Group C
Overall Level of Support	1.660	3.423	4.548
Level of Support from Immediate Supervisor	1.487	3.962	4.974
Level of Support from President/CEO	1.833	2.885	4.122

Table 3:
Summary of ANOVA Results Comparing Average Support Levels for the Three Experimental Groups

	F-Value	P-Value
Overall Support	66.46	0.000
Support from Immediate Supervisor	94.77	0.000
Support from President/CEO	30.55	0.000

Table 4:
Summary of Stress Level Averages for the Three Experimental Groups

	Experimental Group A	Experimental Group B	Experimental Group C
Average Stress Level	3.646	2.769	2.207

Table 5:
Summary of Correlation Coefficients and P-Values for the Spearman's Ranked Correlation Calculations Run Against the Average Stress Level for each Experimental Group

	Experimental Group A		Experimental Group B		Experimental Group C	
	Correlation Coefficient	P-Value	Correlation Coefficient	P-Value	Correlation Coefficient	P-Value
Overall Support	-0.362	0.069	-0.878	0.000*	-0.763	0.000*
Immediate Supervisor Support	-0.292	0.148	-0.852	0.000*	-0.589	0.002*
President/CEO Support	-0.364	0.067	-0.827	0.000*	-0.749	0.000*
Survey Question 1	-0.172	0.401	-0.689	0.000*	-0.725	0.000*
Survey Question 2	0.020	0.924	-0.856	0.000*	-0.479	0.013*
Survey Question 3	-0.439	0.025*	-0.765	0.000*	-0.495	0.010*
Survey Question 4	-0.199	0.329	-0.850	0.000*	-0.435	0.026*
Survey Question 5	-0.070	0.734	-0.797	0.000*	-0.600	0.001*
Survey Question 6	-0.248	0.222	-0.710	0.000*	-0.009	0.964
Survey Question 7	-0.263	0.195	-0.522	0.006*	-0.661	0.000*
Survey Question 8	-0.407	0.039*	-0.784	0.000*	-0.651	0.000*
Survey Question 9	-0.292	0.148	-0.729	0.000*	-0.737	0.000*
Survey Question 10	0.150	0.464	-0.687	0.000*	-0.645	0.000*
Survey Question 11	-0.490	0.011*	-0.708	0.000*	-0.734	0.000*
Survey Question 12	-0.327	0.103	-0.832	0.000*	-0.575	0.002*

* Indicates statistically significant result