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THE IMPACT OF TRAUMATIC EVENTS AND ORGANIZATIONAL RESPONSE

A dissertation submitted

by

JUDE A. MILLER-BURKE

to

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degree of

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Abstract

The Impact of Traumatic Events and Organizational Response
by
Jude A. Miller-Burke

This study examines the employee-related impact from a traumatic event in the areas of physical and mental health, productivity and employee turnover and the perceived benefits of critical incident stress debriefings to those employees and managers who choose to participate in them. The literature review includes an overview of workplace violence (Mantell & Albrecht, 1994; Northwestern National Life Study, 1993), human response to trauma (Weiss, 1993; Freedy, Kilpatrick & Resnick, 1993; Hovanitz, 1993; Everly, 1995), crisis intervention (Rapaport, 1967; Pitcher & Poland, 1992; Auerbach & Kilmann, 1977), critical incident stress debriefings (Manton & Talbot, 1990; Mitchell & Everly, 1995; Lewis, 1994; Mantell & Albrecht, 1994), the impact of mental health on productivity (VonKorff, 1996; Donatelle & Hawkins, 1989) and the cost offset of company-sponsored programs (McDonnell Douglas Corporation, 1989; Conrad, Conrad & Walcott-McQuigg, 1991). Surveys were mailed to 391 individuals who were reported by the security department of a

national bank to have experienced a bank robbery in 1996. These individuals were employed at 42 bank branches in 6 states in the United States. Two different mailings of the survey yielded 141 responses from robbery victims, a 35% response rate. The surveyed robbery victims experienced a significant number of physical and psychological symptoms, as listed in the Diagnostic and Statistical Manual for Mental Disorders-IV for the diagnosis of Posttraumatic Stress Disorder, and by researchers in the field of trauma response. The study disclosed that an individual is more likely to choose to attend a debriefing and find it valuable if he or she had experienced increased adverse health symptoms following the traumatic event, if the level of personal threat perceived during the robbery was stronger, if the individual was threatened personally with a gun. These same individuals reflected a lowered level of productivity, higher levels of post-robbery stress, less desire to continue working for their employer, use of medical/mental health care as a result of the robbery and higher usage of the employee assistance program. An approximately equal number of surveyed robbery victims reported their work and personal relationships to be either worse or better post-event, undoubtedly evidencing, for some, the increased positive interaction with other

employees, supervisors and/or family members. Both groups of employees chose to attend a debriefing and found it helpful at a comparatively higher rate than those who reported no effect on their relationships.

Managers' perceptions of the impact of a robbery on their own workplace productivity was greater and they rated the debriefings as more worthwhile than did nonmanagement employees. The data clearly identify that a traumatic event, such as a robbery, results in increased employee stress, health problems and lowered productivity. The research points to a need for employers to utilize a number of measures pre- and post-incident to mitigate the impact of such events on their employees. Specifically, companies should instruct supervisors to promptly schedule a debriefing for the affected location after every robbery. Those individuals with the most post-incident symptoms are likely to attend and find the debriefings helpful.

Acknowledgments

This study is dedicated to those individuals who experience violence in their lives and find the inner strength to recover and go on to lead happy, productive lives.

I would like to especially acknowledge my husband, Richard, and co-worker, Kathleen, who provided daily support and encouragement throughout the dissertation process. I would like to thank my committee, including Judy Stevens-Long, Committee Chairperson, Willy Demarcell Smith, Associate Dean, Don Bushnell, Faculty Reader, Michael Welp, Student, and Gerald Lewis, External Examiner, for the guidance they provided.

I want to acknowledge Linda and Michael for the inspiration and support they provided at our monthly meetings. Thank you to the Optum® counseling and training staff for their vision and dedication in teaching and helping others who are the victims of violence. Thank you to the national banking corporation who saw the value in this study to help their own employees.

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Chapter One

Personal Statement

Introduction

As a master level psychologist, I have worked in various direct line and management positions in employee assistance and crisis intervention programs for 20 years. Each one of these programs has had special projects in the area of domestic or workplace violence. My current position involves responsibility for providing critical incident stress debriefings after traumatic events to over 5,000 customer companies throughout the nation.

In 1995, our staff provided over 200 company interventions after a traumatic incident. The delivery of critical incident stress debriefings is fairly new to the field of employee assistance, therefore, I want to contribute to the professionalization of this area by extending research on stress debriefings provided in private industry.

After being a domestic violence therapist for 5 years, I developed and managed one of the first company-sponsored domestic violence programs at a large division of Honeywell. Managers within companies struggle with how to help and manage the performance of

employees who are being abused and, therefore, I have been consulted on many cases. The popular media are now focused on violence in the workplace, including customer to employee, co-worker to co-worker and domestic violence at the work site, and I again am in a leadership role developing my current employer's response.

I have a passionate argument in favor of companies offering interventions after a traumatic event to help employees cope. I believe critical incident stress debriefings mitigate the impact of stress after a traumatic event, thereby decreasing physical and mental health problems and reducing absenteeism and turnover. My personal goal is to encourage companies to seek help for their employees after a traumatic event to facilitate their recovery process.

Chapter Two

Review of the Literature

Violence in the Workplace

Violence in America is increasing at an alarming rate (U.S. Department of Justice, 1995). And, while co-worker to co-worker violence continues at the rate of about three murders per day, the increase in violence in the community at large is "spilling over" into the workplace where workers and the public sector interface. This spillover increases the number of traumatic events where employers must provide a response. Violence has a profound impact on the individual victims and the overall functioning of the company.

There are about 1,000 people killed each year at work by a co-worker. This accounts for about 14% of job-related deaths. This, of course, varies by city and state, with workplace homicides accounting for almost 70% of work-related deaths in New York City in 1991 (U.S. Bureau of Labor Statistics). Death by murder is the number one cause of death at work in New York City.

> In studies of workplace violence in 32 states, 14% of all deaths on the job were caused by homicides. The statistical perspective is startling. Of every 100 people who died while at work, 14 of them were killed by

> someone rather than by something. (Mantell & Albrecht, 1994, p. 12)

The use of firearms was a common element in these crimes. Eighty-two percent of work-related homicides are committed with a firearm (Rosenstock, 1994).

A comprehensive and representative definition of violence in the workplace proposed by Mantell and Albrecht (1994, p. 7):

- Punched a supervisor.
- Intimidated another employee with a threat of assault.
- Tampered with the computer system.
- Shot an employee.
- Vandalized employee rest rooms on a repeated basis.
- Returned to a company and stabbed an employee.
- Sent threatening letters or faxes to people in the company.
- Slashed the tires of cars in the company parking lot.
- Killed themselves in or near the facility.
- Returned to the workplace as a disgruntled customer and killed someone.

Workplace violence also includes robbery, rape and simple and aggravated assault. Mantell and Albrecht's definition of workplace violence will be used for purposes of this study.

When violence occurs at work, management is expected to take steps to address the impact of the event. While threats of violence cause an impact, the impact of the event is most severe if there has been a completed homicide.

> Research on bereavement suggests that homicide bereavement is more severe than bereavement for accidental death, natural death or for suicide. The trauma to the victims of violent crime often invokes an emotional response in excess of grief and closely resembling Post Traumatic Stress Disorder. (Bixler, 1985, p. 3)

Most employees, such as bank tellers, must return to the scene of the crime every day, which exacerbates their stress.

Emergency services professionals effectively utilize short-term crisis intervention strategies as routine protocols in meeting the needs of the employees after a traumatic incident. According to some literature, worker burnout and workers' compensation claims decrease as a direct result of these proactive initiatives. As a result, private sector employers have begun to sponsor critical incident stress

debriefings, a technique initially used only by emergency services personnel such as firefighters and police officers.

Review of the literature (Clark & Friedman, 1992) clearly indicates that participants in a critical incident stress debriefing consider the process helpful, but no one has documented what specifically about the debriefing is most valuable to participants or the indirect and direct cost impact of a traumatic event to an employer. If it can be shown that critical incident stress debriefings are helpful to employees and may provide cost savings to companies in the form of lowered health, workers' compensation and short-term disability claims, along with less employee turnover and higher productivity, companies may be more willing to schedule these types of interventions after a violent act.

Facts

Violence in the workplace has received growing attention in the media in the past 2 years, in part because of a number of particularly violent events involving multiple victims. But, despite many articles suggesting that violence in the workplace has increased, the number of co-worker to co-worker violent events has not increased in the past 15

years. There are about three co-worker to co-worker fatalities per day, constituting 15% to 20% of all workplace violence.

However, those who deal with the public, especially retail and social service workers, are affected by general increases in social violence. Employees are twice as likely to be attacked by customers as by co-workers or strangers, and driving a taxi has become the most hazardous American occupation, with law enforcement coming in second (National Institute for Occupational Safety and Health, 1996).

The National Crime Victimization Survey, conducted by the Bureau of Justice Statistics of the U.S. Department of Justice, can be used to estimate the occurrence of workplace assaults resulting in nonfatal injuries. In 1992, the National Crime Victimization Survey found that approximately 670,000 American workers were assaulted (simple assault, aggravated assault, robbery or rape) while at work or on duty, which represents approximately 11% of all violent crimes in the United States (California/OSHA, 1994).

Other studies have reported as many as one million individuals were victims of violent crime while working, about 15% of all violent crime. The U.S. Department of Justice has also stated that crime victimization in the workplace costs 3 1/2 days of lost work per crime

and $55 million in lost wages annually, not including days covered by sick and annual sick leave. However, these data are estimates and not entirely systematic.

Workplace fatality data consistently report that the occupation with the highest rate of workplace homicide is a taxicab driver. Other high risk occupations/workplaces include work in: liquor stores, gas stations, detective or protective services, justice and public order establishments, grocery stores or convenience food stores, jewelry stores, hotels or motels and eating/drinking places. There is a high correlation between violent acts and the use of alcohol and other drugs.

The Bureau of Labor Statistics data for 1993 showed health care and social service workers having the highest incidence of assault injuries. Almost two thirds of all nonfatal assaults occurred in nursing homes, hospitals and establishments providing residential care and other social services.

Domestic violence is the number one cause of injury to women in America, and the one place perpetrators know where to find their intended victim is at her place of work. Husbands and boyfriends commit 13,000 acts of violence against women in the workplace each year and husbands and boyfriends killed 31 women at work in 1992

(U.S. Department of Justice, 1994). A female employee who is being abused is a particularly difficult management challenge because the need to support her is often coupled with performance problems that must be addressed as well.

The Northwestern National Life Insurance study (1993) entitled, Fear and Violence in the Workplace examined the incidence of workplace stress, harassment and violence and the conditions at work that create them. There were 600 respondents to the survey, a 29% return rate. The published results included the following:

- 2 million Americans were victims of physical attacks in the workplace in the past year.
- 6 million were threatened.
- 16 million were harassed.
- Violence and harassment affect the health and productivity of victim and other workers.
- There is a strong relationship between job stress, workplace harassment and violence.

While this is the most widely quoted study on workplace violence, it is very possible that there was a response bias. Although the direction of the bias is unknown, it seems likely to have been that

those who experienced workplace harassment and violence responded to the survey, while others did not. Northwestern National Life thus generalized the results from 600 respondents to 2 million Americans! No wonder corporations panicked about how to stop this perceived wave of workplace violence.

Company Impact

Even if the popular media overstate the frequency of workplace violence, just one act of workplace violence can affect a company dramatically. There is the personal trauma and tragedy, corporate loss of function and the potential legal liability. Corporate losses include productivity, declining employee morale and increased turnover, diminished reputation/public image and financial loss due to litigation. Not only is the individual victim or victims of a violent incident impacted profoundly, so is the company. The more serious the event, the more significant the impact is likely to be. To handle these traumatic events well, the employer needs to be aware of the law regarding their responsibilities, an alleged perpetrator's rights and the impact on productivity and morale.

Not unexpectedly, the law in the area of workplace violence is still evolving. The general rule for employers is that they have a

responsibility to provide a safe work environment. An employer who learns that a current or former employee has threatened violence against managers, supervisors or other employees may have to take certain preventive steps under the Federal Occupational Safety and Health Act (Fed-OSHA) and its state counterparts.

> Encompassed within this general requirement is an employer's obligation to do everything that is reasonably necessary to protect the life, safety and health of employees, including the furnishing of safety devices and safeguards and the adoption of practices, means, methods, operations and processes reasonably adequate to create a safe and healthful workplace. (Kenwood Group, 1994, p.32)

OSHA recommends employers address workplace security and provide training concerning violent situations pursuant to the employer's safety program. Employers also need to take steps to protect themselves against liability for negligent hiring, training, supervision and retention of employees.

The employer is in the difficult situation of balancing company and general employee needs and rights with the rights of the alleged perpetrator.

> Where the employer warns employees of an individual's violent tendencies, the employer could be found liable for defamation if the employer is under a mistaken belief that the perpetrator is violent. Defamation occurs when a statement which is communicated to another individual is

> false, unprivileged and the cause of injury. (Kenwood Group, 1994, p.41)

It is likewise critical that employers not discriminate against individuals with physical or mental disabilities under the Americans With Disabilities Act (ADA). As reported above, 75% of violent incidents are perpetrated by persons under the influence of alcohol or drugs. If such influence translates into a chemical dependency diagnosis, the perpetrator could be protected under the ADA. Legal counsel is often necessary in making termination decisions despite what appears to be obvious cause. It is still possible to terminate the employment of an employee who threatens violence, but, it is very important to make reasonable work accommodations for an employee protected by the ADA. Companies can be held liable for failure to act and prevent a violent act from occurring or for acting preventively.

The literature on workplace violence (Kenwood Group, 1994) is in concurrence that preparation of the company, including management and employees, for the possible violent event is perhaps the best defense. Many articles agree on the basic components of a violence prevention program although some programs seek broad quality of life improvement, while others target violence prevention

more specifically. Most authors (United HealthCare, 1995) agree that the following measures should be taken in a violence prevention program:

- Strengthen security.
- Provide supportive services to employees.
- Consider implementing a drug testing program.
- Implement a policy prohibiting violent statements and acts.
- Review pre-employment and hiring practices.
- Pay close attention to threats made in the workplace.
- Pay attention to sudden changes in employee behavior.
- Provide supervisory and employee violence prevention training.
- Practice preventive planning when downsizing or reorganizing.
- Implement a merger/acquisition stress management team.
- Obtain consultation when dealing with a troubled employee from the employee assistance program.
- Develop a comprehensive crisis management plan.

A term that is used repeatedly in the literature is crisis management team. The crisis management team is made up of human

resources, upper management, line management, legal, security, law enforcement, medical and public relations staff. Their role when confronted with an emergency is to conduct an initial risk assessment and determine level of response required, develop an initial action plan, conduct an investigation, conduct interviews with the alleged threatening employee and implement an action plan with continual reassessment. The action plan with continual reassessment may include critical incident stress debriefings.

Response To Trauma

Violence affects both physical and mental health possibly resulting in greater absenteeism, employee turnover, workers' compensation and short-term disability costs and lowered productivity. Posttraumatic Stress Disorder (PTSD) listed in the Diagnostic and Statistical Manual of Psychiatric Disorders-IV is the most commonly used diagnosis for victims of trauma. The first criterion for diagnosis is external to the individual. It involves exposure to an event outside the range of experience such that almost anyone would experience significant distress (Weiss, 1993). Examples would include an airplane crash or traumatic amputation of a limb.

There are three main intrapersonal and behavioral criteria that are necessary for an individual to meet to have this diagnosis. The first is re-experiencing the events through dreams or intrusive thoughts or feelings, along with a physiologic reaction at reexposure to events that symbolize an aspect of the traumatic event both psychologically and physically. The second criterion is "the avoidance of stimuli linked to the trauma and/or a general numbing responsiveness and less investment in life's activities and other people" (Weiss, 1993, p.7). What may be the most visible symptom of exposure to traumatic stress is the hyperarousal cluster of symptoms, including disturbances in sleep, concentration and appetite along with extreme physiological responses such as heart palpitations.

Freedy, Kilpatrick and Resnick (1993) proposed a psychosocial approach linking natural disasters and subsequent psychosocial adjustment. Their approach highlights two principles, the first of which is to frame adjustment as a process unfolding with time. Secondly, factors existing before, during and after the disaster can influence adjustment. These authors stated that,

> It is possible that characteristics of disaster exposure (e.g., injury, life threat) will interact with certain individual (e.g., coping behavior) or environmental (e.g., non-disaster life events) characteristics to determine

> adjustment. Third, a range of adjustment is possible, from negative to positive, dependent on the experiences and resources of the individual. (1993, p. 50)

Freedy, Kilpatrick and Resnick developed a "Risk Factor Model of Natural Disasters Adjustment" (1993) that outlined major predictive factors of trauma response as well as post-disaster outcomes. Pre-disaster factors focused on demographic characteristics and mental health history, to name just two areas. Within-disaster factors included disaster exposure and the cognitive appraisal of the disaster. Post-disaster factors included basic needs, initial distress level, stressful life events, resource loss, coping behavior, and social support. The resultant mental health outcomes encompassed depression, anxiety, somatic complaints, substance abuse, and positive experiences.

This process-based orientation of the model also suggests that the mental health needs of victims will change over time and be highly individualized. These authors argued for mental health interventions ranging from public health education campaigns, support groups and critical incident stress debriefings to one-to-one counseling, short- and long-term. This is a very comprehensive model taking into account who the individual was before the trauma, what happened during the

trauma, a myriad of factors after the event and a range of subsequent outcomes, positive and negative.

Most models at least mention the possible relationship between a traumatic event and subsequent health symptoms, but Hovanitz (1993) has strongly believed there are important physical health risks associated with the aftermath of a disaster due to the increases in life event stress. She stated:

> Ten published studies of six floods were reviewed to evaluate the significance of health impairment in the aftermath of this type of disaster. Despite the use of widely differing methodologies, all studies reported some measure of compromised health associated with flood exposure. All studies but one found physical health compromised in natural disaster victims relative to controls...almost all found severity of the experience associated with increased frequency of severity of physical impairment. (1993, p. 226)

A negative health impact may be due to the impact of the disastrous event and also to the stress associated with a series of adverse life events that follow, such as financial hardship. The life stress/dysfunction relationship became widely studied following the 1997 publication of the Social Readjustment Rating Scale by Holmes and Rahe. Tuberculosis, diabetes, arthritis, cancer, and myocardial infarction have been found to be related to life events. Minor physical

illnesses such as colds and flu can be the result of life stress, as well as exacerbated pre-existing physical conditions. Immune functioning is compromised by stress. Hovanitz closed by emphasizing the value of relaxation training and exercise along with coping skills taught when facilitating a debriefing for the survivors of a disaster.

George Everly (1995) coined the term psychotraumatology, and defined it as the study of psychological trauma--the study of the factors and processes that exist before, during and after a psychological traumatization. Everly suggested that two primary psychiatric disorders result as a response to exposure to a traumatic stressor: posttraumatic stress disorder (PTSD) and acute stress disorder. The primary difference between PTSD and acute stress disorder is that the latter may only last from 2 to 30 days. Everly listed the major factors that augment and mitigate the risk of PTSD.

Augmenting Factors	Mitigating Factors
1. Number of traumatic events	1. Level of pre-trauma preparation
2. Severity or magnitude of the traumatic events	2. Support resources available
3. Personal relevance of the traumatic events	3. Speed of implementation
4. Preexisting risk factors	

(Everly, 1995, p.10)

As other theorists have suggested, Everly argued that PTSD symptoms are due to neurologic hypersensitivity; PTSD is a disorder of arousal. As do other theorists, Everly focused on psychological hypersensitivity, the cognitive appraisal given to a situation which increases, diminishes or sustains its impact. Many theorists when discussing the physiological response to trauma quote Hans Selye regarding stress and distress or "somatic wear and tear." As Everly continued descriptions of workers in long-term recovery efforts, he suggested, "One such source of trauma is continued sensory exposure to disaster damages. Sights, sounds, and smells continue to keep the disaster alive for many long months and, sometimes, years" (1995, p. 171).

Mitchell and Everly (1995) broadened the definition of the clinical impact of a traumatic event beyond PTSD to include psychotic reactions, dissociative disorders, adjustment disorders and acute stress disorders. Like other authors, Mitchell and Everly believed many victims will suffer from the ill effects of posttraumatic stress, but will not meet all of the diagnostic criteria for PTSD. They stated,

> The reiterative nature of the disorder is nothing less than a potentially never-ending effort to make sense out of the world in face of traumatic evidence that one's worldview

> is inadequate and, therefore, no longer protective. (1995, p. 40)

Trauma theories all discuss both immediate stress and its subsequent neurological impact. Most speak to the need for a reorganization of how the individual sees him or herself after a traumatic event. A common theme when exploring the range of impact of a traumatic event includes considering preexisting, concurrent and subsequent factors for each individual. Ways to mitigate the impact of traumatic stress include adjustment of cognitive frameworks, telling the experience numerous times, exercise, social support and education regarding signs and symptoms of stress, grief and loss.

Primary differences between models appear in relation to the importance given to the external event and environment versus intrapsychic processes. And, some models more clearly predict physical health sequela, while others are more limited in their perspective in this area.

Crisis Intervention

A number of companies are responding to trauma in the workplace by providing critical incident stress debriefings. This type

of intervention is new within the past 15 years, but is based on the components of crisis intervention theory and practice, which has existed since the 1950s.

Representing most crisis intervention theorists, Rapaport (1967) defined a crisis as a disruption of homeostasis. She stated that a crisis can be perceived as a challenge, loss, or three interrelated factors to produce a crisis state: 1) A hazardous event; 2) A threat to life goal; and 3) An inability to respond with adequate coping mechanisms. Rapaport (1967) asserted that the disruption of traditional coping mechanisms and the increase in tension the individual experiences make the person more amenable to intervention. Because the individual is so emotionally accessible (s)he experiences the help as more effective. This is a common theme throughout the literature on crisis intervention theory.

Pitcher and Poland (1992) summarized crisis intervention literature by stating,

> A few points are consistent. One is that it is the perception of the individual that defines a crisis--not the event itself. Second, the individual in crisis has a very difficult time negotiating life while in this crisis state, however brief is that state. Third, a crisis state is not seen in itself as psychopathology, nor is it chronic. Crisis is a "normal" reaction to an "abnormal" stressor. (p. 9)

Rogers (1993) summarized the crisis intervention literature by stating:

> 1) Environmental pressures can overwhelm an individual's ability to cope; 2) Help should be provided in close proximity in time after an overwhelming event as it is the disorganization of crisis that makes an individual more amenable to help; and 3) The nature of the help is focused on the coping needs that arise from the precipitating stressor. (p. 36)

One crisis intervention theory is that of Hermann. It has three main elements summarized by Billings, Milburn and Schaalman (1980), that are similar to what individuals experience during a violent incident.

> Threat is a potential **hindrance** to some state or goal desired by the unit and only occurs if the decision makers recognize it and believe that it will hinder attaining goals. **Decision time** is short when the situation will be altered in the near future, after which no decision can be made or the decision can be made only under less favorable circumstances. **Surprise** refers to a lack of awareness by the decision makers that the crisis situation is likely to occur but is not equated with the lack of a planned response to the situation. Even if such a plan exists, the unit can still be surprised and, presumably, a crisis created. In Hermann's model, all three attributes must be present in order for a crisis to exist. (p. 301)

Many authors, including Billings, Milburn and Schallman, proposed that the degree of perceived crisis is a function of the perceived value of potential and probable loss and time pressure. Also, there is

agreement that when a crisis situation is anticipated, even in general terms, it evokes a weaker emotional response than situations which were totally a surprise. Therefore, planning lessens the perceived crisis.

Auerbach and Kilmann (1977) summarized the crisis intervention theory literature by stating,

> Briefly, across conceptual models, there seems to be general agreement that crisis is a response state characterized by high levels of subjective discomfort at which the individual is at least temporarily unable to emit the overt or covert behaviors required to modify the stress of his environment. Crisis reactions may be elicited by a range of stressful life situations, none of which are crisis inducing on a priori ground. (p. 1189)

In discussing practice applications, Auerbach and Kilmann stated,

> Crisis intervention emphasizes dealing with ordinarily adequately functioning individuals who are responding with disabling levels of anxiety to discrete environmental stressors, as opposed to chronically maladjusted individuals whose behavior seems to stem from a continuing psychiatric disorder. (1977, p. 1190)

Crisis intervention techniques cover a wide range of procedures, but several factors have been emphasized as distinguishing crisis intervention from long-term psychotherapy. Crisis intervention focuses on the resolution of immediate problems and emotional

conflicts, not restructuring personality. There is a high level of therapist activity, including mobilizing other resources, and an emphasis on a minimal number of brief contacts.

Common themes in the area of crisis intervention practice include a focus on facilitating the individuals in regaining control over aspects of their lives, education regarding grief and loss, problem-solving regarding specific situations and mobilizing support systems. What is clear from a review of practice techniques is that even providing the illusion of control enhances adjustment to a negative situation. Early experience in controlling trauma may protect individuals from experiencing helplessness when faced with an inescapable situation.

In summary, the concepts and practice application points derived from the area of crisis intervention that are now embedded in the models of critical incident stress debriefings include:

- A crisis is not pathology,
- A crisis is a normal reaction to an overwhelming stressor,
- An unanticipated crisis evokes a stronger negative response,
- The degree of perceived crisis is a function of the individual's loss,

- Individual perception or cognitive appraisal exacerbates or lessens the crisis impact,
- An individual is more open to help due to crisis,
- An individual is unable to respond with usual coping mechanisms,
- Debriefings have a high level of facilitator activity,
- Debriefings have a minimal number of contacts,
- Facilitators focus on the individual's subjective discomfort, including issues of grief and loss,
- Facilitators focus on individuals regaining a sense of control over their lives,
- Facilitators provide education regarding grief/loss and ways to cope, and
- Help is provided in close proximity to the event.

Critical Incident Stress Debriefings

There is agreement in the literature that debilitating psychological problems can result if critical incident stress is left untreated and the majority of individuals who participate in a critical incident stress debriefing program experience some immediate relief which is helpful in their work and personal life. Furthermore, when

help is needed it is most useful if it is provided as soon as possible. (Pitcher & Poland, 1992)

> Many of the theorists in crisis intervention literature assume that long-term pathology can result from poorly resolved crises. If the individual copes in a manner that is counterproductive in the long run, then he or she not only becomes entrenched in coping habits that are likely to perpetuate future crises, but may also have difficulty negotiating the developmental tasks of that portion of his or her life. Another possibility is that the individual may "get stuck" in the crisis state, an alternative that could lead to serious long-term depression or psychological malfunctioning. (Pitcher & Poland, 1992, p. 126)

Formalized critical incident stress debriefings (CISDs) were first employed in the wake of workplace trauma in the 1980s as a way to offer immediate intervention. While the Mitchell model of critical incident stress debriefings is most widely used with emergency personnel, many types of interventions are available and have been applied in a wide range of social settings.

Much data in nursing and psychology journals suggests that debriefings mitigate the impact of stress. Clark and Friedman (1992) stated that emergency workers are affected physically and emotionally by critical incident stress, and that debriefings conducted by trained team members are an effective method to mitigate the impact of critical incident stress. Manton and Talbot (1990) surveyed 172

emergency personnel and reported that debriefings reduced symptoms in almost all personnel. The effectiveness of the debriefings was found to derive, in large part, from talking, and in particular talking with others who experienced the same event. Smith and De Chesnay (1994) demonstrated that critical incident stress debriefings were perceived as helpful by the officers in alleviating symptoms of posttraumatic stress disorder after violent incidents.

The most well-known model of critical incident stress debriefing was developed by Jeffrey Mitchell. It outlines four general stages or steps (Mitchell & Everly, 1995):

Stage 1 The introduction sets the stage and tone for the debriefing and establishes rules for the discussion.

Stage 2 In the fact phase participants describe what happened during the incident.

Stage 3 In the thought phase participants discuss their most prevalent thoughts during the incident.

Stage 4 In the reaction phase group members discuss the worst elements of the critical incident.

Stage 5 In the symptom phase attendees describe their symptoms of distress during or after the critical incident.

Stage 6 During the teaching phase the facilitators provide information, suggestions and education about how to reduce the impact of the stress.

Stage 7 In the final phase of re-entry, questions are answered, closure is provided on open issues and summary comments are provided by the facilitators.

While the Mitchell model was primarily designed for emergency services personnel, the Lewis model (1994) presented a version designed for a broader application possibly more conducive to private industry, Lewis cited the following stages:

- Greeting,
- Introduction,
- "Paint the Picture" exercise,
- Reaction phase,
- Education phase,
- Closing phase, and
- Follow-up phase.

While Mitchell proposed rigidly defined steps, each of which he believed are critical, Lewis' critical incident stress debriefing groups have a feel more similar to a psychoeducational process group with less

structure. Like other forms of psychotherapeutic interventions, perhaps the critical incident stress debriefing, whether done by a peer emergency services worker, therapist or parent, will be just as effective as long as there is caring and support demonstrated. It may be essential for companies after a critical incident to do "something" to demonstrate their concern for the employees' welfare, with the "what" being less critical.

Manton and Talbot (1990) designed a specific debriefing process for those who work with victims of armed robberies. It is based on the premise that what is critical after a robbery is an early intervention to "allow for containment of the victim's feelings and the expression of feelings in a safe supportive environment" (p. 509). Manton and Talbot stated that this intervention offers protection to help the person come to terms with the traumatic event, prevents a phobic reaction from developing and identifies potential longer-term problems.

These interventions take individuals from the "shock" phase through to "acceptance" in a group or individual setting. Contextual issues are reported to be very important, including, for example, a robbery in the context of the bank and community. Manton and Talbot addressed the fact that the workplace is a preexisting group that has

established boundaries, levels of functioning, leadership styles, gender roles, all of which affect the reaction to the robbery and how the intervention should be handled. Similarly to other theorists, these authors recommended debriefings also for the facilitators of debriefings.

Most recently, the literature suggests that a company have a broad crisis management plan that is delineated before a violent event actually occurs (Mantell & Albrecht, 1994). Mantell and Albrecht suggest that the workplace violence response plan be a part of an ongoing review of the mental health of an organization. They stated,

> This involves the use of prescreening for potential new hires, the creation of a humane working environment, safe and legal discipline and termination procedures, and the offer of counseling for an employee who requests it. (Mantell & Albrecht, 1994, p. 232)

Mantell and Albrecht suggested working with an outside mental health professional or the company-sponsored employee assistance program at the time of crisis. They cautioned that the media will always want to know what the company is doing for the survivors, and that a company had better be prepared to offer an answer that clearly demonstrates employer concern. This is also a common theme in the literature.

The primary difference in the models described above is in their rigidity of steps, breadth and preventive nature as an overall focus. The Mitchell model is a very linear, well-defined intervention that focuses on what individuals need posttrauma, whereas Mantell and Albrecht stated that a workplace violence prevention plan should be part of a proactive review of the organization's mental health. Some models advocate a group intervention as opposed to an individual intervention, but all models focus on grief/loss and take individuals from the "shock" phase through to the "acceptance" phase.

The Impact of Mental Health on Productivity

As stated earlier, trauma can have a profound impact on individuals physically, emotionally and psychologically. With or without physical problems due to trauma, an individual's attendance, productivity and company loyalty may be affected. While there is little direct evaluation of workplace violence on productivity, some related literature seems predictive.

In a study of general mental disorders, Von Korff (1996) reported, "impaired occupational role functioning, increased costs of medical care and family dysfunction" (p. 1). He stated that individuals with even one mental disorder have over a 30% work role disability,

two mental disorders resulted in a 50% reduction in productivity. He clearly demonstrated the difference between the health care costs of patients with a diagnosis of depression versus a control group. A depressed patient costs two times as much as a control group member.

Von Korff (1996) suggested, "collaborative care," including education, support and training in behavioral management as ways to reduce health care costs. This broad-based care, similar to the components of critical incident stress debriefings, resulted in a two-to-one savings for the company. United HealthCare's employee assistance division purports,

> The total annual economic cost of mental illness is estimated to be $104 billion. This figure includes $43 billion for direct treatment and support costs, $47 billion for morbidity costs (that is, reduced or lost productivity), $9 billion for mortality costs (lost productivity due to death), and $5 billion in other costs (such as caregiver service). Mental health problems can also be a comorbidity factor which indirectly contributes to utilization of medical care and services. A study of over 14,000 employees at Aetna found higher physical health benefits utilization among persons with a mental health diagnosis. (1996, p. 2)

A meta analysis of 58 studies regarding the cost offset effect of mental health treatments on medical utilization showed (Primary Care Behavioral Healthcare Summit, 1996, p. 110):

- Eighty-five percent decrease in medical utilization following psychotherapy.
- Cost savings greater for inpatient than outpatient utilization.
- Seventy-three percent decrease in hospital utilization.
- Twenty-three percent decrease in outpatient utilization.
- Cost offset greater for patients over 55 years of age.

Further describing the economic impact of mental health, Donatelle and Hawkins (1989) stated,

> The economic impact of stress was calculated in terms of such things as diminished productivity, absenteeism and direct medical costs, and was estimated to cost this country $50-$75 billion a year. This figure is now estimated to be in excess of $150 billion, according to Dr. Paul J. Rosch, President of the American Institute of Stress. Rosch estimates that stress-related disorders and claims are the major factor in escalating health care costs, which exceed $1 billion a day. (p. 20)

Donatelle and Hawkins developed a Model of the Stress Claims Chain of Events (1989). This model described how personal, environmental, and organizational dysfunction, such as a critical incident in the workplace, could cause injury, illness or disability resulting in a stress claim (Donatelle & Hawkins, 1989). Phase I of their model focused on dysfunctional personal behaviors,

environmental conditions, and organizational activity that leads to a stress claim. Phase 2 highlighted job dissatisfaction, depression, substance abuse, low productivity, and absenteeism, to name a few outcomes of phase 1. Phase 3 focused on injury, illness, and disability, and phase 4 represented the resultant stress or disability claims.

Research regarding domestic violence has also suggested important employer costs. A 1985 survey of more than 120 women in support groups in Minnesota showed the following impact of domestic violence in the workplace (Jensen, 1996, p. 4):

Prohibited from working by abuser	33%
Missed work	55%
Reprimanded for absenteeism	44%
Late to work or left early	62%
Harassed at work by abuser	56%
Lost job	24%

> Battering costs U.S. businesses $3 billion to $5 billion a year in absenteeism, compromised productivity, turnover, excessive use of benefits (especially health insurance) and time spent coping procedurally with work problems. (Minnesota State Bar Association, 1996, p. 4)

In one more direct evaluation, the Northwestern National Life Insurance Company (1993) cited the following data from workplace attack victims:

- Seventy-nine percent stated it affected them psychologically.
- Forty percent stated it disrupted their work life.
- Twenty-eight percent stated they became physically injured or sick.
- Fifteen percent said there was no negative effect.

Employees who were threatened, but not physically attacked, stated that they were affected psychologically and their work life was disrupted almost as much as those who were actually attacked.

The Bureau of Labor Statistics (Minnesota State Bar Association, 1996) reviewed the number of days away from work in private industry because of a violent act. The median number of days away from work due to a shooting was 30, stabbing was 28, and a beating was 5 days.

Cost Offset of Company-sponsored Programs

One of the original studies in the area of cost savings of company-sponsored general mental health programs is the McDonnell Douglas Corporation study, published in 1989. Absenteeism and

medical claims data were studied from 1985 through 1988 for those employees who had been treated for alcoholism, chemical dependency or mental illness, but who had chosen not to use the employee assistance program (EAP). These were compared with records for those who were not treated for any of the conditions mentioned above. A further comparison of the experience of those that did not access the EAP with those that did allowed for an analysis of how EAP services influenced absenteeism and medical claims cost.

This study demonstrated, over the course of 4 years, that the employees treated for chemical dependency incurred 88 excess days of absenteeism. Fifty excess days of absenteeism were incurred for employees treated for mental illness. They also demonstrated that for at least 2 years prior to a diagnosis of chemical dependency or a psychiatric illness, the impaired employee had significantly higher average medical claims costs ranging from $7,500 to $17,850.

The McDonnell Douglas employee assistance program saved the company about 40% more days in absenteeism for those employees treated for psychiatric and chemical dependency diagnoses. The assistance program also produced an 81% reduction in employee turnover. And, possibly most significantly, total 4-year costs in

medical claims were over $7,000 lower than for those who did not use the assistance program.

In the McDonnell Douglas Corporation study, Alexander and Alexander (1984, p. 14) stated,

> The results presented in the foregoing section clearly demonstrate the effectiveness of the MDC EAP in managing employees with behavioral illness. EAP clients incur significantly lower medical claims costs for both themselves and their families. Of actual importance are the reductions in absenteeism and employee turnover effected by the program.

Although not analyzed separately, critical incident stress debriefings are often part of services offered by an employee assistance program, with one intervention being one-to-one and the other in a group setting. In the McDonnell Douglas Corporation study, Smith and Mahoney stated,

> Based on the study results, the offset value of EAP services for these individuals over the next three years will be $5.1 million. $2 million will be saved in employee medical claims. Savings on dependent medical claims will account for an additional $2.3 million. Absenteeism over the coming four years will be reduced by 6,121 days producing an additional $.8 million in savings. (1989, p. 18)

On the other end of the continuum, there are just as many authors who disagree that company-sponsored programs save money. Conrad, Conrad, and Walcott-McQuigg stated,

> A careful examination of the literature reveals that claims about the effectiveness of work site health promotion programs are, in general, based on flawed studies containing serious threats to the validity of their conclusions. (1991, p. 112)

They went on to state,

> Because social science research cannot determine what is true but only what has not been falsified, validity is viewed as a matter of degree. In other words, work site health promotion studies can never prove that an intervention caused an effect. (1991, p. 114)

Other authors have agreed that the workplace is a "messy" site to do research. Problems include employee turnover, difficulty in identifying control groups, and finding a site where randomization of subjects is permitted. And, many employers want quick results, eliminating long-term studies. Fielding (1988) stated,

> Merging of health risk information, programmatic data and results and the other health-related databases such as health benefits, disability, workers' compensation and absenteeism, is often impossible and at best very resource-intensive, requiring the confluence of several technical and scientific disciplines. In addition, corporate databases are often either in manual form, do not include the required data elements of interest, may use different employee identifiers and/or may not meet research standards for uniformity or completeness. (p. 113.)

Fielding went on to report the positive results from two different studies, and emphasized that the percentage of "at risk" populations that will be impacted by a health promotion program is very important. Fielding (1988) summarized by saying,

> But, if the existing literature on economic benefits directly attributable to workplace health promotion programs is not entirely convincing, the reason may be more the scope, design and methodology of most studies than the lack of results that can be obtained with a state-of-the-art comprehensive program evaluated over a sufficient period. (p. 115)

Clearly, well-constructed research on the human and financial cost impact of a traumatic event and the effect on productivity and absenteeism is required. The present study examines the indirect cost impact of a traumatic event and the subsequent helpfulness of company-sponsored critical incident stress debriefings to the individual employee and employer.

Chapter Three

Statement of the Problem

Violence in America is increasing at an alarming rate, and it spills over into the workplace. Therefore, the number of traumatic events to which an employer must respond appropriately is growing as well. Companies most at risk for violent incidents are those where the workers and the general public regularly interface, most particularly in those businesses (e.g., taxicab drivers, convenience stores, service stations, banks) where there is also cash available. These violent events have a profound impact on the individual victims and the overall functioning of the company involved.

Homicide is currently the third leading cause of death in the workplace (Castillo & Jenkins, 1994). There is an average of three murders in the workplace each day, over 1,000 murders by co-workers and former workers each year (Dietz, 1994). While the actual number of co-worker murders has not increased in the past 15 years, violence in the community has, nonetheless, moved into the workplace, necessitating such responses as violence prevention programs and critical incident stress debriefings. There has clearly been an increase,

as well, in workplace murders for those in the service professions; and one study noted that the risk of violent behavior among those who were laid off from their jobs was nearly six times higher than the rate of their employed counterparts (Catalano, Dooley, Norvaco, & Wilson, 1993). When violence occurs at work, management is now expected to take appropriate and timely steps to address the impact of the event.

Purpose of the Study

One focus of this study is an examination of the cost impact of a traumatic event to a company particularly in the areas of employee health problems, lowered productivity and employee turnover. Another is an examination of the perceived benefit of critical incident stress debriefings to the employees and managers who choose to participate in them. While a literature review describes debriefings as helpful in mitigating the impact of stress, this research focuses on identifying those specific aspects of a debriefing that are perceived as being most helpful by the participants. Demonstrating the impact of a traumatic event on employees, the effectiveness of debriefings in mitigating this impact and identifying the most helpful aspects of debriefings in the minds of recipients, should increase corporate

commitment and success in providing employees with the proper assistance after a traumatic event.

Research Hypotheses

The research hypotheses were derived from a review of the literature on workplace violence, crisis intervention, human response to trauma, critical incident stress debriefings and the cost offset of company-sponsored programs. This study addresses the following hypotheses:

1. There is indirect and direct cost impact to a company after a traumatic event in the form of health problems, lowered productivity, higher absenteeism and employee turnover.
2. Those who choose to attend a post-event critical incident stress debriefing find it contributes positively toward their recovery process.
3. Managers in particular find the debriefing valuable as a way both to help employees recover post-robbery and in their own personal recovery process.

Definition of Terms

1. Critical incident: A crisis event. An event which has a stressful impact sufficient enough to overwhelm the usually effective

coping skills of either an individual or a group. A sudden, powerful event outside the range of ordinary human experience which produces a strong emotional turmoil and a temporary state of psychological disequilibrium (Mitchell & Everly, 1995).

2. Critical incident stress debriefing: An organized approach to the management of stress responses conducted in a group setting and resulting from an emergency situation.

3. Crisis intervention: A procedural protocol dealing with ordinarily adequately functioning individuals who are responding with disabling levels of anxiety to discrete environmental stressors. (Auerbach & Kilmann, 1977)

4. Workplace violence: An act of violence initiated by a current or former co-worker or customer that occurs at a place of work.

5. Cost impact: The impact of an event, direct or indirect, that costs a company financially in the form of increased employee absenteeism, turnover, health care utilization and lowered productivity.

Assumptions

This research is predicated upon several key assumptions regarding the area to be investigated.

1. After people have experienced a traumatic event, they will suffer a discernible physical and emotional impact.
2. The more severe the event experienced, the higher the stress, the greater the subsequent health and job related problems that impact a company.
3. Participants in a debriefing will be able to articulate what they see as most helpful in the group debriefing process.
4. Although people have been traumatized and a period of time has elapsed since the incident occurred, they will recall sufficient information to accurately answer questions.

Limitations

The present study may be limited in a number of ways:

1. Self-selection of those responding to the survey may result in a response bias.
2. Participants may underreport symptoms and issues.
3. Individuals may not return the survey.

Significance of the Study

This study touches upon several important theoretical and practical issues in the areas of workplace violence and crisis intervention. As noted above, the frequency of violent incidents in

companies where the public and private sector interface has dramatically increased in recent years. Further study and research into the impact of a traumatic event on employees will help companies make better decisions regarding approaches that facilitate recovery and mitigate the cost of such events. Critical incident stress debriefings are frequently utilized as a form of crisis intervention and offer an opportunity to observe the efficacy of supportive therapeutic techniques in close proximity to a traumatic event.

There is a growing acceptance of the critical incident stress debriefing technique as a way to mitigate the impact of traumatic stress. While debriefings originated in the field of emergency personnel, they are now utilized frequently in the private sector in response to workplace violence. If it can be demonstrated that employees and managers perceive such debriefings, post-incident, as a helpful tool in the recovery process, if it can be identified from recipients how such tools can best be utilized, companies are more likely both to offer them and use them effectively. The result may thereby be enhanced employee health and productivity.

Chapter Four

Methodology

Sample and Procedures

The sample population of bank employees who were studied all exhibited the following characteristics:

1. Access to Optum Employee Assistance services,
2. Employment at a bank branch that experienced a robbery (or robberies) in 1996, and
3. Managers who had the option to schedule critical incident stress debriefings for employees after a robbery.

The 391 participants solicited fell into cells 1, 3 and 4 in Table 1.

Table 1

Attendance at Critical Incident Stress Debriefings

		Attended Critical Incident Stress Debriefing: Yes	Attended Critical Incident Stress Debriefing: No
Offered Critical Incident Stress Debriefing	Yes	1	3
	No	2	4

These three cells represented people who were:

Category 1. Robbed, offered a debriefing and attended,

Category 2. Robbed, offered a debriefing and did not attend, and

Category 3. Robbed, not offered a debriefing and did not attend.

To maximize the potential of surveying the most individuals who directly experienced a robbery, survey participants were limited to individuals from bank branches that experienced a robbery in 1996. While this may limit the generalizability of the results from this study to employment environments with robbery history, it, nonetheless, allowed for a richer pool of participants experienced in robberies and debriefings.

Feedback on the robbery survey was solicited from bank management and contracted and staff counselors who facilitate debriefings. Their feedback was used to enhance survey clarity and the relevance of survey questions. Initially, an invitation postcard was mailed to the homes of individuals announcing the study and the importance of their participation. Three hundred ninety-one surveys with a cover letter explaining the purpose of the study were mailed to the homes of individuals who worked in bank branches that

experienced a robbery in 1996. A self-addressed, stamped envelope was included with the survey for returns.

Each survey instrument was assigned a number which was stamped on the survey. A file was maintained with the names and corresponding survey numbers to track those which were not returned. When a survey was returned, the individual's name was destroyed. Unreturned surveys were followed up with another letter and survey instrument to encourage participation. Surveys were returned directly to the researcher and not to the employee's company, a fact that was noted in the cover letter accompanying the survey instrument to encourage response.

Limitations

Limitations of this study may include:

- Self-selection among those responding to the survey resulting in a response bias.
- Existence of a response bias that resulted in underreporting of symptoms and issues addressed in survey questions.
- Managerial discretion regarding whether to schedule a debriefing after a robbery created an unequal opportunity for all employees (posttrauma) to attend.

Data Analysis

Sampling Issues. Analysis of the sampling process included a calculation of the survey return rate, comparing line and management responses and evaluating the comparative results among participants who attended a debriefing and those who did not.

Survey. The survey consisted of 44 questions including 10 open-ended questions designed to allow respondents to express answers in their own words. The survey instrument was created after an extensive review of the literature on physical and emotional reactions to traumatic events, the impact of health on health benefit utilization and workplace productivity, and critical incident stress debriefings.

The purpose of the study was to solicit information from affected employees regarding the impact of a robbery, (a traumatic event) on their personal and work relationships, mental and physical health, productivity, attendance and usage of health care services. Two parallel purposes of the study were to determine if critical incident stress debriefings were perceived by survey respondents as helpful by line and management staff and how managers might best assist

employees through their recovery process. The results may evidence significant cost implications for companies that experience robberies.

Survey Data. The empirical data from the structured-response items on the survey were analyzed in two steps. The first involved determining the distribution of responses to the survey items for the entire sample of respondents. This provided a descriptive profile of the general results of the study. The second step was to test statistically for possible moderating factors that might have changed the results obtained from the total sample, for example, age, race, gender, organizational position or robbery relevant factors such as the number of robberies an individual experienced or proximity to the robber. In addition, responses to the open-ended items on the survey were analyzed for dominant themes, as well as important or interesting individual comments.

Data Analysis. The data were analyzed using chi-square, t-test, analysis of variance, factor analysis and discriminant analysis statistical procedures. Analyses were conducted comparing respondents who attended a debriefing and those who did not. A factor analysis was conducted to reduce the number of variables in the health

symptoms checklist. For the analysis of variance, the differences were explored using the least significant difference multiple range test to determine how group means clustered.

Two individuals independently coded the qualitative data for each question into themes. Interrater reliability was assessed using the kappa statistic.

The qualitative data were analyzed by completing frequency distributions of the text response items, frequency distribution of the text items after grouping responses to increase the sample size and selected cross tabulations were run where a significant chi-square statistic existed.

Summary Report

The data were summarized in a report that was delivered to the bank customer, without any identifying information of individual respondents providing information regarding to the impact of traumatic events on health, relationships, productivity and use of health care services. The report summarized the differences in these areas for those who attended a debriefing and those who did not and identified the varying results for line and management staff.

Chapter Five

Analysis of the Data

This chapter includes 10 sections describing the survey results. The first describes the study sample, the second the survey design and the third the demographic characteristics of the sample. These sections are followed by a focus on the physical and mental health impact of the robbery, the post-robbery impact at work and the post-robbery recovery process. An analysis of those who chose to attend a debriefing and the respondent evaluations of the impact of debriefings, usage of mental health and medical services, management responses and the qualitative data analysis complete this chapter.

Study Sample

Surveys were mailed to 391 individuals who were reported by the security department of a national bank to have experienced a bank robbery in 1996. These individuals were employed at 42 bank branches in the states of Maine, New York, Colorado, Utah, Oregon and Washington. Two different mailings of the survey yielded 141 responses from robbery victims, a 35% response rate.

Survey Design

There were 44 questions on the survey focusing on respondent demographic information, history with bank robberies, changes experienced post-robbery, post-robbery interventions, critical incident stress debriefings and specific questions for supervisors regarding their decision to schedule a debriefing and how employees were notified. Ten questions were open-ended to allow respondents an opportunity to provide answers to the most relevant study questions in their own words. The symptoms listed in the Diagnostic and Statistical Manual for Psychiatric Disorders-IV for Posttraumatic Stress Disorder were utilized to assess the impact of a robbery on the respondent's physical and mental health.

Data Description

Tables 5, 8 and 9 display column percentages reflecting the grouping of respondents by physical health (Table 5), attendance at debriefing sessions (Table 8) or rated helpfulness of debriefing sessions (Table 9). The narrative results discuss the cross tabulation and chi-square tests. Because the chi-square test does not attribute causation, both column and row percentages are described in the narrative.

Demographic Characteristics of the Sample

Table 2 describes the demographic characteristics of the sample population.

Table 2

Respondent Demographic Data (N=141)

Mean age	39
Age range	20 - 60
Male	15%
Female	85%
Caucasian	87%
Minority	13%
Managers	41%
Line positions	59%
Experienced 1 robbery	37%
Experienced 2 robberies	21%
Experienced 3 or more robberies	42%
Customers present	80%
No customers present	16%
Not sure	4%
Face-to-face with assailant	24%
Same room as assailant	49%
Not in same room	11%
Not working at the time of robbery	16%
Felt a strong threat to personal safety	21%
Felt a moderate threat	15%
Felt a mild threat	27%
Felt no threat	37%
Gun/weapon used in robbery	58%
Shots fired	5%

Physical and Mental Health Impact of the Robbery

Table 3 describes the responses of the survey respondents to items regarding the impact of the robbery on their health and work life. Fifty-one percent of respondents reported worse or much worse productivity post-robbery, 24% worse or much worse physical health, 13% worse or much worse work relationships and 41% expressed less desire to work for their employer post-robbery.

Table 3

Impact of Surveyed Employees Experiencing Bank Robbery

	Much Worse	Worse	No Effect	Better	N
Productivity	12%	39%	47%	2%	130
Stress	21%	47%	31%	2%	130
Physical health	3%	21%	76%	0%	128
Work relationships	1%	12%	62%	25%	129
Personal relationships	1%	11%	78%	10%	129
Desire to work for employer post event	10%	31%	57%	2%	128

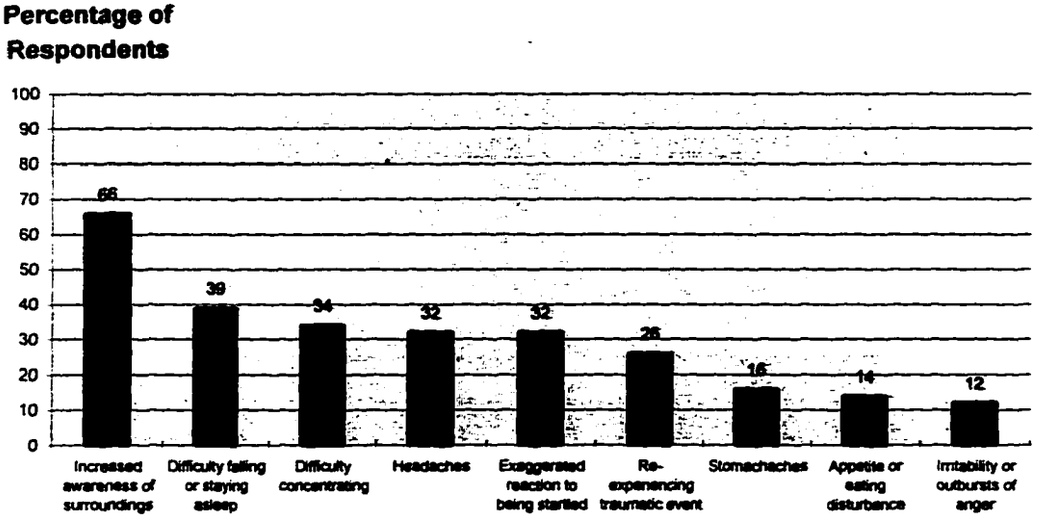
Physical and Mental Health Symptoms Post-robbery

None of the survey respondents reported physical injuries due to the robbery. Headaches (32%), nightmares (32%), sleep disturbance (39%), and difficulty concentrating (34%) were all reported frequently. Most respondents also identified an increased awareness of their

surroundings (66%), while nearly one third reported an exaggerated reaction to being startled, and one quarter reported reexperiencing the traumatic event. The most significant symptoms reported post-robbery are displayed in Table 4.

Table 4

Post-robbery Symptoms As Reported by Bank Employees (N=131)



Symptoms Cluster for Question 22

A factor analysis of the health symptoms checklist extracted three factors. Factor 1 included nightmares, difficulty falling or staying asleep, headaches, increased awareness of surroundings, and exaggerated reaction to being startled. Factor 2 included appetite or eating disturbances, irritability or outbursts of anger, difficulty

concentrating, and stomachaches. Factor 3 included lack of responsiveness to normal activities and people, reexperiencing the traumatic event mentally or physiologically, backaches and avoidance of stimuli associated with trauma. Although there were three principal dimensions, follow-up analysis revealed similar results for other statistical analyses.

Physical Impact Post-robbery

Table 5A displays the results identifying the impact of robbery-related variables on the respondents' physical health.

Table 5A

Post-robbery Physical Health of Bank Employees*

Variables		Worse/ Much Worse Physical Health	No Effect On Physical Health	N
Face-to-face with assailant	Yes	39%	20%	127
	No	61%	80%	
Threat to personal safety	Moderate/strong	58%	29%	128
	Mild/no	42%	71%	
Personal relationships	Worse/much worse	29%	5%	127
	No effect	52%	88%	
	Improved	19%	7%	
Stress	Much worse	58%	9%	128
	Worse	39%	49%	
	No effect/improved	3%	42%	
Desire to keep working for employer	Much less/less	71%	32%	126
	No effect/greater desire	29%	68%	
Post-robbery work relationships	Worse/much worse	17%	10%	127
	No effect	43%	69%	
	Improved	40%	21%	
Productivity	Much worse	32%	5%	128
	Worse	55%	34%	
	No effect/improved	13%	61%	

* All percentages are column percentages and sum to 100% for each variable.

Table 5B

Post-robbery Symptoms of Bank Employees*

		Symptoms	No Symptoms	N
Threat to personal safety	Moderate/strong	45%	9%	130
	Mild/no	55%	91%	
Confronted by a weapon	Yes	64%	33%	91
	No	36%	67%	

* All percentages are column percentages and sum to 100% for each variable.

Those respondents who reported their physical health post-robbery to be worse or much worse had experienced a robbery on average 28 weeks previous versus 35 weeks for those who reported no physical health impact ($t = 2.42$, $df = 120$, $p = .017$). On average, participants who reported their physical health to be worse or much worse experienced a significantly greater number of symptoms (7) than those who stated that the robbery had no impact on their health (2) ($t = 9.70$, $df = 126$, $p < .001$).

The data indicate a relationship between post-robbery physical health and the impact on personal relationships (chi-square = 19.23, $p < .001$). Respondents who reported worse or much worse physical health as a result of the robbery reported a negative impact on their

personal relationships six times as often as those reporting no health impact.

Overall, 70% of the survey respondents reported increased adverse health symptoms as a result of the robbery. The survey data demonstrate a relationship between post-robbery health symptoms and whether a weapon was used during the robbery (chi-square = 6.32 p = .012). Individuals who reported health symptoms as a result of the robbery were more likely to have been confronted with a weapon. Of those who reported health symptoms as a result of the robbery, 64% reported being confronted by a weapon and 36% were not confronted by a weapon. Of those respondents who experienced symptoms as a result of the robbery, 45% reported a moderate to strong threat to their safety, whereas of those respondents who reported no symptoms, only 9% reported a moderate to strong threat to their personal safety. Whether or not an individual experienced health symptoms is related to the extent of reported personal threat (chi-square = 13.19, $p < .001$). The data show that there is a moderate relationship between the extent one thinks his/her personal safety was threatened and the impact on his/her physical health (chi-square = 8.70, $p = .003$). Of

those who reported worse or much worse physical health post-robbery, 16% less people reported none or a mild personal threat (42%) versus those respondents who reported moderate or strong personal safety threat (58%).

There is a relationship between one's physical health post-robbery and one's level of reported stress (chi-square = 37.90, $p < .001$). Fifty-eight percent of respondents who reported worse or much worse physical health post-robbery reported much worse stress compared to only 9% of individuals who did not report an impact on their physical health.

Post-robbery Impact At Work

The data support a relationship between productivity and physical health post-robbery (chi-square = 28.29, $p < .001$). Of those respondents who reported worse or much worse physical health post-robbery, 87% reported worse or much worse post-event productivity. Over twice as many survey respondents who reported worse or much worse physical health post-robbery reported less desire to work for their employer compared to those individuals who did not report a post-robbery impact on health. Physical health post-robbery is related

to how one evaluates one's work relationships post-event (chi-square = 6.61, p = .037). Interestingly, 83% of respondents who reported worse or much worse physical health post-robbery evaluated their work relationships as experiencing no change or improvement. However, it is important to note almost 20% of respondents reported a negative impact on work relationships post-robbery. Respondents reporting worse or much worse physical health also reported worse or much worse relationships at work 17% of the time, no effect 43% of the time, and better work relationships 40% of the time.

The data support a relationship between the perceived helpfulness of the supervisor and the respondent's proximity to the assailant (chi-square = 4.40, p = .036). Sixty-nine percent of respondents who were face-to-face with an assailant reported that their supervisor was somewhat to very helpful in the post-robbery experience, and 31% stated the supervisor made no impact, or made their recovery process worse. Whereas, 46% of respondents who were not face-to-face with the assailant reported that the supervisor was somewhat to very helpful; 54% reported the supervisor made the situation worse, or had no impact on the process.

Post-robbery Recovery

Survey respondents identified a variety of resources that supported their recovery process, from counseling to medical doctors. Eighty-six percent utilized employee assistance counseling and 47% attended critical incident stress debriefings post-robbery. Table 6 describes the use of services post-robbery in the recovery process.

Table 6

Use of Services, Post-robbery, by Bank Employees

	Percent Responding Affirmatively	N
Critical incident stress debriefing	47%	127
Mental health counseling	30%	129
Employee assistance counseling	86%	38
Medical care	5%	129
Community resource	15%	38
Provider paid by insurance (5-8 sessions)	5%	38

Fifty-six percent of survey respondents reported the critical incident stress debriefing to be somewhat or very helpful, and 63% reported co-workers were somewhat or very helpful in the post-robbery recovery process. Forty percent of managers reported supporting employees in their post-robbery recovery process impeded their own recovery.

Table 7 describes what factors were identified as being helpful, impeded, or had no effect on the recovery process (survey question 34).

Table 7

Post-robbery Recovery Factors

	Somewhat/ Very Helpful	Impeded Recovery	No Effect	N
Critical incident stress debriefing *	56%	0%	44%	89
Family/friends	49%	10%	41%	116
Co-workers	63%	6%	31%	116
Supervisor	52%	1%	47%	111
Overall work environment	45%	13%	42%	114
Supporting other employees as a manager	0%	40%	60%	43

* On the other hand, survey question 30, which also asked whether the debriefing helped employees with the recovery process, produced 65 responses distributed as follows: somewhat/very helpful (72%), no effect (26%), and made things worse (2%).

Attendance At Debriefings and Its Perceived Value

Whether to attend a debriefing, once scheduled by the supervisor, was the employee's choice. Table 8 identifies variables which influenced respondent choices to attend a debriefing.

Table 8

Variables Influencing Robbery Victims' Attendance at Debriefing Session*

Variables		Debriefing Session		
		Yes	No	N
Felt personal safety threatened	Strong	36%	10%	126
	Moderate	17%	10%	
	Mild	16%	37%	
	No	31%	43%	
Threatened with a weapon	Yes	73%	44%	89
	No	27%	56%	
Gunshots fired	Yes	9%	0%	108
	No	68%	49%	
	Not applicable	23%	51%	
Productivity	Worse/much worse	66%	38%	126
	No effect/improved	34%	62%	
Post-robbery stress	Worse/much worse	83%	54%	126
	No effect/better	17%	46%	
Physical health	Worse/much worse	36%	15%	124
	No effect	64%	85%	
Work relationships	Worse/much worse	16%	10%	125
	No effect	47%	75%	
	Better	37%	15%	
Desire to continue working for employer	Much less	21%	1%	124
	Less	39%	24%	
	No effect/greater desire to continue	40%	75%	
Used medical/ mental health services	Yes	41%	93%	126
	No	59%	7%	
Used employee assistance services	Yes	54%	2%	124
	No	46%	98%	

* All percentages are column percentages and sum to 100% for each variable.

Table 9 describes the variables that affected the respondents' ratings of the perceived value of the debriefings.

Table 9

Ratings by Robbery Victims of Helpfulness of Debriefing Session*

Variables		Somewhat/ Very Helpful	No Effect	N
Felt personal safety threatened	Strong/moderate	50%	21%	89
	Mild/No	50%	79%	
Health Symptoms	Yes	92%	54%	89
	No	8%	46%	
Threatened with a gun/weapon	Yes	78%	41%	64
	No	22%	59%	
Work relationships post-robbery	Worse/much worse	18%	8%	88
	No effect	41%	77%	
	Better	41%	15%	
Personal relationships post-robbery	Worse/much worse	24%	3%	88
	No effect	64%	92%	
	Better	12%	5%	
Desire to continue working for same employer	Much less	20%	5%	88
	Less	37%	23%	
	No effect/ greater desire	43%	72%	
Used medical/mental health services	Yes	54%	18%	88
	No	46%	82%	
Used employee assistance services	Yes	47%	16%	87
	No	53%	84%	

* All percentages are column percentages and sum to 100% for each variable.

Respondents who chose to attend a debriefing reported twice as many health symptoms (4.7) as those who chose not to attend such sessions (2.2) ($t = 4.71$, $p < .001$). All three health symptom factors produced statistically significant differences when comparing the number of health symptoms of those who chose to attend a debriefing and those who did not; there was no statistically significant difference between the groups on the age variable.

Attendance and Rated Helpfulness of Stress Debriefing

In rating the perceived helpfulness of the debriefing to attendees, age was not found to be a factor. Those who rated the debriefing as having no effect reported an average of 2.3 health symptoms, while those who found it very helpful averaged 5.3 symptoms. In other words, those who found the debriefing to be more helpful also reported more event-related health symptoms.

Fifty-three percent of the male respondents attended a debriefing, while 46% of the female survey respondents attended. This was not a statistically significant difference. The data support a relationship between attendance at a debriefing and the openness of the invitation (chi-square = 7.80, $p = .020$). Of 62 survey respondents,

8% attended the debriefing when it was open to only employees directly affected by the robbery; 29% attended when all employees in the bank at the time of the robbery were invited; 63% reported attending when the debriefing was open to all employees.

There is a relationship between the reported degree of personal threat one experienced during the robbery and whether the individual chose to attend a debriefing (chi-square = 16.95, $p < .001$). Of the respondents who reported experiencing a strong threat during the robbery, 75% attended the debriefing and 25% did not attend. Fifty-nine percent who reported a moderate threat attended a debriefing compared to 41% who did not attend.

The data suggest a relationship between the reported degree of personal threat and how a respondent rated the helpfulness of a debriefing session (chi-square = 9.07, $p = .028$). Seventy-six percent of individuals who reported a perceived strong personal threat found the debriefing to be somewhat or very helpful, and 75% of those individuals who reported a moderate threat found the debriefing somewhat or very helpful.

Individuals who chose to attend a stress debriefing were more likely to have been threatened with a weapon during the robbery in comparison to those who chose not to attend a stress debriefing (chi-square = 7.82, p = .005); Of those respondents who reported the stress debriefings to be somewhat or very helpful, 78% reported a weapon used during the robbery, whereas only 22% of respondents who evaluated the debriefing to be somewhat or very helpful reported no weapon being used during the robbery. The data support a relationship between the rated helpfulness of the stress debriefing and whether a weapon was used during the robbery (chi-square = 9.43, p = .002).

The data support a relationship between one's ability to be productive post-robbery and one's decision to participate in a stress debriefing (chi-square = 9.32, p = .009). Of those respondents who reported much worse productivity, 60% attended a debriefing, and 59% of those who reported worse productivity attended a debriefing, whereas, only 32% of respondents who reported no effect or better productivity attended a stress debriefing.

Participation in a stress debriefing is related to the level of reported post-robbery stress (chi-square = 11.46, $p < .001$). Eighty-three percent of respondents who chose to attend a debriefing reported worse or much worse stress levels after a robbery, whereas only 54% of those who did not participate in a debriefing reported worse or much worse post-robbery stress levels. The data reveal a relationship between respondents who chose to attend a stress debriefing and their physical health post-robbery (chi-square = 7.29, $p = .007$). Sixty-eight percent of those reporting worse or much worse physical health post-robbery chose to attend a debriefing, whereas only 40% of those who reported no physical effect post-robbery chose to attend a stress debriefing.

The data suggest a surprising relationship between attendance at stress debriefings and the post-robbery impact on work relationships (chi-square = 10.65, $p = .005$). Sixteen percent of respondents who chose to attend a debriefing reported worse or much worse work relationships, whereas 47% reported no effect, and 37% reported better post-robbery work relationships. The data also support a surprising relationship between ratings of helpfulness of the stress

debriefing and impact on post-robbery work relationships (chi-square = 11.55, p = .003). Of respondents who reported their work relationships to be worse or much worse, or better, evaluated the stress debriefings to be somewhat or very helpful, almost twice as often as those who reported no impact on work relationships.

Similar findings occurred for perceived changes in personal relationships. Those respondents who stated that their personal relationships were better or worse after the robbery found the debriefings to be more helpful than those who reported no change in their personal relationships (chi-square = 9.99, p = .007).

A relationship between attendance at debriefings and desire to continue working for an employer, post-event, was identified (chi-square = 19.56, p < .001). Ninety-two percent of respondents who reported much less desire to continue working for their employer attended a stress debriefing session, whereas only 32% of respondents reporting no effect or greater desire to continue working for their employer post-robbery attended a debriefing. Ratings of helpfulness regarding the debriefings related to the reported degree of desire to continue working for their employer post-robbery (chi-square = 8.30, p

= .016). Eighty-three percent of respondents reporting much less desire to continue working for their employer post-robbery rated the stress debriefing as somewhat or very helpful, whereas only 43% of respondents reporting no effect or greater desire to work for their employer rated the stress debriefing as somewhat or very helpful.

The data support a relationship between reported adverse health symptoms post-robbery and attendance at stress debriefing sessions (chi-square = 9.40, $p = .002$); the more post-robbery symptoms one reports, the more likely one is to attend a debriefing session. Similarly, evaluations of helpfulness of debriefing sessions is associated with reported post-robbery health symptoms (chi-square = 17.14, $p < .001$). Over three times as many respondents who reported post-robbery health symptoms evaluated the stress debriefing as somewhat or very helpful (69%) as compared to only 18% of those who reported no health symptoms evaluated the stress debriefing session as somewhat or very helpful.

Use of Mental Health/Medical Services

The data demonstrate that post-robbery use of medical and counseling services is associated with the decision to attend a stress

debriefing session (chi-square = 38.94, $p < .001$). Of those respondents who used counseling or medical services, 88% attended a stress debriefing session, whereas only 28% of those who did not use counseling or medical services did attend stress debriefing sessions. The data support the association between impact on productivity post-robbery and use of counseling or medical services (chi-square = 11.34, $p < .001$). Of those who used counseling or medical services, 73% reported worse or much worse productivity, whereas only 40% of those who did not use counseling or medical services reported worse or much worse productivity.

The data also support a relationship between utilization of medical/mental health services and evaluation of the debriefing session as being helpful (chi-square = 11.53, $p = .001$).

The use of counseling services as a consequence of the robbery is associated with participation in a stress debriefing session (chi-square = 36.35, $p < .001$). Fifty-eight percent of survey respondents who reported attending a debriefing also reported using counseling services as a consequence of the robbery; comparatively, only 8% of those who did not attend a debriefing reported utilizing counseling services.

The data suggest a relationship between respondents being confronted with a weapon during a robbery and the decision to seek mental health or medical services (chi-square = 8.88, $p = .003$). Forty-two percent of respondents who reported being confronted with a weapon during the robbery sought mental health/medical services; only 13% of individuals not confronted with a weapon sought such services.

The data indicate a relationship between post-robbery use of employee assistance services and attendance at a debriefing session (chi-square = 43.98 $p < .001$). The data establish a relationship between use of employee assistance services and positive evaluations of the helpfulness of critical incident stress debriefings (chi-square = 9.35, $p = .002$). Of those who used the employee assistance program, 79% evaluated the debriefing session as somewhat or very helpful, whereas only 45% of those who did not seek employee assistance services rated the debriefing session as somewhat or very helpful.

The data support relationship between participation in a debriefing session and use of post-robbery medical care (Fisher's Exact Test, $p = .009$). Of 129 survey respondents, less than 5% used medical

care as a consequence of the robbery, and 95% did not. One hundred percent of those who used medical care also participated in a stress debriefing, whereas 44% of those who did not use medical care reported participating. Ten percent of those who participated in the debriefing used medical care as a consequence of the robbery, whereas 90% did not use medical care.

Discriminant analyses were completed for questions 28, 30 and 34c, focusing on whether an individual chose to attend a debriefing and how helpful it was in the recovery process. This analysis used all potential independent variables, including the post-robbery variables. For questions 28 and 30 I first entered all variables that existed prior to the incident and this analysis, then allowed comparison with post-incident variables.

The discriminating variables for whether an individual chose to attend a debriefing (question 28) were to what extent one thought one's personal safety was threatened during a robbery, the total number of robberies one's bank branch experienced in 1996, and whether any mental health care or psychological counseling was used as a consequence of the robbery. Based on knowing a person's response to these three questions, correct predictions can be made as to whether

he/she will go to a debriefing 77% of the time. This is a 23% increase in predictive ability over the number of survey respondents who said they attended a debriefing session (chi-square = 30.22, df = 3, p < .001).

The discriminating variables for whether a participant found a debriefing session helpful in coping with the robbery (question 30) were overall health symptoms, health symptoms (Factor 2, which included appetite or eating disturbance, irritability or outbursts of anger, difficulty concentrating and stomachaches), the use of any mental health care as a consequence of the robbery, and how helpful co-workers were perceived to be in the post-robbery recovery process. Based on these discriminating variables, one can correctly predict the perceived value of the debriefing 79% of the time, but this is only a minimal improvement (2%) over the number of survey respondents who said they found the debriefing very or somewhat helpful (chi-square = 23.45, df =4, p < .001).

Analyses using only variables drawn from the data documented as being prior to the debriefing, to determine debriefing attendance, demonstrated that the discriminating variables were questions 12 and 8 (i.e., to what extent one felt one's personal safety was threatened

during the robbery and the total number of robberies one's bank branch experienced in 1996). Based on knowing people's response to those two questions, one can correctly predict whether they will go to a debriefing 71% of the time. This is a 15.5% increase in predictive ability. No pre-incident variables were predictive of perceived value of debriefings.

Management Responses

As shown in Table 10, managers reported experiencing significantly more robberies (3.7) than those in nonmanagerial positions (2.3) ($t = 2.86$, $df = 78.14$, $p = .005$). The data support a relationship between managerial positions and worse or much worse productivity post-robbery (chi-square = 4.58, $p = .032$). In addition, the data show a relationship between overall work environment in the post-robbery recovery process and managerial status (chi-square = 10.09, $p = .017$). Nineteen percent of managers reported that their overall work environment made the post-robbery recovery process worse; 51% identified no effect, while 30% reported it to be somewhat or very helpful in the recovery process. The data support a relationship between managerial position and ratings of helpfulness of

the debriefing sessions (chi-square = 8.70, p = .003). Ninety-three percent of managers rated the debriefing as worthwhile, whereas 56% of employees in non-management positions rated the debriefing session as worthwhile.

Table 10

Management Responses to Post-robbery Survey Questionnaire

		Managers	Non-managers	N
Average number of robberies experienced		3.7	2.3	123
Robberies managers experienced	1	19%	50%	123
	2	22%	18%	
	3 or more	59%	32%	
Post-robbery productivity	Worse/much worse	62%	42%	121
	No effect/improved	38%	58%	
Impact of overall work environment on post-robbery recovery	Made it worse	19%	10%	106
	No effect	51%	35%	
	Somewhat/very helpful	30%	55%	
Rating value of debriefing	Worthwhile	93%	56%	51
	Did not know	7%	44%	

Qualitative Data

There were 10 open-ended questions contained in the survey instrument intended to allow respondents to provide answers to a number of key questions in their own words. Open-ended questions

were asked regarding how the robbery affected the respondent's ability to function on the job, the perceived helpfulness of the debriefing for the respondent, factors that helped or posed an obstacle to recovery and how management and employee assistance programs might better help employees cope with the aftermath of a robbery. Three questions were specifically addressed to supervisors regarding their decisions to schedule a debriefing session and how employees under their supervision were notified.

Two individuals independently coded the qualitative data for each question into themes. Interrater reliability was assessed using the kappa statistic. The kappa statistics were as follows:

Question	Kappa	N
27	0.678	100
31	0.677	41
32	1.0	29
33	1.0	13
35	0.695	56
36	0.726	89
37	0.528	64
38	0.716	26
39	0.793	23
40	0.926	18

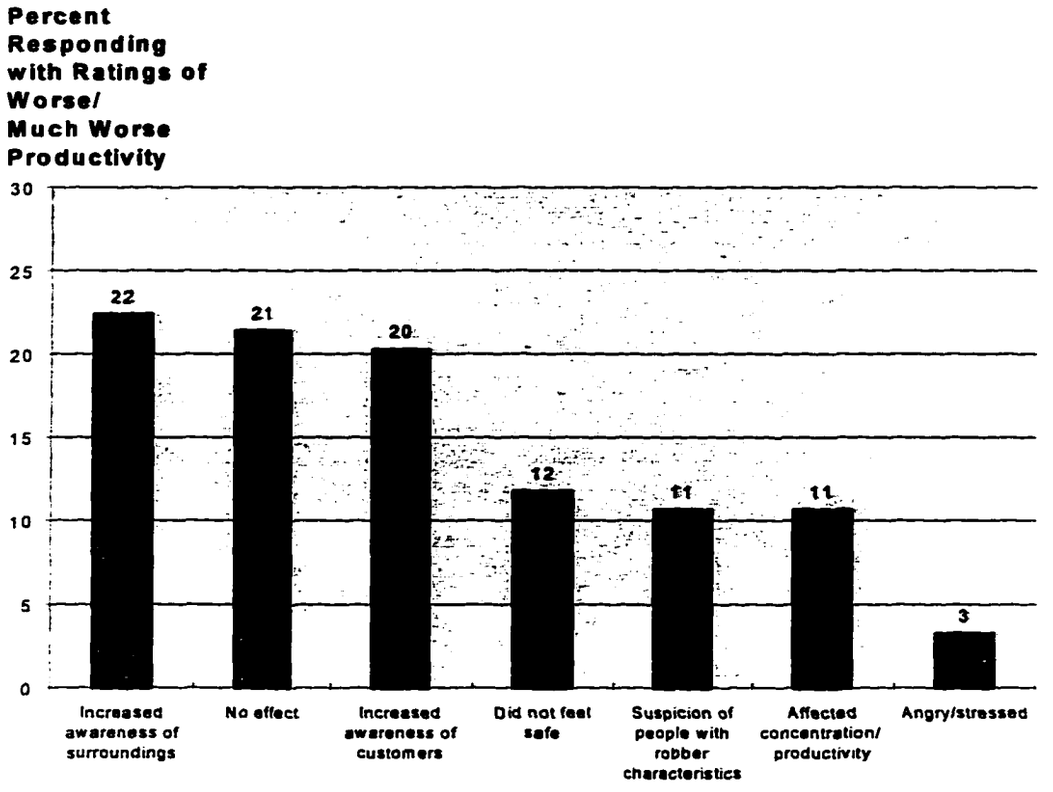
With regard to the kappa statistic, Landis and Koch (1977, Biometrics, pp. 159-174) suggested standards for assessing the

magnitude of the kappa. A kappa above 0.8 might be considered almost perfect, between 0.6 and 0.8 as substantial, between 0.4 and 0.6 moderate, 0.2 to 0.4 as fair and below 0.2 as slight or poor. The rater reliability for these data was clearly substantial to almost perfect with the kappa for 9 out of the 10 questions above 0.6.

The qualitative data were analyzed by coding the responses into themes, examining the response distribution across these identified themes and running statistical comparisons with other selected variables. Frequency distributions for the text response items, frequency distributions for the text response items after grouping responses to increase the sample size and selected cross tabulations were run where there was a significant chi-square statistic.

Table 11

How Robbery Impacts Job Functioning As Reported by Bank Employees (N=94)



Impact of the Robbery

Of those individuals who reported their productivity post-robbery was worse or much worse, 22% of respondents reported an increased awareness of their surroundings, 20% an increased awareness of customers, and 11% suspicion of other individuals with characteristics similar to that of the robber. Twelve percent reported

not feeling safe, and another 11% reported the robbery affected their concentration and productivity.

Numerous factors were cited by respondents that either helped or hindered employee's post-robbery recovery. Thirty-four percent identified caring/supportive co-workers and family members as helpful in the recovery process. Eleven percent reported questions from customers, police and media as an obstacle to recovery.

Table 12

Factors That Helped or Hindered Post-robbery Recovery As Reported by Bank Employees (N=55)

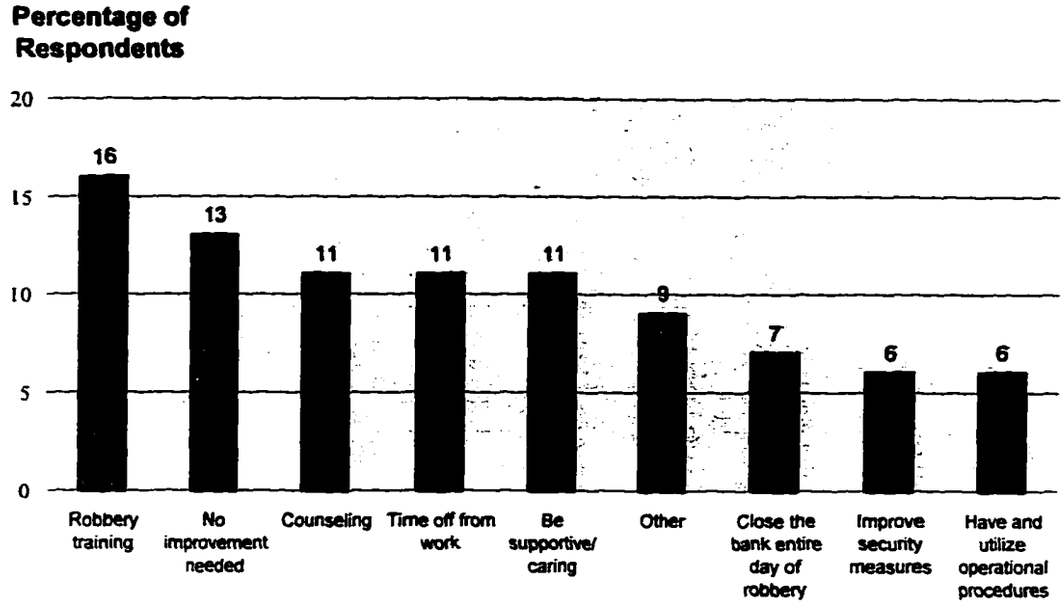
Helpful Factors	
Caring/supportive co-workers/family	34%
Improved security measures	15%
Passage of time	6%
Obstacles	
Questions from customers, police, media	11%
The fact that the robber was not caught	7%
None	11%
Other	16%

Eighty-two respondents answered the question regarding what managers can do to help employees better cope with a bank robbery. The responses are listed in Table 13. Thirteen percent reported that no improvement was needed, but 16% recommended robbery training,

11% counseling, 11% time off from work, and 11% encouraged managers to be supportive and caring.

Table 13

How Managers Can Help Employees As Suggested by Respondents (N=82)



Fifty-eight employees and their supervisors identified the following ways that the employee assistance program could help employees better cope post-robbery; 48% of survey respondents who answered this question listed counseling in some form or another, including:

- General counseling 19%

- Individual and group counseling 10%
- Immediate and follow-up counseling/assistance 9%
- Informing employees about the availability of counseling 7%
- Having knowledgeable counselors 3%

Other survey respondents identified the importance of management education regarding the impact of a robbery on employees, and pre- and post-robbery classes for all employees.

Twenty-six supervisors responded to the open-ended question regarding why they had scheduled a critical incident stress debriefing. They stated the following reasons:

- To allow employees an opportunity to talk about experience 27%
- To be helpful in general 23%
- Suggested by management/security 19%
- To relieve stress for employees 15%
- Other 16%

Seventeen supervisors responded regarding why they did not schedule a post-robbery debriefing. They gave the following reasons:

- They felt that employees did not want to attend 41%

- They were unaware that a debriefing was available 29%
- Other 30%

Twenty-five supervisors responded to the question of how their employees were notified of the debriefing. This was done in a written announcement or verbally to individuals or groups of employees.

Fifty-five percent of the employees who attended a debriefing stated that the most helpful part of the session was having the opportunity to talk about the traumatic event. Twenty-five percent reported that it was helpful to see that their feelings post-robbery were shared by others.

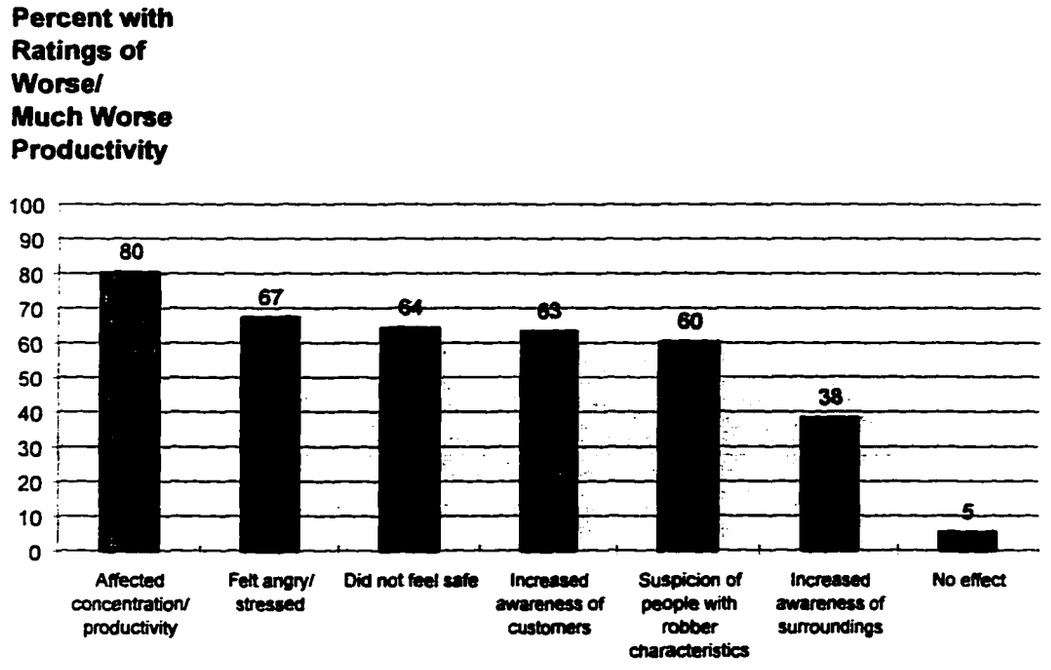
One participant wrote, "An attitude of understanding and acceptance for any emotions being felt or expressed" was the most helpful part of the debriefing session. Another participant wrote, "Getting to talk with a professional and knowing that what I was feeling was not unique. Also getting to express my anger and frustration" were the most helpful parts of the debriefing. And, a third participant wrote, "Knowing someone, or more importantly my employer, cared about me " was the most helpful part of the debriefing.

A cross tabulation on the qualitative data was computed comparing how the robbery affected the respondent's perceived ability

to function on the job with his/her ability to be productive after the robbery. Eighty percent of respondents reported their concentration and productivity were negatively impacted, 67% reported anger and stress, over 60% reported not feeling safe, 63% an increased awareness of customers, and 60% suspicion of people with robber characteristics. Results are displayed in Table 14.

Table 14

Symptoms Impacting Productivity Post-robbery (N=94)

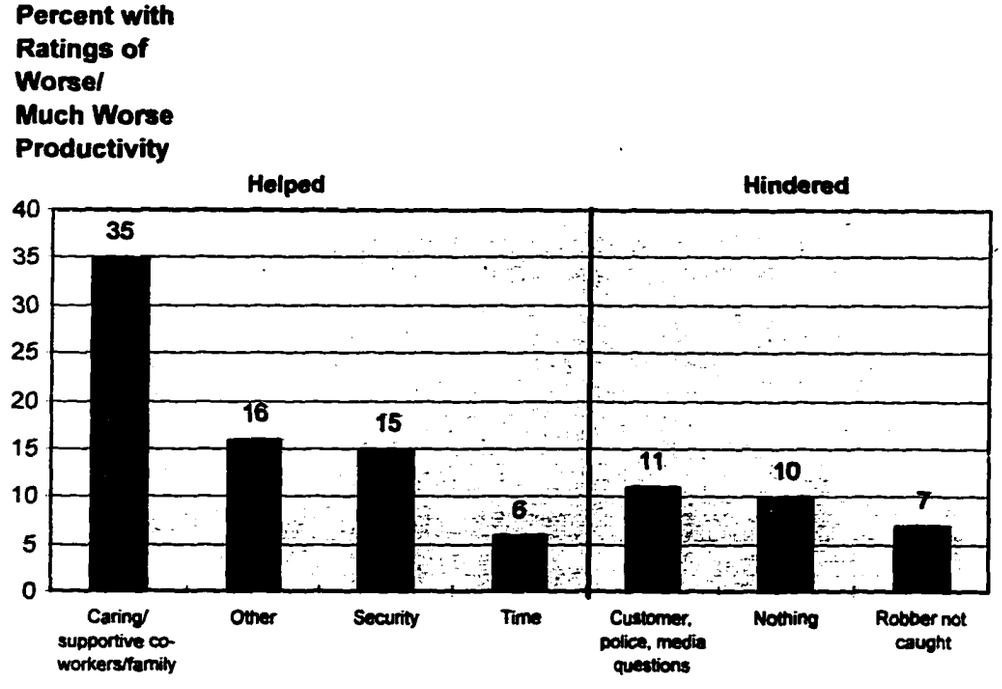


A cross tabulation on the qualitative data was computed comparing the survey respondent's ability to be productive, post-

robbery, with factors that hindered or helped the post-robbery recovery process. Thirty-five percent of the survey respondents to this open-ended question reported caring and supportive family members and co-workers helped their post-robbery recovery process; 11% reported questions from the police, customers and media hindered their recovery. The results are displayed in Table 15

Table 15

Factors That Helped or Hindered Recovery Post-robbery (N=55)



Chapter Six

Summary and Implications of the Study

The research focused on an examination of bank employees, including line and management staff, who worked at one of 42 U. S. bank branches that was robbed in 1996. A 44-question survey was mailed to the homes of 391 employees, resulting in a 35% response rate. The data were analyzed using chi-square, t-test, analysis of variance, discriminate analysis and factor analysis statistical procedures. Variances that were statistically significant were explored utilizing the least significant difference multiple range test to determine how group means clustered.

The quantitative and qualitative self-report survey data gathered in this study demonstrated both an indirect and direct cost impact for companies after a traumatic event. The data clearly suggest that a substantial number of individuals were more stressed, experienced increased health symptoms, a uniformity and frequency in the increased adverse health symptoms, and lowered job productivity. The data evidenced slightly higher absenteeism after a robbery, and demonstrated that participants who chose to attend a debriefing found

it helpful in their own recovery process post-robbery. These results have important implications for businesses struggling to understand and deal appropriately with the human and financial impact of a traumatic event within their companies. The data point to where and how corporate dollars can best be focused and which employees are most likely to benefit.

The data offer a number of conclusions regarding the impact of a critical incident on the health of those involved, those who choose subsequently to attend a debriefing or seek health care services, how a traumatic event impacts the workplace, the value placed upon a post-event debriefing by the participants, and how management and non-management employees view these matters. From a policy viewpoint, the study suggests where and how purchasers of debriefing services should focus their efforts and expenditures.

The Impact of Trauma on Health

This study offers further support for the trauma response theory which, as Weiss (1993) presented it, states that the first criterion for diagnosis of posttraumatic stress disorder (PTSD) is exposure to an event outside the range of normal, everyday experience, with the result that almost anyone would experience comparatively significant

distress. This is supported by the data from this study in which 68% of the respondents reported worse or much worse levels of stress after the robbery. Post-robbery physical health was also reported to be comparatively worse or much worse for 24% of the respondents. Weiss cited three intrapersonal and behavioral criteria that need to be met in order for someone to have this diagnosis:

Category 1. Reexperiencing the event through dreams or intrusive thoughts or feelings, along with a physiologic reaction upon reexposure to events that symbolize an aspect of the trauma.

Category 2. Avoidance of the stimuli linked to the trauma and/or evidence of a general numbing responsiveness.

Category 3. Hyperarousal cluster of symptoms, including disturbances in sleep, concentration and appetite.

Of the 24% of the respondents in this study who reported worse physical health post-robbery, 92% reported symptoms falling under category 1, 45% under category 2, and 53% under category 3. Thirty percent of respondents reported using mental health counseling as a consequence of the robbery.

Corneil (1993) confirmed the relationship between exposure to a traumatic event and the development of posttraumatic stress syndrome. He found that PTSD was directly related to trauma exposure.

Hovanitz (1993) also stated that there are important physical health risks associated with the aftermath of a disaster due to increases in so-called life event stress. She reviewed 10 published studies of six floods to evaluate potential levels of health impairment in the aftermath of this type of disaster. Hovanitz found that despite the use of widely differing methodologies, all studies reported some degree of compromised health associated with flood exposure (a traumatic event) compared to control groups. Likewise, almost all previous studies found that the severity of the experience was associated with an increased frequency of physical impairment.

In addition to the symptoms reported that fell under categories 1, 2, or 3 for posttraumatic stress syndrome as listed on the previous page, 16% reported stomachaches, 32% headaches, and 10% backaches post-robbery. As stated by Hovanitz (1993, p. 228), "Life stress has been shown to initiate physical illnesses that are typically minor in severity, and to exacerbate physical dysfunction of sometimes severe

proportions." Hovanitz suggested targeting these individuals for interventions as the most effective approach to reducing serious health effects due to a disaster. Eighty-six percent of all respondents in the present study reported utilizing the employee assistance program, 5% a community resource, 2% a provider paid for by insurance, and 5% visited a doctor or clinic office.

Individuals who reported worse or much worse post-robbery physical health perceived a strong degree of threat to their personal safety, experienced a higher level of stress, worse or much worse productivity and less desire to continue working for their employer. Both the quantitative and qualitative data supported similar findings.

Critical Incident Stress Debriefings

Respondents to this survey who chose to attend a debriefing experienced an average of 4.7 incident-related symptoms versus 2.2 for those individuals who chose not to attend. Thirty-six percent of the participants who attended the critical incident debriefings described their physical health post-robbery as worse or much worse, and 83% described their post-robbery stress level as worse or much worse.

Data in nursing and psychology journals suggest that debriefings frequently mitigate the impact of stress from a traumatic

event. Manton and Talbot (1990) surveyed 172 emergency personnel and reported that debriefings reduced symptoms in almost all those interviewed. The effectiveness of the debriefings was found to emanate from talking about the traumatic experience, and in particular talking with others who had experienced the traumatic event. Results from the present study support Manton and Talbot's assertion: 55% of the surveyed employees who attended a debriefing stated that the most helpful part of the session was having the opportunity to discuss the traumatic event, and 25% stated that it was helpful to see that their feelings post-robbery were shared by others.

Manton and Talbot's debriefing process, specifically designed for victims of armed robberies, is based on the premise that what is critical after a robbery is an early intervention to "allow for the containment of the victim's feelings and the expression of feelings in a safe, supportive environment" (p. 509). Twenty percent of survey respondents in the present study stated that immediate assistance from the employee assistance program would be helpful in their recovery process.

Seventy percent of the surveyed robbery victims experienced physical and psychological symptoms, as listed in the Diagnostic and

Statistical Manual for Mental Disorders-IV for the diagnosis of posttraumatic stress disorder, and by researchers in the field of trauma response (Mitchell & Everly, 1995). The symptoms reported were strikingly uniform and consistent in their reported frequency, significance and similarity.

This study concluded that individuals who chose to attend a debriefing experienced increased adverse health symptoms following the robbery, were threatened with a weapon, suffered a lowered level of productivity, higher levels of post-robbery stress, and less desire to continue working for their employer.

Higher levels of perceived value from the critical incident stress debriefing were identified by those who were threatened with a weapon and reported more adverse health symptoms. Individuals who evaluated the debriefing sessions as somewhat or very helpful evidenced less desire to continue working for the same employer and higher use of medical/mental health services.

An approximately equal number of surveyed robbery victims reported their work and personal relationships to be worse or better post-event, undoubtedly evidencing, for some, the increased positive interaction with other employees, supervisors and/or family members

following the event. Both groups, however, chose to attend a debriefing at a comparatively higher rate than those who reported no effect on relationships and rated the debriefings as more helpful.

Lanning (1987) identified positive perceptions of debriefings as described by emergency personnel. They included: 1) preparedness for future stress symptoms, 2) acceptance of posttrauma symptoms, 3) supportive interaction, 4) problem resolution, and 5) safe environment to discuss feelings. Similarly, Hanneman (1994) identified several dominant themes associated with debriefing services. They are: 1) the value of venting, 2) the value of expressing emotions, 3) the importance of getting the whole perspective, 4) acceptance that the individuals had done their best in a difficult situation, and 5) a sense of bonding. The present study demonstrates similar findings. Seventy-two percent of the debriefing participants in this study stated that the debriefing was somewhat or very helpful. Eighty-seven percent of supervisors stated that the debriefing session was worthwhile. Those individuals who reported more post-robbery stress, increased adverse health symptoms, affected work and personal relationships and who felt most threatened by the assailant, found the debriefings more helpful than those experiencing less post-robbery effects.

Cost Offset of Stress Debriefings

While it was not the purpose of this study to demonstrate directly the cost offset of critical incident stress debriefings, it is apparent from this study and others that this type of intervention may, in fact, impact favorably the costs of health care. For example, a meta analysis of 58 studies regarding the cost offset effect of mental health treatments on medical utilization showed an 85% decrease in medical utilization following psychotherapy (Primary Care Behavioral Healthcare Summit, 1996). Twenty-four percent of the survey respondents in this study reported worse or much worse physical health as a result of the robbery; 68% worse or much worse levels of stress. This resulted in 6% of respondents missing 1 to 5 days of work due to the robbery, 5% utilizing medical care, and 30% utilizing counseling as a result of the robbery. The favorable ratings of the stress debriefings by the same individuals suggest a positive impact on their health and usage of medical services.

Fifty-one percent of the respondents to this study reported their ability to be productive in the job after the robbery was worse or much worse. One unusual finding was that 25% reported improved post-robbery work relationships, but only 13% reported worse work

relationships. Forty-one percent of respondents reported less desire to work for the same employer after the robbery. Managers experienced a higher number of robberies than nonmanagers. Their perception of the impact of the effect on their own workplace productivity was greater than for nonmanagers.

While many studies have estimated the cost of mental health problems in the workplace, Von Korff (1996) clearly demonstrated the difference between the health care costs of patients with a diagnosis of depression versus a control group. Increased depression, which is a common outcome from a traumatic event, cost two times as much compared with a control group in Von Korff's study. Von Korff suggested "collaborative care," which includes education, support and training in behavioral management, as ways to reduce health care costs. This broad-based approach to care, similar to the components of critical incident stress debriefings, resulted in a 2:1 dollar savings for the company studied.

As reported by Mitchell and Everly (1997), a 1992 study by Potter determined that the perceived benefits of stress debriefings included stress reduction, improved coping skills, increased morale and staff retention. Flannery (1995) tested the concept of

multidimensional critical incident stress management as applied to workplace violence. Benefits of the critical incident stress management program included reduced sick leave, accident claims and staff turnover. Leeman-Conley (1990) conducted a study applying critical incident stress management services to bank employees. Data were collected on sick leave and compensation payments before and after a critical incident stress management program was implemented. Based upon the results of her study, there was a 60% decline in sick leave and 68% decline in compensation payments.

As stated earlier, it was not the purpose of the present study to demonstrate directly the cost impact of a traumatic event or the cost offset of critical incident stress debriefings, but the results of this study and others mentioned in this chapter indicate it is very possible critical incident stress debriefings do save a company money.

Limitations of Study Methodology

Several limitations in the study design hinder its potential validity and one's ability to draw conclusions beyond the survey group.

The population surveyed consisted only of those individuals who had experienced a bank robbery in the past year and whose company experienced several robberies somewhere in the nation each week.

Therefore, generalizing the results to populations with infrequent or less violent incidents might not be valid.

This study investigated, among other factors, the direct and indirect costs of a workplace traumatic event. While some variables are more easily translated into dollars (i.e., reduced productivity), others such as diminished health or a lessened desire to continue working for one's employer, are clearly less quantifiable. To investigate directly the most direct costs to an employer, the obvious, theoretically best, avenue of exploration would be a detailed claims study that compared the before and after health claims history of affected employees, or a case-by-case medical chart review. This research did not utilize this approach; rather it assumed that such an analysis would be highly unlikely to yield statistically supportable results because, among other factors, the inability of the researcher to hold other variables affecting health outcomes constant during the study period would be impossible.

To most accurately assess (on a theoretical basis) the financial impact on a company of a critical incident, one could also conduct a longitudinal study of health, short- and long-term disability claims and employee absenteeism records. And, to most accurately (again,

theoretically) assess whether a critical incident stress debriefing mitigates the impact of stress and reduces health care costs, a pre- and posttest, control group design would, undoubtedly, be desirable. This particular research was performed in the field where there are very real, practical, ethical and legal limitations when working with employees who have experienced a trauma.

Clearly, an acceptable, albeit less rigorous measurement of comparative health status, is a direct post-event survey of individuals regarding their own comparative assessment of their health and health care utilization. This was the approach utilized in this particular study.

Another limitation of the study was the attempt to gather information about the duration of post-robbery symptoms. Questions 15 through 19 in the survey instrument asked about the existence of specific post-robbery effects (e.g., productivity, level of stress) and then asked specifically, "How long did this effect last?" Since less than 30% of the respondents answered the second part of these particular questions, the sample size was too small to generate any valid statistical results. Future studies in the area of duration of posttrauma symptoms might focus on this particular aspect of the

impact of a traumatic event and not (as has been the case here) include it among so many other variables being studied. The length of the survey instrument in this research and/or problems with personal recall may have contributed as well to the lack of response in this area.

Implications for Employers

The data clearly suggest that a traumatic event, such as a robbery, results in increased employee stress and health problems for approximately two thirds of the employees affected, an increased utilization of health care services for over 5% of affected employees, and lowered job productivity for about 50% of employees. The research points to a need for employers to utilize a number of measures pre- and post-incident to mitigate the impact of the event on their employees (which can translate directly into reduced job-related costs through increased productivity and, possibly, less employee turnover). Specifically, companies should instruct supervisors to promptly schedule for the affected location a debriefing after every robbery. Those with the most post-incident symptoms are likely to attend and find it helpful. Though it isn't appropriate to make sessions mandatory, having them well publicized and immediately available seems important.

Managers apparently find that the stress of helping their own employees recover makes their own recovery more difficult and/or protracted. Special pre-incident training should, therefore, be offered to the managers to prepare them not only to arrange services to help employees recover, but also to educate them on the specific stresses they will experience as a manager.

Effective critical incident stress debriefings also provide a potentially effective mechanism to retain employees, of whom the data suggest about 40%, will evidence a diminished desire to continue working for their employer. Such debriefings are both a way to demonstrate that the company cares about its employees and a (perceived) effective means to deal with the potential cause for their desire to leave their job.

In addition, those who experience more stress report more health problems and lower productivity. These individuals are the ones identified in the study survey as most likely to self-select to attend a debriefing, providing a way for companies to impact the level of health care benefits utilized and turnover among those most likely to evidence such behavior.

This research suggests, therefore, that employers should consider a number of measures, pre- and post-incident to mitigate the potentially adverse impact of the event on their workforce and workplace environment:

1. Direct managers and supervisors in affected areas to promptly schedule a debriefing. Those employees with the more significant post-incident symptoms are likely to attend and find it helpful. While it is not appropriate to make such sessions mandatory for all employees, having them available soon after a critical incident will provide an accessible avenue for employees to seek and receive help.
2. Managers apparently find that the stress of helping employees for whom they are responsible recover makes their own personal recovery more difficult. Managers also experience more robberies than nonmanagers (3.7 versus 2.3), thus exacerbating their own individual problems. Fifty-nine percent of managers experienced three or more robberies. Special pre-incident training should, therefore, be offered to the managers and other supervisory personnel to better prepare them for a traumatic event and help assure that they are familiar with the services

offered and their intended purposes. Direct contact post-event with affected managers to encourage their personal participation in debriefings is likewise desirable, given the added stress managers experience.

3. Critical incident stress debriefings provide an opportunity to retain employees who otherwise evidence a likelihood to leave the company. Over 40% of survey respondents identified a diminished desire post-event to continue working for their employer.

4. Those individuals who experienced increased stress and/or more adverse health symptoms reported lower productivity. These individuals are the ones who self-selected to attend a debriefing and reported that the debriefings were most helpful. They are an obvious potential focus for employers to minimize the long-term impact of traumatic events on health care costs and possible productivity improvement.

5. The more open and available a debriefing is, the more employees attend (which the study suggests is desirable based upon its perceived positive impact on those who attend). Restricting attendance only to those most impacted may provide a mixed

and undesirable message. Fifty-four percent of those surveyed respondents who attended a stress debriefing also sought services from the employee assistance program. Thus, there is an apparent close tie between the usage of debriefings and assistance programs, and presumably improvement in the employee's mental and physical health.

The qualitative data from this study suggested a number of other policy-related conclusions for employers. Improved security measures were reported to aid recovery by 14.5% of the survey respondents. Employers may, therefore, want to aggressively and visibly focus on improving security measures at local branches and evidencing their interest in doing so to their employees. Other miscellaneous obstacles to recovery that were identified by respondents included questions from customers, police and the media. Implementing procedures to limit intrusive questions, focusing questions to a few well-prepared employees, may also facilitate the recovery process.

Sixteen percent of survey respondents stated that pre- and post-robbery training classes would aid their recovery process. In discussing crisis intervention, authors Billings, Milburn, and

Schaalman (1980) noted that when a crisis situation is anticipated, even generally, it evokes a weaker emotional response than when situations are a total surprise. Eleven percent of the respondents in this study stated that time off from work would be helpful, and 7% identified that it would be helpful to close the bank for the entire day of the robbery. Thirteen percent thought that no improvement from management was needed; 11% requested counseling, and another 11% more support and caring from managers. Other miscellaneous comments included the need for more management education regarding the impact of a robbery on employees.

Implications to the Banking Industry

In light of what appears to be more frequent and violent bank robberies, this particular industry needs to consider an aggressive and proactive crisis management plan. Clearly the potential cost benefits that this study suggests would justify such an effort. Specific recommendations from this research to address the human and organizational trauma of a bank robbery include the following:

1. Implement an aggressive, proactive educational campaign that teaches employees what to expect (post-event) if their bank is

robbed and suggest behaviors during and after a robbery for employees. Hold separate classes for manager and employees.

2. Have relief teams, locally developed and available, to be on-site the day of a robbery and available to reopen the business while affected employees attend to answering police questions and their own personal recovery process.
3. Implement leadership classes for managers to prepare them for the role they will need to assume after a robbery, the impact a robbery has on employees and on them personally.
4. Make it mandatory for supervisors to schedule debriefings, but not mandatory for their employees to attend. Open the debriefings to all concerned or potentially affected. Schedule them promptly after a robbery, provide the time for people to attend, publicize their availability and encourage people to attend.

Conclusions

A traumatic event, such as a violent incident in the workplace, has an indisputable impact on the individual victims, the business and workplace within which they function. It affects people psychologically, emotionally and physically, which subsequently

impacts their efficiency in the workplace and individuals' use of medical and mental health care.

Those who are most affected are most likely to choose to attend a supportive intervention, such as a debriefing, if it is made available. These are the same individuals who overwhelmingly report that the intervention was helpful. Debriefings, then, can be an effective way for employers to intervene early in the posttrauma period to offset the long-term negative effects of increased employee turnover and health problems. This study demonstrates that debriefings are perceived as useful by the participants and there is a likelihood that they are positively impacting workplace costs. Further research is required, however, in assessing the robustness of the critical incident stress debriefing technique in mitigating the long-term impact of these stress-related symptoms.

Bank employees live with the threat of violence in their everyday work life. Those who have already experienced such events can clearly articulate what has been most helpful to them in their recovery process, whether it be specific aspects of a debriefing, managerial responses, improved security measures, or pre- and post-incident education. The present study, and others, strongly suggests

evidence of a body of knowledge available to companies that is adequate for them to respond effectively to such situations and minimize the adverse impact for themselves and their employees.

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Appendixes

Appendix A

Critical Incident Survey

NOTE TO USERS

The original document received by UMI contained pages with indistinct print. Pages were filmed as received.

This reproduction is the best copy available.

UMI

Critical Incident Survey

Background Data

1. Today's date: _____

2. Age: ___ (years)

3. Sex: __ Male __ Female

4. Race: _____

5. Current job position at bank (check one):
   - __ management
   - __ professional
   - __ security
   - __ support staff
   - __ other

6. Name of branch location (optional):

   _____

History of Experience with Bank Robberies

7. What is the total number of robberies you have experienced since you have been working in the banking field (current and previous employers)?
   ____ (fill in a number)

8. What is the total number of robberies your bank branch has experienced in 1996?
   ____ (fill in a number)

9. How long ago was the most recent robbery at your branch? (fill in a number)
   ____ months and/or ____ weeks

10. Were customers present during this robbery?
    __ yes __ no __ not sure

11. What was your physical proximity to the assailant(s) during the most recent robbery at your branch?
    - __ face-to-face
    - __ in same room, but not face-to-face
    - __ not in same room
    - __ not working at that time
    - __ other: _____

12. To what extent did you feel that your personal safety was threatened during your most recent robbery experience?
    - __ no threat
    - __ mild threat
    - __ moderate threat
    - __ strong threat

13. If you were threatened with a weapon, what kind was it?
    - __ gun
    - __ knife
    - __ other, specify _____
    - __ no weapon

14. If a gun was used, were shots fired?
    - __ yes
    - __ no
    - __ not applicable

Changes Experienced Post-robbery

To answer the following questions, please think of your most recent robbery experience and what happened afterwards.

For each of the following areas, compare your experience before and after the robbery. Fill in the number of days or weeks. How did the robbery affect your:

15. **Ability to be productive at work (after the robbery)**
    - __ much worse
    - __ worse
    - __ no effect
    - __ better

    How long did this effect last?
    - ____ days
    - ____ weeks

16. **Level of stress (after the robbery)**
    - __ much worse
    - __ worse
    - __ no effect
    - __ better

    How long did this effect last?
    - ____ days
    - ____ weeks

17. **Physical health (after the robbery)**
    - __ much worse
    - __ worse
    - __ no effect
    - __ better

    How long did this effect last?
    - ____ days
    - ____ weeks

18. **Work relationships (after the robbery)**
__ much worse
__ worse
__ no effect
__ better

How long did this effect last?
____ days
____ weeks

19. **Personal relationships (after the robbery)**
__ much worse
__ worse
__ no effect
__ better

How long did this effect last?
____ days
____ weeks

20. **Desire to keep working at your current employer (after the robbery):**
__ much less desire
__ less desire
__ no effect
__ greater desire

21. Considering how many days you typically miss from work, did you **miss any additional days from work** due to the robbery experience?
__ yes (how many days? _____)
__ no

If yes, were these days __ paid __ unpaid?

22. After the robbery, did you experience any of the following **health symptoms**?

(check all that apply)

__ physical injury
__ stomachaches
__ headaches
__ backaches
__ appetite or eating disturbances
__ difficulty falling or staying asleep
__ nightmares
__ irritability or outbursts of anger
__ difficulty concentrating
__ increased awareness of surroundings
__ exaggerated reaction to being startled
__ re-experiencing the traumatic event mentally or physiologically
__ avoidance of stimuli associated with trauma
__ lack of responsiveness to normal activities and people
__ other _____

Post-robbery Interventions

23. Did you use any **mental health care** or psychological counseling as a consequence of the robbery?
__ yes __ no __ don't remember

If yes, which of these did you use?
(check all that apply)
__ Optum Employee Assistance Program
__ community resource/other
__ provider paid by insurance benefits:
outpatient counseling sessions
(number) _____
inpatient (days) _____

24. Did you use any **medical care** as a consequence of the robbery?
__ yes __ no __ don't remember

If yes, was it at a: (check all that apply)
__ doctor or clinic office
__ hospital inpatient stay
__ emergency room

25. Did you use any **short-term disability benefits** as a consequence of the robbery?
__ yes __ no

26. Did you use any **workers' compensation benefits** as a consequence of the robbery?
__ yes __ no

27. In general, describe how the robbery affected your ability to function on the job:

_____

_____

_____

_____

_____

_____

_____

Critical Incident Stress Debriefing Intervention

28. After the robbery, did you participate in a critical incident stress debriefing session conducted by someone from the Optum Employee Assistance Program at your worksite?
__ yes __ no

29. If a group session was held, those participating were:
__ only employees directly affected
__ all employees in the bank at the time of the robbery
__ all employees at that location

30. If you attended a critical incident stress debriefing, how effective was the session in helping you to cope with the robbery?
    - __ very helpful
    - __ somewhat helpful
    - __ no effect
    - __ made things worse

31. What part of the debriefing session was most helpful?

32. What part of the debriefing session would you change to improve it?

33. If a debriefing session was offered and you did not attend, why not?

Post-robbery experience

34. How much did each of these factors affect your post-robbery experience?

	Made it worse	No effect	Somewhat helpful	Very helpful
Family/friends	1	2	3	4
Co-workers	1	2	3	4
Critical incident stress debriefing	1	2	3	4
Supervisor	1	2	3	4
Overall work environment	1	2	3	4

35. What other factors helped or posed an obstacle in recovering from the robbery experience?

The banking industry wants to help employees after a robbery. Your ideas and suggestions would be very helpful.

To answer items in this section, refer to your own personal experience (even if you have not directly experienced a robbery) as well as what you have learned from observing and talking with others.

36. What can *Management* in the banking industry do to help employees better cope with a robbery?

37. What can an *Employee Assistance Program* do to help employees better cope with a robbery?

Survey continues. Please turn page.

Questions for Supervisors

38. If you chose to schedule a critical incident stress debriefing session after the robbery for the employees you supervise, what made you decide to do this?

_____

_____

_____

_____

39. If you scheduled a critical incident stress debriefing session, how did you notify your employees?

_____

_____

_____

_____

40. If you **did not** schedule a critical incident stress debriefing session after the robbery for the employees you supervise, why not?

_____

_____

_____

_____

41. Do you believe offering a debriefing session is worthwhile?

__ yes
__ no
__ don't know

42. Did having the responsibility to support your employees make your own experience after the robbery more stressful?

__ yes
__ no

Follow-up Phone Interview

43. If you have been robbed while working at your bank branch and are willing to participate in a 45 minute phone interview conducted in January, please indicate here.

__ Yes

Phone number to call to set up appointment:

_____

44. Final Comments:

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

IF YOU WOULD LIKE TO TALK TO A COUNSELOR REGARDING YOUR FEELINGS AND CONCERNS RELATIVE TO ISSUES RAISED BY THIS SURVEY, PLEASE CALL YOUR ASSISTANCE NUMBER. THIS IS A CONFIDENTIAL SERVICE FOR EMPLOYEES.

Cas

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Appendix B

Case Processing Summary

Statistics

	N	
	Valid	Missing
CASE Case number	141	0
ID ID number	110	31
DATESENT	94	47
DATESNT2	28	113
DATEBACK	122	19
Q1 Today's date	124	17
Q2 Age	134	7
Q3 Sex	136	5
Q4 Race	132	9
Q5 Current job position at bank	126	15
Q7 Total number of robberies experienced	132	9
Q8 Number of robberies at bank in 1995	126	15
Q9A Last robbery at bank (months)	141	0
Q9B Last robbery at bank (weeks)	141	0
Q10 Were customers present during last robbery	131	10
Q11 Physical proximity to assailant at most recent robbery	132	9
Q12 Did you feel your personal safety was threatened	130	11
Q13 Type of weapon threatened with	91	50
Q13O Question 13 "other" response	141	0
Q14 If gun used were shots fired	110	31
Q15 Ability to be productive after robbery	130	11
Q15A How long did effect last (days)	141	0
Q15B How long did effect last (weeks)	141	0
Q16 Level of stress after robbery	130	11
Q16A How long did effect last (days)	141	0
Q16B How long did effect last (weeks)	141	0
Q17 Physical health after robbery	128	13
Q17A How long did effect last (days)	141	0
Q17B How long did effect last (weeks)	11	130
Q18 Work relationships after robbery	129	12
Q18A How long did efect last (days)	3	138
Q18B How long did effect last (weeks)	141	0
Q19 Personal relationships (after robbery)	129	12
Q19A How long did effect last (days)	141	0
Q19B How long did effect last (weeks)	141	0
Q20 Desire to keep working for same employer (after robbery)	128	13
Q21 Missed additional days at work due to robbery	125	16
Q21A How many additional days were lost	9	132
Q21B Were these days paid	6	135
Q22A Physical injury	131	10
Q22B Stomachaches	131	10
Q22C Headaches	131	10
Q22D Backaches	131	10
Q22E Appetite or eating disturbances	131	10
Q22F Difficulty falling or staying asleep	131	10
Q22G Nightmares	131	10
Q22H Irritability or outbursts of anger	131	10
Q22I Difficulty concentrating	131	10
Q22J Increased awareness of surroundings	131	10
Q22K Exaggerated reaction to being startled	131	10
Q22L Re-experiencing the traumatic event mentally or physiologically	131	10
Q22M Avoidance of stimuli associated with trauma	131	10
Q22N Lack of responsiveness to normal activities and people	131	10
Q23 Used counseling as a consequence of the robbery	129	12
Q23A Optium Employee Assistance Program	38	103

Statistics

	N	
	Valid	Missing
Q23B Community resource / other	38	103
Q23C Provider paid by insurance benefits	38	103
Q23D Number of outpatient counseling sessions	2	139
Q23E Inpatient days	0	141
Q24 Used medical care as consequence of robbery	129	12
Q24A Doctor or clinic office	7	134
Q24B Hospital inpatient stay	0	141
Q24C Emergency room	1	140
Q25 Used short term disability benefits as consequence of robbery	129	12
Q26 Used workers' compensation benefits as consequence of robbery	129	12
Q6 Name of branch location	141	0
Q11O Other	141	0
Q22O Other	141	0
Q27 How did robbery affect ability to function on the job	141	0
Q27A Part 2: How did robbery affect ability to function on the job	141	0
Q28 Participated in Optium stress debriefing	127	14
Q29 Participants at group debriefing session	65	76
Q30 How effective was debriefing in helping you to cope	65	76
Q31 Most helpful part of debriefing session	141	0
Q32 What change in debriefing would most improve it	141	0
Q33 Why didn't you attend debriefing session	141	0
Q34A Family / friends	116	25
Q34B Co-workers	116	25
Q34C Critical incident stress debriefing	89	52
Q34D Supervisor	111	30
Q34E Overall work environment	114	27
Q35 Factors that helped or hindered recovery from robbery experience	141	0
Q36 What management can do to help employees cope with bank robbery	141	0
Q36B Part 2: What management can do to help employees cope with robbery	141	0
Q37 What can EAP do to help employees cope with bank robbery	141	0
Q37B Part 2: What can EAP do to help employees cope with bank robbery	141	0
Q37C Part3: What can EAP do to help employees cope with bank robbery	141	0
Q38 Why did you schedule a stress debriefing for employees	141	0
Q39 How were employees notified of stress debriefing	141	0
Q40 Why was no debriefing scheduled for employees	141	0
Q40B Part 2: Why was no debriefing scheduled for employees	141	0
Q41 Debriefing session is worthwhile	53	88
Q42 Did supporting employees make experience more stressful	43	98
Q43 Willing to participate in phone interview	37	104
Q43B Phone number to call	141	0
RQ27 How did robbery affect ability to function on the job	17	124
RQ31	16	125
RQ32	16	125
RQ35	16	125
RQ36 What management can do to help employees cope with bank robb	3	138
RQ37 What can EAP do to help employees cope with bank robbery	17	124

Statistics

	N	
	Valid	Missing
RQ38	2	139
RQ39	2	139
X	141	0
Q9 Last robbery at bank (weeks ago)	126	15
Q15X How long did effect last? (weeks)	39	102
Q16X How long did effect last? (weeks)	51	90
Q19X How long did effect last? (weeks)	10	131
RQ22O Other	141	0
RQ6 Name of branch	141	0
NQ22O Other	131	10
NUMQ22 Number of health symptoms	141	0

Appendix C

Frequency Distributions

C2 Age

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	20	1	.7	.7	.7
	21	2	1.4	1.5	2.2
	22	1	.7	.7	3.0
	23	2	1.4	1.5	4.5
	24	1	.7	.7	5.2
	25	4	2.8	3.0	8.2
	26	3	2.1	2.2	10.4
	27	8	5.7	6.0	16.4
	28	4	2.8	3.0	19.4
	29	2	1.4	1.5	20.9
	30	5	3.5	3.7	24.6
	31	2	1.4	1.5	26.1
	32	4	2.8	3.0	29.1
	33	3	2.1	2.2	31.3
	34	2	1.4	1.5	32.8
	35	6	4.3	4.5	37.3
	36	3	2.1	2.2	39.6
	37	8	5.7	6.0	45.5
	38	11	7.8	8.2	53.7
	39	4	2.8	3.0	56.7
	40	5	3.5	3.7	60.4
	41	5	3.5	3.7	64.2
	42	1	.7	.7	64.9
	43	6	4.3	4.5	69.4
	44	2	1.4	1.5	70.9
	45	2	1.4	1.5	72.4
	46	4	2.8	3.0	75.4
	47	2	1.4	1.5	76.9
	48	2	1.4	1.5	78.4
	49	3	2.1	2.2	80.6
	50	4	2.8	3.0	83.6
	51	3	2.1	2.2	85.8
	52	2	1.4	1.5	87.3
	54	3	2.1	2.2	89.6
	55	4	2.8	3.0	92.5
	56	1	.7	.7	93.3
	57	4	2.8	3.0	96.3
	58	2	1.4	1.5	97.8
	60	3	2.1	2.2	100.0
	.	6	4.3	Missing	
	73	1	.7	Missing	
	Total	141	100.0	100.0	

Critical Incident Survey Analysis - Frequency Distributions

Age

Count	Midpoint	One symbol equals approximately .40 occurrences
1	20	
3	22	
3	24	
7	26	
12	28	
7	30	
6	32	
5	34	
9	36	
19	38	
9	40	
6	42	
8	44	
6	46	
4	48	
7	50	
5	52	
3	54	
5	56	
6	58	
3	60	

0 4 8 12 16 20

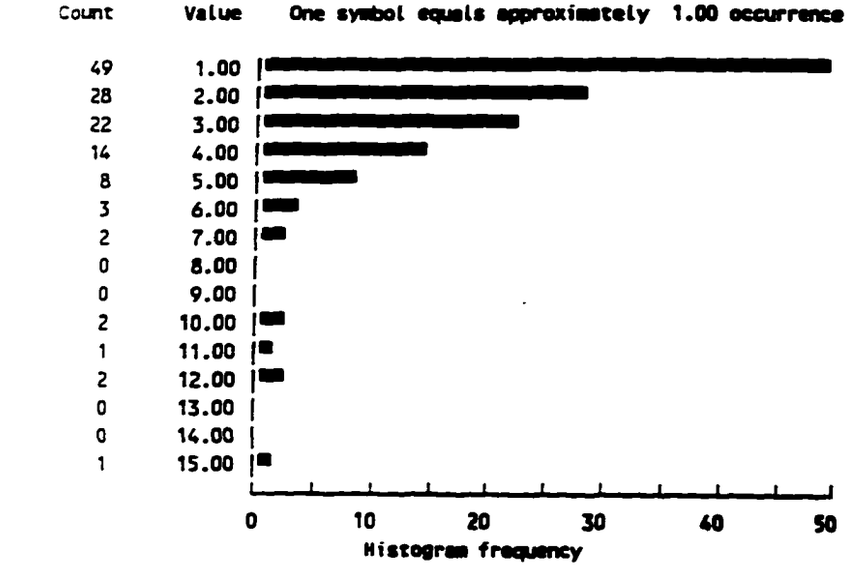
Histogram frequency

ean	39.075	Std err	.881	Median	38.000
ode	38.000	Std dev	10.199	Variance	104.024
urtosis	-.785	S E Kurt	.416	Skewness	.251
E Skew	.209	Range	40.000	Minimum	20.000
aximum	60.000	Sum	5236.000		

Valid cases 134 Missing cases 7

C7 Total number of robberies experienced

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	49	34.8	37.1	37.1
	2	28	19.9	21.2	58.3
	3	22	15.6	16.7	75.0
	4	14	9.9	10.6	85.6
	5	8	5.7	6.1	91.7
	6	3	2.1	2.3	93.9
	7	2	1.4	1.5	95.5
	10	2	1.4	1.5	97.0
	11	1	.7	.8	97.7
	12	2	1.4	1.5	99.2
	15	1	.7	.8	100.0
	.	9	6.4	Missing	
	Total	141	100.0	100.0	



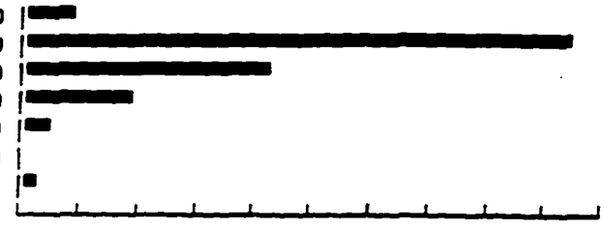
Mean	2.795	Std err	.214	Median	2.000
Mode	1.000	Std dev	2.458	Variance	6.042
Kurtosis	7.469	S E Kurt	.419	Skewness	2.473
S E Skew	.211	Range	14.000	Minimum	1.000
Maximum	15.000	Sum	369.000		

Valid cases 132 Missing cases 9

:8 Number of robberies at bank in 1996

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	0	6	4.3	4.8	4.8
	1	71	50.4	56.3	61.1
	2	31	22.0	24.6	85.7
	3	14	9.9	11.1	96.8
	4	3	2.1	2.4	99.2
	6	1	.7	.8	100.0
	.	15	10.6	Missing	
	Total	141	100.0	100.0	

Count Value One symbol equals approximately 1.50 occurrences



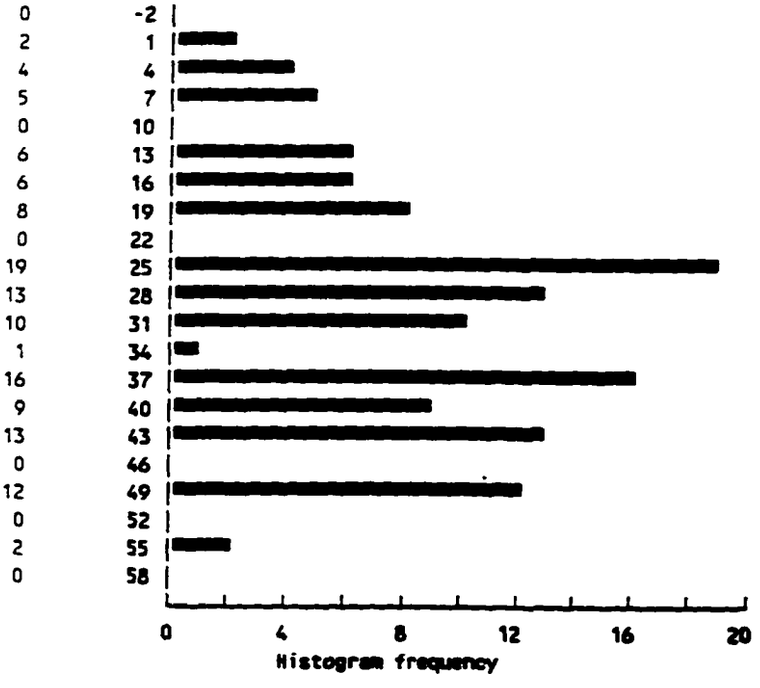
ean	1.532	Std err	.083	Median	1.000
ge	1.000	Std dev	.935	Variance	.875
rtosis	3.671	S E Kurt	.428	Skewness	1.486
E Skew	.216	Range	6.000	Minimum	.000
ximum	6.000	Sum	193.000		

lid cases 126 Missing cases 15

Last robbery at bank (weeks ago)

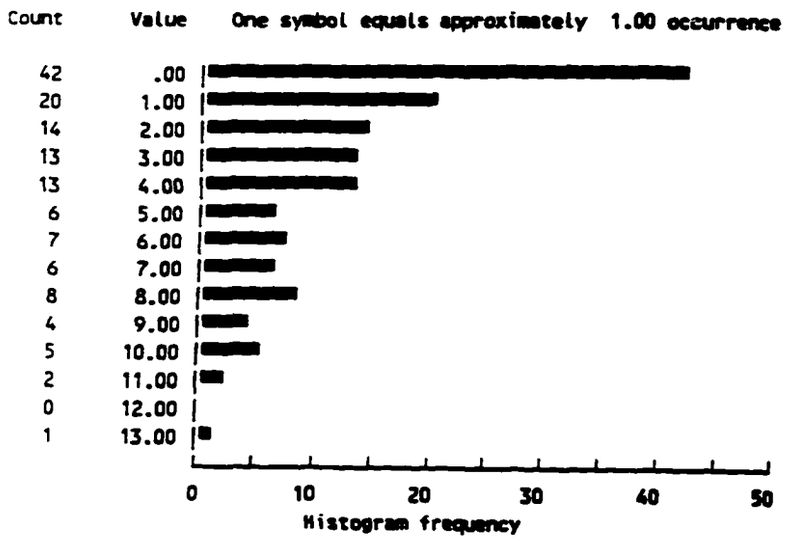
alue Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	1	.7	.8	.8
	2	1	.7	.8	1.6
	4	4	2.8	3.2	4.8
	6	2	1.4	1.6	6.3
	8	3	2.1	2.4	8.7
	12	4	2.8	3.2	11.9
	13	1	.7	.8	12.7
	14	1	.7	.8	13.5
	16	6	4.3	4.8	18.3
	20	8	5.7	6.3	24.6
	24	19	13.5	15.1	39.7
	27	1	.7	.8	40.5
	28	12	8.5	9.5	50.0
	32	10	7.1	7.9	57.9
	34	1	.7	.8	58.7
	36	16	11.3	12.7	71.4
	40	8	5.7	6.3	77.8
	41	1	.7	.8	78.6
	44	13	9.2	10.3	88.9
	48	12	8.5	9.5	98.4
	56	2	1.4	1.6	100.0
	.	15	10.6	Missing	
	Total	141	100.0	100.0	

Count Midpoint One symbol equals approximately .40 occurrences



NUMQ22 Number of health symptoms

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	0	42	29.8	29.8	29.8
	1	20	14.2	14.2	44.0
	2	14	9.9	9.9	53.9
	3	13	9.2	9.2	63.1
	4	13	9.2	9.2	72.3
	5	6	4.3	4.3	76.6
	6	7	5.0	5.0	81.6
	7	6	4.3	4.3	85.8
	8	8	5.7	5.7	91.5
	9	4	2.8	2.8	94.3
	10	5	3.5	3.5	97.9
	11	2	1.4	1.4	99.3
	13	1	.7	.7	100.0
	Total	141	100.0	100.0	



Mean	3.106	Std err	.274	Median	2.000
Mode	.000	Std dev	3.255	Variance	10.596
Kurtosis	-.121	S E Kurt	.406	Skewness	.936
S E Skew	.204	Range	13.000	Minimum	.000
Maximum	13.000	Sum	438.000		

Valid cases 141 Missing cases 0

RQ6 Name of branch

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
<blank>	1	22	15.6	15.6	15.6
	3	1	.7	.7	16.3
	5	1	.7	.7	17.0
	6	1	.7	.7	17.7
	7	1	.7	.7	18.4
	8	5	3.5	3.5	22.0
	9	3	2.1	2.1	24.1
	11	1	.7	.7	24.8
	12	3	2.1	2.1	27.0
	13	1	.7	.7	27.7
	14	5	3.5	3.5	31.2
	15	5	3.5	3.5	34.8
	16	1	.7	.7	35.5
	17	5	3.5	3.5	39.0
	18	6	4.3	4.3	43.3
	20	3	2.1	2.1	45.4
	21	1	.7	.7	46.1
	22	1	.7	.7	46.8
	23	2	1.4	1.4	48.2
	24	1	.7	.7	48.9
	25	2	1.4	1.4	50.4
	26	5	3.5	3.5	53.9
	27	2	1.4	1.4	55.3
	28	4	2.8	2.8	58.2
	29	1	.7	.7	58.9
	30	1	.7	.7	59.6
	31	1	.7	.7	60.3
	33	1	.7	.7	61.0
	34	1	.7	.7	61.7
	35	4	2.8	2.8	64.5
	36	4	2.8	2.8	67.4
	38	4	2.8	2.8	70.2
	39	6	4.3	4.3	74.5
	40	1	.7	.7	75.2
	41	1	.7	.7	75.9
	42	1	.7	.7	76.6
	43	1	.7	.7	77.3
	44	5	3.5	3.5	80.9
	45	2	1.4	1.4	82.3
	47	2	1.4	1.4	83.7
	48	1	.7	.7	84.4
	49	3	2.1	2.1	86.5
	50	3	2.1	2.1	88.7
	51	3	2.1	2.1	90.8
	52	2	1.4	1.4	92.2
	53	1	.7	.7	92.9
	54	5	3.5	3.5	96.5
	56	1	.7	.7	97.2
	57	1	.7	.7	97.9
	58	3	2.1	2.1	100.0
	Total	141	100.0	100.0	

Critical Incident Survey Analysis - Frequency Distributions

P06 Name of branch

Valid cases 141 Missing cases 0

- -

P10 Were customers present during last robbe

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Yes	1	105	74.5	80.2	80.2
No	2	21	14.9	16.0	96.2
Not sure	3	5	3.5	3.8	100.0
	.	10	7.1	Missing	
	Total	141	100.0	100.0	

Valid cases 131 Missing cases 10

- -

P11 Physical proximity to assailant at most

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Face to face	1	31	22.0	23.5	23.5
In same room	2	65	46.1	49.2	72.7
Not in same room	3	15	10.6	11.4	84.1
Not working at that	4	12	8.5	9.1	93.2
Other	5	9	6.4	6.8	100.0
	.	9	6.4	Missing	
	Total	141	100.0	100.0	

Valid cases 132 Missing cases 9

- -

P12 Did you feel your personal safety was th

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
No threat	1	48	34.0	36.9	36.9
Mild threat	2	35	24.8	26.9	63.8
Moderate threat	3	19	13.5	14.6	78.5
Strong threat	4	28	19.9	21.5	100.0
	.	11	7.8	Missing	
	Total	141	100.0	100.0	

Valid cases 130 Missing cases 11

:13 Type of weapon threatened with

alue Label	Value	Frequency	Percent	Valid Percent	Cum Percent
un	1	46	32.6	50.5	50.5
ther	3	6	4.3	6.6	57.1
weapon	4	39	27.7	42.9	100.0
	.	50	35.5	Missing	
	Total	141	100.0	100.0	

alid cases 91 Missing cases 50

- -

:30 Question 13 "other" response

alue Label	Value	Frequency	Percent	Valid Percent	Cum Percent
		130	92.2	92.2	92.2
	He said	1	.7	.7	92.9
	N/A	3	2.1	2.1	95.0
	NA (I wa	1	.7	.7	95.7
	Not invo	1	.7	.7	96.5
	Smoke bo	1	.7	.7	97.2
	Stated o	1	.7	.7	97.9
	Teller w	1	.7	.7	98.6
	The vict	1	.7	.7	99.3
	gun was	1	.7	.7	100.0
	Total	141	100.0	100.0	

alid cases 141 Missing cases 0

- -

'4 If gun used were shots fired

alue Label	Value	Frequency	Percent	Valid Percent	Cum Percent
es	1	5	3.5	4.5	4.5
o	2	64	45.4	58.2	62.7
t applicable	3	41	29.1	37.3	100.0
	.	31	22.0	Missing	
	Total	141	100.0	100.0	

alid cases 110 Missing cases 31

215 Ability to be productive after robbery

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Much worse	1	15	10.6	11.5	11.5
Worse	2	51	36.2	39.2	50.8
No effect	3	62	44.0	47.7	98.5
Better	4	2	1.4	1.5	100.0
	.	11	7.8	Missing	
	Total	141	100.0	100.0	

Valid cases 130 Missing cases 11

- -

215X How long did effect last? (weeks)

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	.0	1	.7	2.6	2.6
	.1	4	2.8	10.3	12.8
	.3	8	5.7	20.5	33.3
	.4	1	.7	2.6	35.9
	1.0	5	3.5	12.8	48.7
	2.0	4	2.8	10.3	59.0
	3.0	2	1.4	5.1	64.1
	4.0	5	3.5	12.8	76.9
	6.0	1	.7	2.6	79.5
	8.0	2	1.4	5.1	84.6
	10.0	1	.7	2.6	87.2
	12.0	1	.7	2.6	89.7
	16.0	1	.7	2.6	92.3
	52.0	1	.7	2.6	94.9
	142.7	1	.7	2.6	97.4
	1141.7	1	.7	2.6	100.0
	.	99	70.2	Missing	
	999.0	3	2.1	Missing	
	Total	141	100.0	100.0	

Valid cases 39 Missing cases 102

:16 Level of stress after robbery

alue Label	Value	Frequency	Percent	Valid Percent	Cum Percent
uch worse	1	27	19.1	20.8	20.8
orse	2	61	43.3	46.9	67.7
effect	3	40	28.4	30.8	98.5
etter	4	2	1.4	1.5	100.0
	.	11	7.8	Missing	
	Total	141	100.0	100.0	

alid cases 130 Missing cases 11

- -

6X How long did effect last? (weeks)

ue Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	.1	4	2.8	7.8	7.8
	.3	6	4.3	11.8	19.6
	.4	1	.7	2.0	21.6
	.6	1	.7	2.0	23.5
	.7	3	2.1	5.9	29.4
	1.0	4	2.8	7.8	37.3
	1.4	1	.7	2.0	39.2
	2.0	9	6.4	17.6	56.9
	3.0	5	3.5	9.8	66.7
	4.0	4	2.8	7.8	74.5
	5.0	1	.7	2.0	76.5
	6.0	3	2.1	5.9	82.4
	8.0	3	2.1	5.9	88.2
	9.0	1	.7	2.0	90.2
	10.0	1	.7	2.0	92.2
	12.0	1	.7	2.0	94.1
	52.0	1	.7	2.0	96.1
	142.7	1	.7	2.0	98.0
	1141.7	1	.7	2.0	100.0
	.	87	61.7	Missing	
	999.0	3	2.1	Missing	
	Total	141	100.0	100.0	

lid cases 51 Missing cases 90

C17 Physical health after robbery

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Much worse	1	4	2.8	3.1	3.1
Worse	2	27	19.1	21.1	24.2
No effect	3	97	68.8	75.8	100.0
	.	13	9.2	Missing	
	Total	141	100.0	100.0	

Valid cases 128 Missing cases 13

- -

C17A How long did effect last (days)

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
		132	93.6	93.6	93.6
	X	9	6.4	6.4	100.0
	Total	141	100.0	100.0	

Valid cases 141 Missing cases 0

- -

C17B How long did effect last (weeks)

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	0	1	.7	9.1	9.1
	1	3	2.1	27.3	36.4
	2	1	.7	9.1	45.5
	3	2	1.4	18.2	63.6
	4	1	.7	9.1	72.7
	8	1	.7	9.1	81.8
	10	2	1.4	18.2	100.0
	.	128	90.8	Missing	
	999	2	1.4	Missing	
	Total	141	100.0	100.0	

Valid cases 11 Missing cases 130

:8 Work relationships after robbery

;.ue Label	Value	Frequency	Percent	Valid Percent	Cum Percent
;ch worse	1	1	.7	.8	.8
:rse	2	15	10.6	11.6	12.4
. effect	3	81	57.4	62.8	75.2
etter	4	32	22.7	24.8	100.0
	.	12	8.5	Missing	
	Total	141	100.0	100.0	

.id cases 129 Missing cases 12

- -

'8A How long did efect last (days)

.ue Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	0	1	.7	33.3	33.3
	3	2	1.4	66.7	100.0
	.	138	97.9	Missing	
	Total	141	100.0	100.0	

.id cases 3 Missing cases 138

- -

88 How long did effect last (weeks)

ue Label	Value	Frequency	Percent	Valid Percent	Cum Percent
		127	90.1	90.1	90.1
	X	14	9.9	9.9	100.0
	Total	141	100.0	100.0	

.id cases 141 Missing cases 0

219 Personal relationships (after robbery)

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Much worse	1	1	.7	.8	.8
Worse	2	14	9.9	10.9	11.6
No effect	3	101	71.6	78.3	89.9
Better	4	13	9.2	10.1	100.0
	.	12	8.5	Missing	
	Total	141	100.0	100.0	

Valid cases 129 Missing cases 12

- -

219X How long did effect last? (weeks)

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	.0	2	1.4	20.0	20.0
	.3	2	1.4	20.0	40.0
	2.0	3	2.1	30.0	70.0
	4.0	1	.7	10.0	80.0
	10.0	1	.7	10.0	90.0
	142.7	1	.7	10.0	100.0
	.	131	92.9	Missing	
	Total	141	100.0	100.0	

Valid cases 10 Missing cases 131

- -

220 Desire to keep working for same employer

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Much less desire	1	13	9.2	10.2	10.2
Less desire	2	40	28.4	31.3	41.4
No effect	3	72	51.1	56.3	97.7
Greater desire	4	3	2.1	2.3	100.0
	.	13	9.2	Missing	
	Total	141	100.0	100.0	

Valid cases 128 Missing cases 13

C21 Missed additional days at work due to ro

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Yes	1	8	5.7	6.4	6.4
No	2	117	83.0	93.6	100.0
	.	16	11.3	Missing	
	Total	141	100.0	100.0	

Valid cases 125 Missing cases 16

- -

C21A How many additional days were lost

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	2	1.4	22.2	22.2
	2	5	3.5	55.6	77.8
	4	1	.7	11.1	88.9
	5	1	.7	11.1	100.0
	.	131	92.9	Missing	
	999	1	.7	Missing	
	Total	141	100.0	100.0	

Valid cases 9 Missing cases 132

- -

C18 Were these days paid

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Yes	1	6	4.3	100.0	100.0
	.	135	95.7	Missing	
	Total	141	100.0	100.0	

Valid cases 6 Missing cases 135

Critical Incident Survey Analysis - Frequency Distributions

328 Participated in stress debriefing

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Yes	1	59	41.8	46.5	46.5
No	2	68	48.2	53.5	100.0
	.	14	9.9	Missing	
	Total	141	100.0	100.0	

Valid cases 127 Missing cases 14

- -

329 Participants at group debriefing session

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
City employees direc	1	8	5.7	12.7	12.7
City employees in ban	2	17	12.1	27.0	39.7
City employees at loc	3	38	27.0	60.3	100.0
	.	78	55.3	Missing	
	Total	141	100.0	100.0	

Valid cases 63 Missing cases 78

- -

330 How effective was debriefing in helping

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Very helpful	1	17	12.1	26.2	26.2
Somewhat helpful	2	30	21.3	46.2	72.3
No effect	3	17	12.1	26.2	98.5
Made things worse	4	1	.7	1.5	100.0
	.	76	53.9	Missing	
	Total	141	100.0	100.0	

Valid cases 65 Missing cases 76

234A Family / friends

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
ade it worse	1	12	8.5	10.3	10.3
e effect	2	47	33.3	40.5	50.9
omewhat helpful	3	26	18.4	22.4	73.3
ery helpful	4	31	22.0	26.7	100.0
	.	25	17.7	Missing	
	Total	141	100.0	100.0	

alid cases 116 Missing cases 25

34B Co-workers

alue Label	Value	Frequency	Percent	Valid Percent	Cum Percent
ade it worse	1	7	5.0	6.0	6.0
effect	2	36	25.5	31.0	37.1
omewhat helpful	3	39	27.7	33.6	70.7
ery helpful	4	34	24.1	29.3	100.0
	.	25	17.7	Missing	
	Total	141	100.0	100.0	

alid cases 116 Missing cases 25

34C Critical incident stress debriefing

alue Label	Value	Frequency	Percent	Valid Percent	Cum Percent
effect	2	39	27.7	43.8	43.8
mewhat helpful	3	34	24.1	38.2	82.0
ry helpful	4	16	11.3	18.0	100.0
	.	52	36.9	Missing	
	Total	141	100.0	100.0	

alid cases 89 Missing cases 52

Q340 Supervisor

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Made it worse	1	1	.7	.9	.9
No effect	2	52	36.9	46.8	47.7
Somewhat helpful	3	29	20.6	26.1	73.9
Very helpful	4	29	20.6	26.1	100.0
	.	30	21.3	Missing	
	Total	141	100.0	100.0	

Valid cases 111 Missing cases 30

Q34E Overall work environment

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Made it worse	1	15	10.6	13.2	13.2
No effect	2	48	34.0	42.1	55.3
Somewhat helpful	3	34	24.1	29.8	85.1
Very helpful	4	17	12.1	14.9	100.0
	.	27	19.1	Missing	
	Total	141	100.0	100.0	

Valid cases 114 Missing cases 27

Q3[illegible] Debriefing session is worthwhile

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Yes	1	46	32.6	86.8	86.8
Don't know	3	7	5.0	13.2	100.0
	.	88	62.4	Missing	
	Total	141	100.0	100.0	

Valid cases 53 Missing cases 88

Appendix D

Participation in Critical Incident Stress Debriefing

Critical Incident Survey Analysis - Q28 & Q34c

SYMPTOMS Experienced symptoms? (Q22) by Q28 Participated in stress debriefing

Q28 Page 1 of 1

SYMPTOMS	Count / Row Pct / Col Pct	Yes 1	No 2	Row Total
No	0	7 22.6 11.9	24 77.4 35.3	31 24.4
Yes	1	52 54.2 88.1	44 45.8 64.7	96 75.6
	Column Total	59 46.5	68 53.5	127 100.0

Chi-Square	Value	DF	Significance
Pearson	9.39865	1	.00217
Continuity Correction	8.17172	1	.00425
Likelihood Ratio	9.88636	1	.00167
Mantel-Haenszel	9.32465	1	.00226

Minimum Expected Frequency - 14.402

Number of Missing Observations: 14

Q17 Physical health after robbery by Q28 Participated in stress debriefing

Q17	Q28 Yes (1)	Q28 No (2)	Row Total
2 Worse / much wor	21	10	31
	67.7	32.3	25.0
	36.2	15.2	
3 No effect	37	56	93
	39.8	60.2	75.0
	63.8	84.8	
Column Total	58	66	124
	46.8	53.2	100.0

Chi-Square	Value	DF	Significance
Pearson	7.29920	1	.00690
Continuity Correction	6.21944	1	.01264
Likelihood Ratio	7.38226	1	.00659
Mantel-Haenszel	7.24033	1	.00713

Minimum Expected Frequency - 14.500

Number of Missing Observations: 17

Critical Incident Survey Analysis - Q28 & Q34c

Q12 Did you feel your personal safety was th by Q28 Participated in stress debriefing

Q28 Page 1 of 1

Count / Row Pct / Col Pct	Yes 1	No 2	Row Total
Q12			
1 No threat	18 38.3 31.0	29 61.7 42.6	47 37.3
2 Mild threat	9 26.5 15.5	25 73.5 36.8	34 27.0
3 Moderate threat	10 58.8 17.2	7 41.2 10.3	17 13.5
4 Strong threat	21 75.0 36.2	7 25.0 10.3	28 22.2
Column Total	58 46.0	68 54.0	126 100.0

Chi-Square	Value	DF	Significance
Pearson	16.94638	3	.00073
Likelihood Ratio	17.49700	3	.00056
Mantel-Haenszel	11.35988	1	.00075

Minimum Expected Frequency - 7.825

Number of Missing Observations: 15

Critical Incident Survey Analysis - Q28 & Q34c

'3R Weapon used? by Q28 Participated in stress debriefing

Page 1 of 1

'3R	Count / Row Pct / Col Pct	Q28 Yes 1	Q28 No 2	Row Total
0		30	21	51
Weapon		58.8	41.2	57.3
		73.2	43.8	
4		11	27	38
No weapon		28.9	71.1	42.7
		26.8	56.3	
Column Total		41	48	89
		46.1	53.9	100.0

Chi-Square	Value	DF	Significance
arson	7.82291	1	.00516
ctinuity Correction	6.66663	1	.00982
kelihood Ratio	7.99698	1	.00469
ntel-Haenszel	7.73501	1	.00542

nimum Expected Frequency - 17.506

ber of Missing Observations: 52

Q15 Ability to be productive after robbery by Q28 Participated in stress debriefing

Q15	Count / Row Pct / Col Pct	Q28 Yes 1	Q28 No 2	Row Total
1 Much worse		9 60.0 15.5	6 40.0 8.8	15 11.9
2 Worse		29 59.2 50.0	20 40.8 29.4	49 38.9
3 No effect / bett		20 32.3 34.5	42 67.7 61.8	62 49.2
	Column Total	58 46.0	68 54.0	126 100.0

Chi-Square	Value	DF	Significance
Pearson	9.32460	2	.00944
Likelihood Ratio	9.45119	2	.00887
Mantel-Haenszel	7.59499	1	.00585

Minimum Expected Frequency - 6.905

Number of Missing Observations: 15

.2G Desire to keep working for same employer by Q28 Participated in stress debriefing

Q28 Page 1 of 1

Count / Row Pct / Col Pct	Yes 1	No 2	Row Total
.2G			
1 Much less desire	12 92.3 21.1	1 7.7 1.5	13 10.5
2 Less desire	22 57.9 38.6	16 42.1 23.9	38 30.6
3 No effect / grea	23 31.5 40.4	50 68.5 74.6	73 58.9
Column Total	57 46.0	67 54.0	126 100.0

Chi-Square	Value	DF	Significance
Pearson	19.56214	2	.00006
Likelihood Ratio	21.34236	2	.00002
Mantel-Haenszel	19.27307	1	.00001

Minimum Expected Frequency - 5.976

Number of Missing Observations: 17

Critical Incident Survey Analysis - Q28 & Q34c

Q18 Work relationships after robbery by Q28 Participated in stress debriefing

Page 1 of 1

Count / Row Pct / Col Pct	Q28 Yes 1	Q28 No 2	Row Total
Q18 2 Worse / much wor	9 56.3 15.8	7 43.8 10.3	16 12.8
3 No effect	27 34.6 47.4	51 65.4 75.0	78 62.4
4 Better	21 67.7 36.8	10 32.3 14.7	31 24.8
Column Total	57 45.6	68 54.4	125 100.0

Chi-Square	Value	DF	Significance
Pearson	10.65233	2	.00486
Likelihood Ratio	10.77676	2	.00457
Mantel-Haenszel	2.35564	1	.12483

Minimum Expected Frequency - 7.296

Number of Missing Observations: 16

Q24 Used medical care as consequence of robb by Q28 Participated in stress debriefing

Q24	Count / Row Pct / Col Pct	Q28 Yes (1)	Q28 No (2)	Row Total
Yes	1	6		6
		100.0		4.8
		10.3		
No	2	52	67	119
		43.7	56.3	95.2
		89.7	100.0	
	Column Total	58	67	125
		46.4	53.6	100.0

Chi-Square	Value	DF	Significance
Pearson	7.28050	1	.00697
Continuity Correction	5.19264	1	.02268
Likelihood Ratio	9.56500	1	.00198
Mantel-Haenszel	7.22225	1	.00720
Fisher's Exact Test:			
One-Tail			.00863
Two-Tail			.00863

Minimum Expected Frequency - 2.784

Cells with Expected Frequency < 5 - 2 OF 4 (50.0%)

Number of Missing Observations: 16

ERVICES Used counseling/medical services? by Q28 Participated in stress debriefing

	Q28		
Count / Row Pct / Col Pct	Yes 1	No 2	Row Total
ERVICES 0 NO	24 / 27.9 / 40.7	62 / 72.1 / 92.5	86 / 68.3
1 Yes	35 / 87.5 / 59.3	5 / 12.5 / 7.5	40 / 31.7
Column Total	59 / 46.8	67 / 53.2	126 / 100.0

Chi-Square	Value	DF	Significance
arson	38.93974	1	.00000
ntinuity Correction	36.58314	1	.00000
kelihood Ratio	42.18671	1	.00000
ntel-Haenszel	38.63069	1	.00000

nimum Expected Frequency - 18.730

mber of Missing Observations: 15

Critical Incident Survey Analysis - Q28 & Q34c

Q23A Employee Assistance Program by Q28 Participated in stress debriefing

Page 1 of 1

Count / Row Pct / Col Pct	Q28 Yes 1	Q28 No 2	Row Total
Q23A 0 No	27 29.7 45.8	64 70.3 98.5	91 73.4
1 Yes	32 97.0 54.2	1 3.0 1.5	33 26.6
Column Total	59 47.6	65 52.4	124 100.0

Chi-Square	Value	DF	Significance
Pearson	43.97781	1	.00000
Continuity Correction	41.32091	1	.00000
Likelihood Ratio	51.98346	1	.00000
Mantel-Haenszel	43.62315	1	.00000

Minimum Expected Frequency - 15.702

Number of Missing Observations: 17

Q16R Level of stress after robbery * Q28 Participated in stress debriefing Crosstabulation

			Q28 Participated in stress debriefing		Total
			1 Yes	2 No	
Q16R Level of stress after robbery	2 Worse / much worse	Count	48	37	85
		% of Q16R Level of stress after robbery	56.5%	43.5%	100.0%
		% of Q28 Participated in stress debriefing	82.8%	54.4%	67.5%
	3 No effect / better	Count	10	31	41
		% of Q16R Level of stress after robbery	24.4%	75.6%	100.0%
		% of Q28 Participated in stress debriefing	17.2%	45.6%	32.5%
Total		Count	58	68	126
		% of Q16R Level of stress after robbery	46.0%	54.0%	100.0%
		% of Q28 Participated in stress debriefing	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-tailed)	Exact Sig. (2-tailed)	Exact Sig. (1-tailed)
Pearson Chi-Square	11.458[b]	1	.001		
Continuity Correction[a]	10.203	1	.001		
Likelihood Ratio	11.917	1	.001		
Fisher's Exact Test				.001	.001
Linear-by-Linear Association	11.367	1	.001		
N of Valid Cases	126				

a. Computed only for a 2x2 table

b. 0 cells (.0%) have expected count less than 5. The minimum expected count is 18.87.

Appendix E

Evaluation of Critical Incident Stress Debriefing

Q12 Did you feel your personal safety was threatened * Q34C Critical incident stress debriefing Crosstabulation

			Q34C Critical incident stress debriefing		
			2 No effect	3 Somewhat/very helpful	Total
Q12 Did you feel your personal safety was threatened	1 No threat	Count	20	13	33
		% of Q12 Did you feel your personal safety was threatened	60.6%	39.4%	100.0%
		% of Q34C Critical incident stress debriefing	51.3%	26.0%	37.1%
	2 Mild threat	Count	11	12	23
		% of Q12 Did you feel your personal safety was threatened	47.8%	52.2%	100.0%
		% of Q34C Critical incident stress debriefing	28.2%	24.0%	25.8%
	3 Moderate threat	Count	3	9	12
		% of Q12 Did you feel your personal safety was threatened	25.0%	75.0%	100.0%
		% of Q34C Critical incident stress debriefing	7.7%	18.0%	13.5%
	4 Strong threat	Count	5	16	21
		% of Q12 Did you feel your personal safety was threatened	23.8%	76.2%	100.0%
		% of Q34C Critical incident stress debriefing	12.8%	32.0%	23.6%
Total		Count	39	50	89
		% of Q12 Did you feel your personal safety was threatened	43.8%	56.2%	100.0%
		% of Q34C Critical incident stress debriefing	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-tailed)
Pearson Chi-Square	9.069[a]	3	.028
Likelihood Ratio	9.376	3	.025
Linear-by-Linear Association	8.500	1	.004
N of Valid Cases	89		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 5.26.

Q13R Weapon used? * Q34CR Critical incident stress debriefing Crosstabulation

			Q34CR Critical incident stress debriefing		
			2 No effect	3 Somewhat/very helpful	Total
Q13R Weapon used?	0 Weapon	Count	11	29	40
		% of Q13R Weapon used?	27.5%	72.5%	100.0%
		% of Q34CR Critical incident stress debriefing	40.7%	78.4%	62.5%
	4 No weapon	Count	16	8	24
		% of Q13R Weapon used?	66.7%	33.3%	100.0%
		% of Q34CR Critical incident stress debriefing	59.3%	21.6%	37.5%
Total		Count	27	37	64
		% of Q13R Weapon used?	42.2%	57.8%	100.0%
		% of Q34CR Critical incident stress debriefing	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-tailed)	Exact Sig. (2-tailed)	Exact Sig. (1-tailed)
Pearson Chi-Square	9.435[b]	1	.002		
Continuity Correction[a]	7.897	1	.005		
Likelihood Ratio	9.548	1	.002		
Fisher's Exact Test				.004	.002
Linear-by-Linear Association	9.287	1	.002		
N of Valid Cases	64				

a. Computed only for a 2x2 table

b. 0 cells (.0%) have expected count less than 5. The minimum expected count is 10.13.

SYMPTOMS Experienced symptoms? (Q22) * Q34CR Critical incident stress debriefing Crosstabulation

			Q34CR Critical incident stress debriefing		
			2 No effect	3 Somewhat/very helpful	Total
SYMPTOMS Experienced symptoms? (Q22)	0 No	Count	18	4	22
		% of SYMPTOMS Experienced symptoms? (Q22)	81.8%	18.2%	100.0%
		% of Q34CR Critical incident stress debriefing	46.2%	8.0%	24.7%
	1 Yes	Count	21	46	67
		% of SYMPTOMS Experienced symptoms? (Q22)	31.3%	68.7%	100.0%
		% of Q34CR Critical incident stress debriefing	53.8%	92.0%	75.3%
Total		Count	39	50	89
		% of SYMPTOMS Experienced symptoms? (Q22)	43.8%	56.2%	100.0%
		% of Q34CR Critical incident stress debriefing	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-tailed)	Exact Sig. (2-tailed)	Exact Sig. (1-tailed)
Pearson Chi-Square	17.140[b]	1	.000		
Continuity Correction[a]	15.151	1	.000		
Likelihood Ratio	17.831	1	.000		
Fisher's Exact Test[a]				.000	.000
Linear-by-Linear Association	16.947	1	.000		
N of Valid Cases	89				

a. Computed only for a 2x2 table

b. 0 cells (.0%) have expected count less than 5. The minimum expected count is 9.64.

Q20 Desire to keep working for same employer (after robbery) * Q34CR Critical incident stress debriefing Crosstabulation

			Q34CR Critical incident stress debriefing		
			2 No effect	3 Somewhat/very helpful	Total
Q20 Desire to keep working for same employer (after robbery)	1 Much less desire	Count	2	10	12
		% of Q20 Desire to keep working for same employer (after robbery)	16.7%	83.3%	100.0%
		% of Q34CR Critical incident stress debriefing	5.1%	20.4%	13.6%
	2 Less desire	Count	9	18	27
		% of Q20 Desire to keep working for same employer (after robbery)	33.3%	66.7%	100.0%
		% of Q34CR Critical incident stress debriefing	23.1%	36.7%	30.7%
	3 No effect / greater desire	Count	28	21	49
		% of Q20 Desire to keep working for same employer (after robbery)	57.1%	42.9%	100.0%
		% of Q34CR Critical incident stress debriefing	71.8%	42.9%	55.7%
Total		Count	39	49	88
		% of Q20 Desire to keep working for same employer (after robbery)	44.3%	55.7%	100.0%
		% of Q34CR Critical incident stress debriefing	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-tailed)
Pearson Chi-Square	8.304[a]	2	.016
Likelihood Ratio	8.745	2	.013
Linear-by-Linear Association	8.129	1	.004
N of Valid Cases	88		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 5.32.

Q18 Work relationships after robbery * Q34CR Critical incident stress debriefing Crosstabulation

			Q34CR Critical incident stress debriefing		
			2 No effect	3 Somewhat/very helpful	Total
Q18 Work relationships after robbery	2 Worse / much worse	Count	3	9	12
		% of Q18 Work relationships after robbery	25.0%	75.0%	100.0%
		% of Q34CR Critical incident stress debriefing	7.7%	18.4%	13.6%
	3 No effect	Count	30	20	50
		% of Q18 Work relationships after robbery	60.0%	40.0%	100.0%
		% of Q34CR Critical incident stress debriefing	76.9%	40.8%	56.8%
	4 Better	Count	6	20	26
		% of Q18 Work relationships after robbery	23.1%	76.9%	100.0%
		% of Q34CR Critical incident stress debriefing	15.4%	40.8%	29.5%
Total		Count	39	49	88
		% of Q18 Work relationships after robbery	44.3%	55.7%	100.0%
		% of Q34CR Critical incident stress debriefing	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-tailed)
Pearson Chi-Square	11.551[a]	2	.003
Likelihood Ratio	11.967	2	.003
Linear-by-Linear Association	1.150	1	.284
N of Valid Cases	88		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 5.32.

SERVICES Used counseling/medical services? * Q34CR Critical incident stress debriefing Crosstabulation

			Q34CR Critical incident stress debriefing		
			2 No effect	3 Somewhat/very helpful	Total
SERVICES Used counseling/medical services?	0 No	Count	31	23	54
		% of SERVICES Used counseling/medical services?	57.4%	42.6%	100.0%
		% of Q34CR Critical incident stress debriefing	81.6%	46.0%	61.4%
	1 Yes	Count	7	27	34
		% of SERVICES Used counseling/medical services?	20.6%	79.4%	100.0%
		% of Q34CR Critical incident stress debriefing	18.4%	54.0%	38.6%
Total		Count	38	50	88
		% of SERVICES Used counseling/medical services?	43.2%	56.8%	100.0%
		% of Q34CR Critical incident stress debriefing	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-tailed)	Exact Sig. (2-tailed)	Exact Sig. (1-tailed)
Pearson Chi-Square	11.528[b]	1	.001		
Continuity Correction[a]	10.076	1	.002		
Likelihood Ratio	12.108	1	.001		
Fisher's Exact Test[a]				.001	.001
Linear-by-Linear Association	11.397	1	.001		
N of Valid Cases	88				

a. Computed only for a 2x2 table

b. 0 cells (.0%) have expected count less than 5. The minimum expected count is 14.68.

Q23A Employee Assistance Program * Q34CR Critical incident stress debriefing Crosstabulation

			Q34CR Critical incident stress debriefing		
			2 No effect	3 Somewhat/very helpful	Total
Q23A Optium Employee Assistance Program	0 No	Count	32	26	58
		% of Q23A Optium Employee Assistance Program	55.2%	44.8%	100.0%
		% of Q34CR Critical incident stress debriefing	84.2%	53.1%	66.7%
	1 Yes	Count	6	23	29
		% of Q23A Optium Employee Assistance Program	20.7%	79.3%	100.0%
		% of Q34CR Critical incident stress debriefing	15.8%	46.9%	33.3%
Total		Count	38	49	87
		% of Q23A Optium Employee Assistance Program	43.7%	56.3%	100.0%
		% of Q34CR Critical incident stress debriefing	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-tailed)	Exact Sig. (2-tailed)	Exact Sig. (1-tailed)
Pearson Chi-Square	9.345[b]	1	.002		
Continuity Correction[a]	7.996	1	.005		
Likelihood Ratio	9.860	1	.002		
Fisher's Exact Test[a]				.003	.002
Linear-by-Linear Association	9.237	1	.002		
N of Valid Cases	87				

a. Computed only for a 2x2 table

b. 0 cells (.0%) have expected count less than 5. The minimum expected count is 12.67.

Q34C Critical incident stress debriefing by Q28 Participated in stress debriefing

Q34C	Q28 Yes (1)	Q28 No (2)	Row Total
2 No effect	12	25	37
	32.4	67.6	43.0
	22.2	78.1	
3 Somewhat helpful	28	5	33
	84.8	15.2	38.4
	51.9	15.6	
4 Very helpful	14	2	16
	87.5	12.5	18.6
	25.9	6.3	
Column Total	54	32	86
	62.8	37.2	100.0

Chi-Square	Value	DF	Significance
Pearson	25.64842	2	.00000
Likelihood Ratio	26.77567	2	.00000
Mantel-Haenszel	20.37890	1	.00001

Minimum Expected Frequency - 5.953

Number of Missing Observations: 55

Appendix F

Physical Health Post-robbery

Q16 Level of stress after robbery by Q17 Physical health after robbery

Q16	Q17 Worse / much wor 2	Q17 No effec t 3	Row Total
1 Much worse	18 66.7 58.1	9 33.3 9.3	27 21.1
2 Worse	12 20.3 38.7	47 79.7 48.5	59 46.1
3 No effect / bett	1 2.4 3.2	41 97.6 42.3	42 32.8
Column Total	31 24.2	97 75.8	128 100.0

Chi-Square	Value	DF	Significance
Pearson	37.90428	2	.00000
Likelihood Ratio	38.29773	2	.00000
Mantel-Haenszel	34.22593	1	.00000

Minimum Expected Frequency - 6.539

Number of Missing Observations: 13

C12R Felt personal safety was threatened by Q17 Physical health after robbery

Q17 Page 1 of 1

Count / Row Pct / Col Pct	Worse / much wor 2	No effec t 3	Row Total
C12R 2 No / mild	13 / 15.9 / 41.9	69 / 84.1 / 71.1	82 / 64.1
3 Moderate / stron	18 / 39.1 / 58.1	28 / 60.9 / 28.9	46 / 35.9
Column Total	31 / 24.2	97 / 75.8	128 / 100.0

Chi-Square	Value	DF	Significance
Pearson	8.69949	1	.00318
Continuity Correction	7.47745	1	.00625
Likelihood Ratio	8.43386	1	.00368
Mantel-Haenszel	8.63153	1	.00330

Minimum Expected Frequency - 11.141

Number of Missing Observations: 13

Q15 Ability to be productive after robbery by Q17 Physical health after robbery

Q15	Q17 Worse / much wor 2	Q17 No effec t 3	Row Total
1 Much worse	10	5	15
	66.7	33.3	11.7
	32.3	5.2	
2 Worse	17	33	50
	34.0	66.0	39.1
	54.8	34.0	
3 No effect / bett	4	59	63
	6.3	93.7	49.2
	12.9	60.8	
Column Total	31	97	128
	24.2	75.8	100.0

Chi-Square	Value	DF	Significance
Pearson	28.29372	2	.00000
Likelihood Ratio	28.72444	2	.00000
Mantel-Haenszel	27.98899	1	.00000

Minimum Expected Frequency - 3.633
Cells with Expected Frequency < 5 - 1 OF 6 (16.7%)

Number of Missing Observations: 13

Q18 Work relationships after robbery by Q17 Physical health after robbery

	Q17		Page 1 of 1
Count / Row Pct / Col Pct	Worse / much wor 2	No effec t 3	Row Total
Q18			
2 Worse / much wor	5 / 33.3 / 16.7	10 / 66.7 / 10.3	15 / 11.8
3 No effect	13 / 16.3 / 43.3	67 / 83.8 / 69.1	80 / 63.0
4 Better	12 / 37.5 / 40.0	20 / 62.5 / 20.6	32 / 25.2
Column Total	30 / 23.6	97 / 76.4	127 / 100.0

Chi-Square	Value	DF	Significance
Pearson	6.60985	2	.03670
Likelihood Ratio	6.41550	2	.04045
Mantel-Haenszel	1.09498	1	.29537

Minimum Expected Frequency - 3.543
Cells with Expected Frequency < 5 - 1 OF 6 (16.7%)

Number of Missing Observations: 14

SYMPTOMS Experienced symptoms? (Q22) by Q12R Felt personal safety was threatened

Q12R Page 1 of 1

SYMPTOMS	Count / Row Pct / Col Pct	No / mild 2	Moderate / strong 3	Row Total
No	0	29	3	32
		90.6	9.4	24.6
		34.9	6.4	
Yes	1	54	44	98
		55.1	44.9	75.4
		65.1	93.6	
	Column Total	83	47	130
		63.8	36.2	100.0

Chi-Square	Value	DF	Significance
Pearson	13.18748	1	.00028
Continuity Correction	11.69344	1	.00063
Likelihood Ratio	15.37061	1	.00009
Mantel-Haenszel	13.08604	1	.00030

Minimum Expected Frequency - 11.569

Number of Missing Observations: 11

SYMPTOMS Experienced symptoms? (Q22) by Q13R Weapon used?

Q13R Page 1 of 1

SYMPTOMS	Count / Row Pct / Col Pct	Weapon 0	No weapon 4	Row Total
No	0	7	14	21
		33.3	66.7	23.1
		13.5	35.9	
Yes	1	45	25	70
		64.3	35.7	76.9
		86.5	64.1	
	Column Total	52	39	91
		57.1	42.9	100.0

Chi-Square	Value	DF	Significance
Pearson	6.31944	1	.01194
Continuity Correction	5.11875	1	.02367
Likelihood Ratio	6.30976	1	.01201
Mantel-Haenszel	6.25000	1	.01242

Minimum Expected Frequency - 9.000

Number of Missing Observations: 50

Q20R Desire to keep working for employer * Q17 Physical health after robbery Crosstabulation

			Q17 Physical health after robbery		
			2 Worse / much worse	3 No effect	Total
Q20R Desire to keep working for employer	2 Less / much less desire	Count	22	30	52
		% of Q20R Desire to keep working for employer	42.3%	57.7%	100.0%
		% of Q17 Physical health after robbery	71.0%	31.6%	41.3%
	3 No effect / greater desire	Count	9	65	74
		% of Q20R Desire to keep working for employer	12.2%	87.8%	100.0%
		% of Q17 Physical health after robbery	29.0%	68.4%	58.7%
Total		Count	31	95	126
		% of Q20R Desire to keep working for employer	24.6%	75.4%	100.0%
		% of Q17 Physical health after robbery	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-tailed)	Exact Sig. (2-tailed)	Exact Sig. (1-tailed)
Pearson Chi-Square	14.961[b]	1	.000		
Continuity Correction[a]	13.380	1	.000		
Likelihood Ratio	14.966	1	.000		
Fisher's Exact Test[a]				.000	.000
Linear-by-Linear Association	14.842	1	.000		
N of Valid Cases	126				

a. Computed only for a 2x2 table

b. 0 cells (.0%) have expected count less than 5. The minimum expected count is 12.79.

Appendix G

Management versus Nonmanagement Responses

Q15R Ability to be productive after robbery * Q5R Current job position at bank Crosstabulation

			Q5R Current job position at bank		
			1 Management	9 Other	Total
Q15R Ability to be productive after robbery	2 Worse / much worse	Count	31	30	61
		% of Q15R Ability to be productive after robbery	50.8%	49.2%	100.0%
		% of Q5R Current job position at bank	62.0%	42.3%	50.4%
	3 No effect / better	Count	19	41	60
		% of Q15R Ability to be productive after robbery	31.7%	68.3%	100.0%
		% of Q5R Current job position at bank	38.0%	57.7%	49.6%
Total		Count	50	71	121
		% of Q15R Ability to be productive after robbery	41.3%	58.7%	100.0%
		% of Q5R Current job position at bank	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-tailed)	Exact Sig. (2-tailed)	Exact Sig. (1-tailed)
Pearson Chi-Square	4.576[b]	1	.032		
Continuity Correction[a]	3.820	1	.051		
Likelihood Ratio	4.611	1	.032		
Fisher's Exact Test				.042	.025
Linear-by-Linear Association	4.538	1	.033		
N of Valid Cases	121				

a. Computed only for a 2x2 table

b. 0 cells (.0%) have expected count less than 5. The minimum expected count is 24.79.

236 What management can do to help employees

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Close the bank the e	2	6	4.3	7.3	7.3
Robbery training	3	13	9.2	15.9	23.2
Improve security mea	4	5	3.5	6.1	29.3
Counseling	5	9	6.4	11.0	40.2
Give time off	6	9	6.4	11.0	51.2
They did O.K.	7	11	7.8	13.4	64.6
Stress feelings are	8	1	.7	1.2	65.9
Keep hassle free	9	5	3.5	6.1	72.0
Be supportive/caring	10	9	6.4	11.0	82.9
Do something	11	1	.7	1.2	84.1
Get right back to wo	12	1	.7	1.2	85.4
Do not know	13	1	.7	1.2	86.6
Communication	14	3	2.1	3.7	90.2
Stress personal safe	15	1	.7	1.2	91.5
Transfer employees f	16	1	.7	1.2	92.7
Be together with co-	17	3	2.1	3.7	96.3
Appreciate everyone	18	2	1.4	2.4	98.8
Remain aware of surr	19	1	.7	1.2	100.0
	.	59	41.8	Missing	
	Total	141	100.0	100.0	

Valid cases 82 Missing cases 59

341 Debriefing session is worthwhile by QSR Current job position at bank

QSR Page 1 of 1

Count / Row Pct / Col Pct	Manageme nt 1	Other 9	Row Total
341 1 Yes	39 88.6 92.9	5 11.4 55.6	44 86.3
3 Don't know	3 42.9 7.1	4 57.1 44.4	7 13.7
Column Total	42 82.4	9 17.6	51 100.0

Chi-Square	Value	DF	Significance
Pearson	8.70895	1	.00317
Continuity Correction	5.84375	1	.01563
Likelihood Ratio	6.81471	1	.00904
Mantel-Haenszel	8.53819	1	.00348
Fisher's Exact Test:			
One-Tail			.01346
Two-Tail			.01346

Minimum Expected Frequency - 1.235
Cells with Expected Frequency < 5 - 1 OF 4 (25.0%)

Number of Missing Observations: 90