

AN EXAMINATION OF THE EFFECTIVENESS OF PERIODIC
STRESS DEBRIEFING WITH LAW ENFORCEMENT PERSONNEL

by

ANDREW THOMSON YOUNG, B.A., M.S., M.Ed.

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TABLE OF CONTENTS

ACKNOWLEDGMENTS

LIST OF TABLES IV

CHAPTER

I	INTRODUCTION	1
II	REVIEW OF LITERATURE	19
III	METHOD	52
IV	RESULTS	65
V	DISCUSSION	85
	REFERENCES	104
	APPENDIX	
A	THE IMPACT OF EVENTS SCALE-REVISED	115
B	THE BECK DEPRESSION INVENTORY (BDI)	117
C	THE SOCIAL READJUSTMENT RATING SCALE	120
D	DEMOGRAPHIC QUESTIONS	122
E	INFORMED CONSENT	124
F	THE CISD PROGRESSION	127
G	SUICIDE ASSESSMENT AND PROTOCOL	130
H	GROUP MEETING GUIDELINES	133
I	OFFER TO CONTROL GROUP FOR TREATMENT	135
J	THE TEACHING PHASE	136

LIST OF TABLES

1	Descriptive Statistics for Participaton Across Research Conditions and Groups	66
2	Work Duties	67
3	Demographic Information	69
4	Treatment Condition Meeting Attendance	70
5	Descriptive Statistics for Treatment and Control Condition Scores on the BDI and IES-R	74
6	Estimated Marginal Means and Standard Deviations for the Research Condifions for the BDI and IES-R Posttest	76
7	MANCOVA for the SRRS, BDI, and IES-R Pretest Scores	77
8	MANCOVA Results for Research Condifion Differences	77
9	MANCOVA Results for Research Conditions on BDI and IES-R Scores	78
10	Descriptive Statistics for IES-R Subscale Scores for Patrol Groups at Pretest and Posttest	79
11	Descriptive Statistics for IES-R Subscale Scores for investigator Groups at Pretest and Posttest	80
12	MANCOVA for IES-R Subscales for Research Condifions at Posttest	81

CHAPTER I

INTRODUCTION

Every community depends on law enforcement personnel. At any time a life-threatening emergency can occur, and the need for law enforcement becomes acute. Law enforcement officers frequently respond to brutal assaults, rapes, murders, domestic disputes, accidents, catastrophes, robberies, shootings, and stabbings. Often the officers become the object or focus of these events. For example, when officers respond to domestic disputes (which are some of the most dangerous calls faced in the line of duty), they can become the object of anger and abuse.

The realities of law enforcement raise some important questions. How do these officers handle the stress associated with their job? How can these individuals secure the needed psychological defenses and skills to go from call to call and also be able to live off-duty in a "nonnal" way? In sum, how can people who daily engage in emergency situations cope effectively without burning out, becoming depressed, experiencing the symptoms associated with Posttraumatic Stress Disorder (PTSD), or quitting? This study explores these questions.

Statement of the Problem

Police officers face many stress-inducing situations. In the course of an average day, the local police department responds to over fifty stress-inducing calls for service (domestic disputes, different types of assaults, civil disturbances, robberies, and

burglaries). One major source of stress is an officer-involved shooting. According to Ayoub (1980), officers who did not receive professional help after being involved in an incident of deadly force faced a 70% chance of leaving the job within five years. Brubaker (2002) found a majority of the officers in his study felt tacitly prepared to face a deadly-force incident, but were "not prepared for the psychological impact upon themselves, their families, and their departments after the event" (Brubaker, 2002, p. 11). In light of officer shortages in many police departments (Assistant Police Chief D. Holton, personal communication, April 8, 2002), any loss of qualified officers due to an officer-involved shooting is cause for concern among department leaders. Police officers also have high rates of domestic problems, spousal abuse, divorce, alcohol abuse, somatization, anxiety, depression and other stress-related behaviors (Deahl, Srinivasan, Jones, Neblett, & Jolly 2001; Harpold & Feemster, 2001; Leventhal, 1978; Martin, 1981; Mitchell and Everly, 1995). These high rates of officer turnover and other stress-related behaviors underscore the need for organized and professional interventions.

In addition to the need for psychological support after an officer experiences a traumatic incident, officers may also benefit from periodic interventions that address accumulated stress. Many times, when critical incident support (an organized and professional psychological intervention specific to a major traumatic event) is employed, the need emerges to address the stress associated with previous traumatic events or the stress associated with the day-to-day work of an officer. Cumulative stress is not normally addressed in ongoing and formal interventions by emergency service administrators (Hayes, 1999). Instead, individuals must devise their own coping

methods. Pinizzotto, Davis, and Miller (2002) underscored the importance of addressing cumulative stress levels and emotional health in police officers when they stated, "officers may not realize how their emotional and psychological health can work either for or against them. To react appropriately under demanding and life-threatening circumstances, an officer's physical and emotional condition prove vitally important" (Pinizzotto, Davis, & Miller, 2002, p. 4).

Significance of the Current Study in Light of Previous Research

This study addresses issues associated with police officers' levels of critical incident-related stress, cumulative stress, and their subsequent effects (e.g. divorce, alcohol use, and job dissatisfaction). In contrast, previous researchers (Bohl, 1991; Brom, Kleber, & Hofman, 1993; Chemtob, Tomas, Law, & Cremmiter, 1997; Deahl, Eamshaw, & Jones; 1994; Dineen, Pentzien, & Moteczun, 1994; Dyregrov, 1999; Ersland, Weisaeth, & Sund, 1989; Everiy, Flannery, & Mitchell, 2000; Feldman, & Bell, 1991; Flannery, 1998; Flannery, Fulton, Tausch, & DeLoffi, 1991; Flannery, Hanson, & Penk, 1994; Flannery, Hanson, Penk, Flannery, & Gallagher, 1995; Hytten & Hasle, 1989; Jenkins, 1996; Nurmi, 1997; McWhirter & Linzer, 1994; Meehan, 1996; Rime, 1995; Robinson & Mitchell, 1995; Sloan, 1988; Smith, & de Chesnay, 1994; Stallard & Law, 1993; Turner, Thompson, & Rosser, 1993; Wee, Mills, & Koehler, 1993; Wollman, 1993; Yule, 1992) focused solely on the effectiveness of critical incident stress debriefings in mitigating the affects of a critical incident. Moreover, previous researchers (Banks, 1998; Bowenkamp, 1995; Cydulka, Emerman, Shade, & Kubincanek, 1994;

Donahue, 1982; Durham, McCammon, & Allison, 1985; Fullerton, McCarroll, Ursano, & Wright, 1992; Hokanson, 1997; Mitchell, 1983; Mitchell & Everiy, 1995; Mock, Wrenn, Wright, Eustis, & Slovis, 1999; Raphel, Singh, Bradbury, & Lambert, 1983-84; Raphel, 1986; Wagner, 1979; 1986; Weiss, Mannar, Metzler, & Ronfeldt, 1995) were concerned primarily with emergency medical workers and firefighters instead of police officers. Even though similarities exist among these groups, emergency medical service workers and firefighters do not usually mediate domestic disputes, perform lengthy murder investigations, or face use-of-force situations such as an officer-involved shooting. Police officers are a special population who face different types of critical incidents; their duties create the need for more and different psychological coping strategies than their civil service counterparts. This study will add to the body of knowledge associated with crisis intervention and management, psychological debriefing groups, law enforcement training and management, and the treatment and prevention of Acute Stress Disorder (ASD) and PTSD.

Officers can benefit from increased training in stress management. Police cadet training briefly covers posttraumatic stress, basic coping skills, and how to identify stress reactions in others (Texas Commission on Law Enforcement, 2002). Departments may improve their employee assistance programs by implementing cumulative stress debriefings. For example. Special Weapons and Tactics (SWAT) team members who have participated in an in-service program that employs cumulative stress debriefings may be better able to perform their duties, be more resilient to job stress, and be beUer able to cope with an in-the-line-of-duty death because their cumulative stress has been

reduced. If an on-going debriefing program is implemented, individual officers may experience reduced job stress, increased job satisfaction, perceive their department as more personally supportive, and may be less likely to develop Depression or PTSD. This in turn may increase departmental morale. An officer may also experience a better home and social life because his or her cumulative stress levels have been addressed. The department may also benefit from these interventions through lower suicide and divorce rates, increased job satisfaction, fewer sick days taken, and lower job turnover rates among officers. More needs to be done to facilitate the teaching of coping skills and to address the acute and long-term effects of police work.

Dyregrov (1999) describes debriefing groups. Debriefing groups are a type of support group with therapeutic qualities. Debriefing groups have a short duration, and members must be actively involved. These groups typically focus on a specific event, and group leadership is instrumental to the success of the group experience. According to Dyregrov, the primary purpose of debriefing groups is to provide emotional support (through normalization, catharsis, validation, facilitation hope, and providing reassurance) and education. These components of debriefing groups can provide needed stability in the midst of crisis.

However, there are some dangers associated with debriefing. Secondary traumatization may occur when a group member who did not experience the traumatic event at the same level as another member is exposed to a higher level of trauma through the sharing of experiences. Other negative experiences can occur when members are threatened by pressure to disclose, a member being allowed to dominate group time.

coercive group pressure, important topics are ignored, group conflict, or group members are made scapegoats. Dyregrov identifies effective group leadership as the key to reducing the risk of these events occurring in debriefing groups.

Group leaders must possess certain skills because of the time constraints associated with debriefing groups and the nature of working with traumatized individuals. Leaders need to quickly establish ground rules and establish a therapeutic environment. Effective group leaders must outline goals and motivate participation, build relationships with members, model helpful or positive behavior, build cohesion, guard against and address inappropriate behaviors (e.g., dominating group time), and assess member strengths and weaknesses (see Yalom, 1995).

Debriefing groups have an important place in the field of crisis intervention and group counseling. Rime's (1995) observation that victims of traumatic events will not find the necessary support and opportunities to share their experience in natural social situations supports the need for crisis debriefings to be offered for all victims. Debriefing groups provide traumatized individuals with an opportunity to process their emotional and cognitive reactions to traumatic events, thus preventing dissociative reactions (which correlate highly with PTSD, see Bremner & Brett, 1997).

Wollman (1993) provided an excellent overview of the development of group crisis intervention for emergency service and law enforcement personnel, and how this type of group work fits into the broader disciplines of mental health-related group counseling, and crisis counseling theory and intervention. Crisis intervention with emergency services personnel in a group setting has been used for a number of years

(Donahue, 1982; Durham, McCammon, & Allison, 1985; Mitchell, 1983; Raphel, Singh, Bradbury, & Lambert, 1983-84; Raphel, 1986; Wagner, 1979, 1986). In contrast, Wollman contends that group crisis intervention, also known as debriefing, is not well known in the fields of psychology and psychotherapy. He stated, "Most of the articles on Critical Incident Stress Debriefing are found in the emergency services literature rather than the psychology or group therapy literature" (Wollman, 1993, p. 71).

Further adding to this division, debriefing is also loosely defined in both the mental health fields and the emergency services community. The term debriefing has been used to refer to therapy, an individual intervention, a group intervention, or an educational intervention. Therefore, the need to explain debriefing from a group theory, structure, and process can help clear up these discrepancies and provide mental health professionals with information about debriefing.

Critical Incident Stress Debriefing (CISD) (Mitchell & Everly, 1997), as understood by Wollman, is compatible with crisis intervention theory and crisis groups, in that this mode of group intervention seeks to (a) accelerate the recovery of individuals exposed to traumatic events, (b) reduce the psychological impact of these events, and (c) identify and refer individuals who are in need of professional counseling. CISD is compatible with group theory because this mode of intervention identifies a common goal (processing a traumatic event and providing members with social support) for the group and excludes individuals who do not meet inclusion criteria (e.g., are not part of the group that experienced a specific trauma, have preexisting psychological disorders, or are in need of individual counseling). CISD also uses a number of techniques that are

consistent with group therapy techniques (e.g., use of rounds, some here-and-now interpretation, giving and receiving feedback, summarizing, and paraphrasing) (Yalom, 1995). Wollman also identifies Yalom's therapeutic factors (group cohesion and mutual support) that are at work in CISD interventions.

Debriefing is also founded in crisis theory and intervention. Debriefing is a preventative intervention used in crisis situations that focuses on those factors that have been found in previous research to lead to psychological distress and disorders. Other goals of debriefing are the reduction of the stress and tension associated with a crisis, cognitive restructuring of beliefs (e.g., the world is unsafe), fostering intellectual understanding of the relationship between current stress reactions and the crisis, catharsis, exploring coping strategies, fostering social support, crisis resolution, and restoring the individual to adaptive functioning or pre-crisis levels of functioning. These goals are the same goals of crisis intervention.

In comparing CISD and therapeutic crisis groups, Wollman concludes one major difference between these interventions is that crisis groups are usually long term, and are comprised of individuals who do not share the same traumatic incident. CISD groups are comprised of individuals who have experienced the same traumatic event, and who are from a preexisting group (police, fire, emergency medical services, bank personnel, or jurors). CISD also differs in that properly trained peers are used in group leadership and follow-up. CISD sessions are usually longer than crisis group sessions, but groups only meet once or twice. CISD leaders from the mental health profession are "outsiders," and their interaction with the group may be hindered by their lack of connection with and

knowledge about the preexisting group. Despite these differences, Wollman concludes that CISD groups are a type of crisis group that is rooted in crisis group theory and practice.

A statement made by Wollman reinforces the rationale behind the current study.

Wollman states.

The critical incident may have exacerbated existing stressors within the system, which may or may not be related to the critical incident. There can be a tendency by group members to focus on these familiar issues and to avoid disclosure of more anxiety-provoking thoughts and feelings associated with the critical incident. On the other hand, a preexisting stressor may be inextricably connected to the incident and to the subsequent reactions, and the group will need to explore this connection. (p. 79)

This statement underscores the need to address cumulative stress, along with critical incident stress.

Everiy, Flannery, and Mitchell (2000) reviewed a number of articles that examine three models of debriefing (the Raphael model, the Mitchell model, and the Dyregrov model) and sought to ascertain how these models fit into the field of treating psychological trauma. The Mitchell and Dyregrov models are different in three minor ways. Everiy, Flannery, and Mitchell explain that the Dyregrov model,

focuses on the decision-making process of the participants during the thought phase (Mitchell model), adds a stage of sensory impressions of the incident to enhance understanding and processing of the experience, and places emphasis on the normalization of reactions and responses, (p. 26)

The authors report that Dyregrov considers his model to be the same as the Mitchell model, with a slightly different focus on group process variables.

The Raphael model is broader in that it additionally focuses on the emotional experiences of the participant, the mdividuaFs past expenences and how these

experiences may influence current perceptions, and the quality of interpersonal relationships, in this model the group leader is to be well trained in individual, group, and crisis counseling.

Everly, Flannery, and Mitchell (2000) agreed with Wollman that Yalom's therapeutic factors influence the success of crisis intervention groups. The specific factors that are at work in these group settings are group cohesion, catharsis, imitative behavior, group members sharing information, the opportunity to address existential issues, social support, and modeling of adaptive behaviors. The Mitchell model of debriefing and CISM addresses these factors specifically.

Along with psychological debriefing groups, Critical Incident Stress Management (CISM) programs have the added components of pre-crisis trainings, psychoeducational trainings, pre- and post-incident individual counseling services, defusing (stress education that follows a critical incident), demobilizations (brief group meetings that follow a critical incident), and family support programs. "Both Mitchell (1983) and Raphael (1986) emphasized the need for multiple interventions" in the treatment of critical incident stress (Everly, Flannery, & Mitchell, 2000, p. 27).

Research Questions

This study addresses three research questions. First, do periodic CISD group meetings decrease the level of depression, acute stress disorder symptoms, and posttraumatic stress disorder symptoms in police officers? Second, do periodic CISD group meetings positively effect officer perception of departmental support among police

officers? Third, do officers view CISD group meetings as helpful? The null hypothesis to be tested by this study is that periodic stress debriefing group meetings will have no effect on an officer's level of depression, number and severity of acute stress disorder and posttraumatic stress disorder symptoms, an officer's perception of departmental support, or perception (helpful or not helpful) of the intervention.

Definition of Terms

In order to make this study more precise, an operational definition of terms is necessary. The following terms will be employed throughout this study.

Acute Stress Disorder. The essential feature of Acute Stress Disorder is development of characteristic anxiety, dissociative, and other symptoms within one month after exposure to a traumatic stressor. Other symptoms of Acute Stress Disorder are numbing, detachment from their bodies, lack of emotional responsiveness, reduction in awareness of surroundings, derealization, depersonalization, amnesia, reliving the experience, avoidance of associated stimuli, anxiety and increased arousal, an overall interference with normal functioning, and a subjective causing of distress within the individual. These symptoms must last for at least 2 days and not beyond 4 weeks. If the condition continues beyond 4 weeks, then the diagnosis of PTSD is warranted. The severity, duration, and proximity to the traumatic stressor affect the likelihood of the individual developing Acute Stress Disorder. (American Psychiatric Association, 2000).

Critical Incident Stress Debriefing. Critical Incident Stress Debriefing is a specific protocol described by Mitchell (1983). It is a seven-step model (see Appendix F)

that is typically used 24 to 72 hours after a traumatic event with a homogenous group of individuals (e.g., police officers, paramedics, firefighters) who experienced the event at a relatively similar level. This protocol is lead by a mental health professional and a peer (e.g., police officer, paramedic, firefighter) specifically trained in the use of this model.

Critical Incident Stress Management. Critical Incident Stress Management denotes a program with a number of components, all of which are geared towards the prevention and management of stress-responses. This program includes Critical Incident Stress Debriefing (CISD), and other interventions such as pre-incident training.

Demobilizations (a three-step, abbreviated version of a CISD employed as responders leave the scene of a traumatic event) and Defiisings (a five-step, abbreviated version of a CISD used hours after a traumatic event).

Debriefing Groups. Debriefing groups denote a general category of group therapy interventions. This category includes Critical Incident Stress Debriefing, but may also include long-term group interventions focused on helping individuals overcome traumatic events. The current study will use a specific type of debriefing intervention called Critical Incident Stress Debriefing.

Depression. The essential features of a Major Depressive Episode are a depressed mood or a loss of interest in pleasure that represents a marked change from normal functioning and which cause "clinically significant distress or impairment in social, occupational, or other important areas of functioning" (American Psychiatric Association, 2000, p. 356). Along with this, five (or more) of the following symptoms are present over the same two-week period: (1) "depressed mood most of the day, nearly

every day, as indicated by either subjective report (e.g., feels sad or empty) or observation made by others (e.g., appears tearful)," (2) "markedly diminished interest or pleasure in all, or almost all, activities most of the day, nearly every day (as indicated by either subjective account or observation made by others)," (3) "significant weight loss when not dieting or weight gain (e.g., a change of more than 5% of body weight in a month), or decrease or increase in appetite nearly every day," (4) "insomnia or hypersomnia nearly every day," (5) "psychomotor agitation or retardation nearly every day (observable by others, not merely subjective feelings of restlessness or being slowed down)," (6) "fatigue or loss of energy nearly every day," (7) "feelings of worthlessness or excessive or inappropriate guilt (which may be delusional) nearly every day (not merely self-reproach or guilt about being sick)," (8) "diminished ability to think or concentrate, or indecisiveness, nearly every day (either by subjective account or observed by others)," (9) "recurrent thoughts of death (not just fear of dying), recurrent suicidal ideation without a specific plan, or a suicide attempt or a specific plan for committing suicide." (American Psychiatric Association, 2000, p. 356).

Participant. A participant is a volunteer police officer randomly assigned to either a treatment group or a control group. This participant will be an active duty police officer from one of the divisions (patrol, person crimes, training, narcotics, etc.) within the city police department.

Periodic stress debriefing. Periodic stress debriefing will be the treatment model used in this study. These debriefing meetings will occur every week for eight weeks. Officers of the same rank and job description will comprise these groups. A trained peer

will facilitate the group, along with a trained mental health professional. These stress-debriefing meetings will employ the protocol outlined by Mitchell and Everly (1997), called Critical Incident Stress Debriefing. This seven-step model asks participants to explore stressful and/or traumatic events in a group setting and to answer specific questions in a specific order. In order, these questions are: (1) What was your role in this event? (2) What were your first thoughts after you had time to think about this event? (3) What was the worst part of this event for you? and, (4) What physical, emotional, or behavioral changes have you experienced since this event? After group members explore these questions, a teaching phase begins. In this phase, group leader(s) normalize participants' experiences and discuss normal stress reactions and coping skills. The last phase is the "re-entry" phase where common themes are summarized, expectancy is emphasized ("you will get better"), and lessons learned are identified.

Posttraumatic Stress Disorder. The essential feature of Posttraumatic Stress Disorder (PTSD) is the development of characteristic symptoms. These typical symptoms follow and are related to exposure to a traumatic event or stressor, and usually involve direct personal experience of actual or threatened death or serious injury; threat to one's physical integrity; witnessing an event that involves death, injury, or threat to another person's physical integrity (vicarious); or learning about the unexpected or violent death, serious harm, or threat of death or injury of a family member, close friend, and the like. Furthermore, the person's experience of the traumatic event must involve intense fear, helplessness, or horror (American Psychiatric Association, 2000). The characteristic symptoms of PTSD are persistent reexperiencing of the event (recurrent or

intrusive recollections, dreams, dissociative states that last seconds to several hours/days), avoidance of stimuli, thoughts, feelings, or conversations associated with the trauma (anniversaries of the event, stimuli that resemble or symbolize a component of the event like smells or locations), numbing of general responsiveness, and increased arousal (physiological reactivity like tachycardia). This full symptom picture must be present for more than one month in order to meet the criteria for a PTSD diagnosis.

Depression symptoms and social difficulties may also be present. Examples are: not participating in activities once enjoyed by the individual, or feeling detached or estranged from others, and feeling like others will never understand the individual's experience and emotional reactions. There are also anxiety symptoms that may be present, such as trouble sleeping (also a depressive symptom), exaggerated startle response, hypervigilance (arousal), irritability, anger, and inability to concentrate. Individuals who experience a traumatic event may also have expectations of death, short life, no career, or no lasting relationships. The individual may also have restricted affect or inability to recall important aspects of the trauma. As with most disorders, another feature is that the disturbance causes clinically significant distress or impairment in social, occupational, or other important areas of functioning.

There are circumstances that seem to increase the likelihood that an individual will experience PTSD. PTSD may be more severe or long lasting if the stressor is of human design (rape, torture). The likelihood of developing the disorder may increase as the intensity, severity, duration of the stressor, and the physical proximity to the stressor increase. Finally, other symptoms associated with PTSD are survivor's guilt, self-

destructive behaviors, somatic complaints, and feelings of shame, ineffectiveness, despair, hopelessness, being permanently damaged, or relationship problems.

The goal of the treatment intervention will be to affect the symptoms of chronic stress. The Beck Depression Inventory - II (Beck, 1996) and the Impact of Event Scale - Revised (Weiss, & Marmar, 1997) will measure the outcomes of the debriefing meetings. These diagnostic criteria will also serve as the measurable treatment outcomes. Perceptions about departmental support and determining if the officers found this program to be helpful will be assessed in the demographic section of the measurements (see appendix D).

Limitations and Delimitations of this Study

The results of this study will be specific to police officers from a city police department in a southwestern city with a population around 200,000, and a police force of approximately 300. Participants will be volunteers. The willingness of these volunteers to participate and to make use of psychological services may influence the generalizability of findings.

The usefulness of the information gathered in this study may also be affected by preexisting psychological disorders other than anxiety (as represented by Acute Stress Disorder and Posttraumatic Stress Disorder) and depression. Group dynamics and interactions specific to each treatment group may also influence the outcomes of treatment. The treatment phase of this study will occur in small groups, and the influences and inherent differences among these groups could also affect the obtained

results, which in turn could affect the generalizability of the results. There are a number of environmental, psychological, and personality characteristics that will not be assessed that may also influence the findings of this study.

Summary

The psychological stresses faced daily by law enforcement personnel can be overwhelming. This reality makes formulating and testing the effectiveness of psychological interventions desirable. If these interventions prove effective in reducing a police officer's level of depression, stress, and anxiety, the benefits can be far-reaching. Not only will the officers benefit, their friends and families will benefit because the officers will experience fewer and less severe symptoms and effects of depression, stress, and anxiety (i.e., irritability, fatigue, outbursts of anger.). The public will benefit because officers will have the psychological resources to perform their duties effectively and compassionately, and department administrators will benefit from reduced use of sick leave, better officer performance, fewer disciplinary actions, and reduced financial loss incurred from training individuals to replace officers who leave the profession because of stress-related problems.

Organization of the Dissertation

This chapter introduces this study. In Chapter II, I will review the literature that pertains to the effectiveness of Critical Incident Stress Debriefing especially as it relates to prevention of and treatment for Acute Stress Disorder and Posttraumatic Stress

Disorder in the populations of emergency medical workers, fire fighters, and law enforcement personnel. Chapter III will describe the methods and statistical analysis used to interpret findings. Chapter IV will present these findings. This dissertation will close (Chapter V) with a summary of the study, a discussion of the findings and appropriate conclusions, and suggestions for further research.

CHAPTER D

REVIEW OF LITERATURE

Introduction

This chapter reviews the literature pertinent to the study of psychological debriefing and the treatment of duty-related stress in police officers. This chapter is divided in the following headings: review of the literature: an overview; a meta-analysis of debriefing with vicarious trauma; studies about the efficacy of debriefings with different populations; the effect of timing on the effectiveness of debriefing; studies with participants from the emergency services; studies about debriefing with law enforcement; a group intervention with policemen not based on the Critical Incident Stress Management model; the psychological impact of law enforcement work and how to respond; and further research possibilities: gaps in the literature. Under each heading, a summary and review of the research are given. This review of the literature also provides a context for the current study through examining the psychological needs of police officers, and how those needs are addressed through the use of crisis debriefing groups.

Review of the Literature: An Overview

The debate over the effectiveness of Critical Incident Stress Debriefing (CISD) and Critical Incident Stress Management (CISM) is ongoing. CISD is a specific protocol described by Mitchell (1983). It is a seven-step model (see Appendix F) that is typically used 24 to 72 hours after a traumatic event with a homogenous group of individuals (e.g.,

police officers, paramedics, firefighters) who experienced the event at a relatively similar level. This protocol is led by a mental health professional and a peer (e.g. police officer, paramedic, firefighter) specifically trained in the use of this model. CISM denotes a program with a number of components, all of which are geared towards the prevention and management of stress-responses. This program includes Critical Incident Stress Debriefing, and other interventions such as pre-incident training. Demobilizations (a three-step, abbreviated version of a CISD employed as responders leave the scene of a traumatic event) and Defusings (a five-step, abbreviated version of a CISD used hours after a traumatic event). The debate over the effectiveness of these interventions is illustrated in two recent Letters to the Editor in the journal *Critical Care* and the *British Journal of Psychological Medicine*. John Tobin wrote.

There is plenty of evidence that CISD does not prevent post traumatic stress disorder, so why, on occasions do I recommend it? For the one reason as was described by one of my English colleagues, 'the punters like it.' The other reason, one of which I consider to be significant, is that it ameliorates the anger felt by the victims of the trauma. By sending in a critical incident stress debriefing team to a unit, the message is being given that the authorities care about the unit's emotional as well as physical well being. In short, I recommend that it (CISD) is utilized sparingly, with highly trained personnel who are peer supports of the at risk populations, and only after major events. (2001, p. 142)

Ashraf Kagee wrote in response to an article about CISD, "although Hammond and Brook's concern for disaster response workers is laudable, their enthusiasm for CISD as an unvalidated intervention is misplaced. Until data are produced that support the use of psychoprophylactic treatment, advocating it is inappropriate and misguided" (p. 88).

These quotes help bring contextual reference points to the current debate in academia about the efficacy of CISM and CISD. The quotes also illustrate one of the problems in

assessing the efficacy of CISM and CISD, that being; how is CISD and CISM defined and implemented? Neither of these statements clarifies what model is being commented on.

Proponents of CISD and CISM, like Everiy and Mitchell (2000), operationally defined the terms associated with CISD and CISM. The major components of CISM are pre-incident preparation (providing information about stress and stress reactions, crisis management, mitigating cumulative stress, and other factors that may influence an individuals' ability to cope with a traumatic event), demobilizations, crisis management briefings (educational meetings used with large groups), debriefings, CISD meetings, one-on-one crisis intervention, counseling, family crisis intervention, and follow-up and referral systems.

According to Everiy, Flannery, and Mitchell (2000), a number of studies examined the effectiveness of CISM programs. One such study (Leeman-Conley, 1990) found that a CISM program (that consisted of training prior to a bank robbery for bank employees, individual crisis intervention, training for managers, group debriefing, and professional counseling) reduced sick leave by 60% and workers compensation by 68%, when compared with rates before the CISM intervention was employed. Another study (Brom, Kleber, & Hofinan, 1993) found that a CISM program (that consisted of "CISM-like interventions," e.g., information, support, and follow-up) reduced the number of symptoms for victims of "moderate to serious" road traffic accidents, as compared with a control group, but the program did not affect scores obtained on the Impact of Event Scale (IES) (a commonly used measure of some the symptoms of PTSD) and no

difference was found in the IES scores of those in the treatment group as compared with the control group, in four studies (Flannery, 1998; Flannery, Fulton, Tausch, & DeLoffi, 1991; Flannery, Hanson, & Penk, 1994; Flannery, Hanson, Penk, Flannery, & Gallagher, 1995) involving staff in a psychiatric setting who had been assaulted by patients, CISM programs (that included individual crisis counseling, debriefings, staff support groups, family counseling, and counseling referrals) reduced staff turnover, their use of sick leave, their filing for workers compensation, their medical expenses, and their legal fees, as compared to rates prior to the implementation of CISM.

Two studies examined the Mitchell (1983) model of debriefing as a component of CISM programs. One study (Western Management Consultants, 1996) found that nurses who experienced the death of a patient, violent death of a colleague, patient suicide, or assaults on staff and who participated in a debriefing used fewer days off, and staff turnover rates were reduced by 24%), compared with rates prior to the use of debriefings. The CISM program in this study included pre-incident training, individual counseling, debriefing, and professional referrals. The other study (Hokanson, 1997) found that of the 600 Los Angeles fire fighters surveyed 56% experienced a significant reduction in PTSD symptoms, used fewer sick leave days, and filed fewer workers compensation claims, compared with rates prior to the use of debriefings. The CISM program in this study consisted of defusings, debriefings, peer support, preincident training, and professional referrals.

A number of "uncontrolled" studies (Deahl, Eamshaw, & Jones; 1994; Dineen, Pentzien, & Moteczun, 1994; Feldman & Bell, 1991; Hytten & Hasle, 1989; McWhirter

& Linzer, 1994; Meehan, 1996; Robinson & Mitchell, 1995; Sloan, 1988; Smith & de Chesnay, 1994; Stallard & Law, 1993; Turner, Thompson, & Rosser, 1993) and "comparison" studies (Bohl, 1991; Chemtob, Tomas, Law, & Cremmiter, 1997; Ersland, Weisaeth, & Sund, 1989; Jenkins, 1996; Nurmi, 1997; Wee, Mills, & Koehler, 1993; Yule, 1992) found positive outcomes associated with debriefing. An uncontrolled study is one that does not meet the statistical requirements for comparison of outcomes among individuals or groups, whereas a comparison study examines variables among a treatment group and a control group. (Everiy, Flannery, & Mitchell, 2000). "There are no truly randomized controlled studies (where one group does not receive treatment) to date" (Everiy, Flannery, & Mitchell, 2000, p. 32). The uncontrolled studies listed above examined the effects of debriefing interventions on plane crash victims, fire fighters involved in a hotel fire, jurors from a murder trial, victims of a rail station fire, emergency service workers, hospital personnel, victims of a school bus accident, military victims of an engine room accident, and bank robbery victims. These studies found that participants in debriefings viewed the intervention as "helpful," that the debriefings reduced stress-related symptoms, and that debriefing lowered participants' IES scores. In the controlled studies, debriefing reduced distress significantly, lowered IES scores, reduced levels of anger, depression, anxiety, and PTSD symptoms, when the debriefed group was compared with the control group.

Nevertheless, other uncontrolled studies (Creamer, Burgess, Buckingham, & Pattison, 1989; Dyregrov, Kristofferson, & Gjestad, 1996; Searle & Bisson, 1992; Weisaeth, 1989) found no significant effects associated with debriefings. One

comparison study (McFarlane, 1988) found that debriefed fire fighters who responded to an Australian brush fire had less acute stress disorder (ASD) symptoms but a "greater likelihood" of developing delayed PTSD (which may be because these fire fighters were also primary victims who lost family members or property in the fire). Another comparison study by Griffiths and Watts (1992) found that debriefed Australian emergency responders involved in two bus crashes had significantly higher IES scores and poorer "general health" scores as compared with those who were not debriefed. Three controlled studies (Deahl, Gillham, Thomas, Searie, & Srinivasan, 1994; Kenardy, et al., 1996; Matthews, 1998) found debriefing had no effect on stress levels or psychological distress.

One problem with these studies, especially the uncontrolled studies, is that there are no standards for the components of a CISM program or debriefing protocol. Standardization of outcome measures is also a barrier to seeing the true influences of CISM on outcome variables. The vast number of type and severity of critical incidents, along with personality variables, are also a confounding variable in these studies. Finally, other methodological improvements (e.g., random sampling, the use of control groups, and standardization of outcome variables) are needed to improve generalizability and researchers' understanding of the influence of CISM programs on individuals who have experienced traumatic events.

In spite of mixed results reported in the literature, Everly, Flannery, and Mitchell (2000) seem confident that the "accumulated data in these studies suggest that crisis intervention procedures, group debriefings, and especially CISM approaches are effective

in reducing the negative psychological aftermath of a variety of critical incidents" (p. 36). Some of the studies reviewed seem to indicate otherwise, but the lack of standardized interventions and research methods make room for debate.

Studies of the effectiveness of debriefing have been methodologically weak due to the constraints of crisis counseling and the limitations in the investigational methods used by previous researchers. Everiy, Flannery, and Mitchell suggest that firrtire researchers employ "improved operational definitions, measurement and intervention procedures, and sensitive outcome measures" (p. 35). Furthermore, practitioners will benefit from research that examines the effectiveness of debriefing with different types of critical incidents and victims, and is conducted on-site with one group randomly assigned to a treatment group and another group assigned to a control group. According to the authors, no truly randomized controlled studies exist to date.

Everiy and Mitchell (2000) also surveyed a number of studies (Bohl, 1991; Chemtob, Tomas, Law, & Cremmiter, 1997; Jenkins, 1996; Nurmi, 1999; Robinson & Mitchell, 1993, 1995; Wee, Mills, & Koelher, 1999) that support the effectiveness of CISM and CISD, and those that disputed the effectiveness of debriefing (Bisson, Jenkins, Alexander, & Bannister, 1997; Bordow & Porritt, 1979; Bunn & Clark, 1979; Hobbs, Mayou, Harrison, & Worlock, 1996; Lee, Slade, & Lygo, 1996). The authors noted that all of these studies are methodologically robust and widely referenced in academic literature. The authors rebutted the findings of the articles that dispute the effectiveness of debriefing by ouflining their shortcomings. None of the studies examined the CISD model of debriefing, and, therefore, did not increase the understanding of the

effectiveness of this model. There was also no "precise refinement of the independent variables examined in these studies. A more detailed examination of some of these studies will be provided later in this chapter.

The authors advocated for the proper implementation of their CISM and CISD models. Studies that have been used to discredit these models (Bisson, Jenkins, Alexander, & Bannister, 1997; Bordow & Porritt, 1979; Bunn & Clark, 1979; Hobbs, Mayou, Harrison, & Worlock, 1996; Lee, Slade, & Lygo, 1996) have methodological flaws, and have employed models of debriefing that are inconsistent with the CISD model. When employed properly, CISM and CISD are effective interventions in mitigating the effects of traumatic events.

CISM and CISD are excellent interventions for prevention of stress related disorders (Mitchell & Everiy, 1995). Prevention of PTSD and other related disorders is preferable to treatment, and CISM and CISD are appropriate programs for prevention. According to these authors, CISM and CISD not only reduce the incidents of PTSD, but also other stress-related problems (e.g., marital problems, somatic complaints, alcohol abuse).

A robust study by Boreow and Poritt (1979) that employed random assignment to two treatment groups seems to help control for the effects of "a sympathetic ear" offers support for the effectiveness of debriefing. The intervention in the study consisted of a psychological debriefing (no details about the components of this debriefing were given) for 10 individuals involved in "road trauma," and a psychological debriefing and interview with a social worker who assessed emotional and social support for thirty

individuals involved in "road trauma." The control group (N=30) received; _{no} intervention. The group that received the debriefing and interview suffered significantly fewer psychological symptoms than the other groups. The results of this study suggest that a multifaceted approach, like CISM, is more effective than debriefing alone. This would be consistent with Mitchell and Everly's (1997) view of proper crisis intervention.

A multifaceted early crisis intervention is most effective when the principles of proximity (to the event), immediacy (of the intervention), and expectancy (returning to "normal" functioning) are followed. Crisis intervention must include these principles. Early intervention may also address Acute Stress Disorder, which is a predictor of PTSD. (Deahl, 2000).

Another study (Bisson, McFarlane, & Rose, 2000) that examined psychological debriefing and summarized related literature helped determine what makes debriefing effective. The authors noted that the focus of debriefing should be on present reactions to a particular traumatic event, rather than on earlier experiences that may shape an individual's reactions to the current event. This point has particular relevance to this study since the goal of the current study is to address both cumulative stress and critical incident stress.

Bisson, McFarlane, and Rose begin by examining Dyregrov's model of debriefing. Dyregrov (1997) bases the steps of his model on Mitchell's (1983) model which emphasizes the need to focus on group process variables in debriefing. The phases in this model are: (1) Introduction (review group process rules). (2) Expectations and facts (review expectations and the details of the traumatic event, especially the

unexpected components), (3) Thoughts and impressions (participants are asked "what are your thoughts when . . ."), (4) Emotional reactions, (5) Normalization, (6) Future planning/coping, (7) Disengagement (information about stress reactions are given).

The group process variables that Dyregrov views as important are trust, authority and structure. Both the Dyregrov model and the Mitchell model employed a trained peer as a group facilitator. The use of a peer positively affects the group process, specifically establishing trust early in the group. Leader and co-leader interactions also influence group process variables. The more "therapist qualities" demonstrated by the group leaders, the more therapeutic the group experience was for the participants (Dyregrov, 1997, p. 593). Group leaders must guide the group from a position of respect by demonstrating that they "are attentive to the participants, provide verbal and nonverbal feedback, are open and honest, and are attuned to what is happening in the group" (Dyregrov, 1997, p. 595). The group leaders must also maintain eye contact and refrain from being distracted (e.g., looking at notes). As the group progresses, group leadership diminishes, yet leaders are also directive and responsible for facilitation as needed.

Meta-Analysis of Debriefing With Vicarious Trauma

A key difference between the trauma assessed in some of the studies presented thus far, and the trauma experienced by emergency services personnel is that emergency services personnel typically do not experience the trauma directly. Rather, emergency services personnel experience trauma and its effects second-hand as witnesses (vicarious trauma). Several studies have considered vicarious trauma and its effect on

psychological debriefing, and two studies in particular synthesize the findings of the most robust studies.

One study analyzed 10 studies of psychological debriefing to determine its effectiveness in addressing witness trauma. (Everiy, Boyle, & Lating, 1999). The studies were chosen based on the debriefing model used, its correct use, and its application to incidents of vicarious trauma. The effect size (Cohen's d) for each study was used to compare results across research efforts. These effect sizes were weighted according to respective sample sizes. A "fail-safe" number was also calculated to compensate for any studies that were overlooked. Statistical analysis yielded a medium effect size ($d = .54; p < .01$) for the 10 articles studied. This result is a good indicator that debriefing, as studied in these articles, was beneficial to the participants involved.

Similarly, Everiy, Flarmery, Eyler, and Mitchell (2001) provided an excellent overview of CISM in their examination of the effectiveness of CISM and CISD. This article also contains a survey of research on CISM, much of which will be (or has been) covered in this review. This article also includes metaanalysis of the articles reviewed, and these researchers found a significant and large effect size ($d = 1.0$) for the CISM intervention in the articles they reviewed.

Studies About the Efficacy of Debriefings With Various Populations

One study evaluated the psychological status of individuals who were admitted to a hospital emergency room after a traffic accident and who were subsequently involved in a psychological debriefing (Mayou, Ehlers, & Hobbs. 2000). Although the debriefing

model employed in this study was different than the Mitchell model, it did share a few similarities (namely, a detailed review of the traumatic event, the encouragement of emotional expression, exploration of the individual's cognitive appraisal of the event, and teaching about reactions to psychological trauma). The most significant difference between this model and the Mitchell model was that the debriefings in this study were conducted one-on-one, instead of in homogenous groups.

The study by Mayou, Ehlers, and Hobbs included 106 individuals who satisfied their research criteria. They were those involved in accidents that required medical attention, who remembered the event, and who were between 16-65 years old. This group was given the Impact of Event Scale (IES), the Brief Symptom Inventory (BSI), a "semi-structured interview," and the Abbreviated Injury Severity survey as baseline measures. The follow-up measures were the IES, the BSI, questionnaires "derived from our previous research," and questions about problems with driving, pain, interference with normal functioning, financial problems, insurance problems, and physical problems. The debriefing intervention was given to individuals who were randomly assigned to the treatment group. Researchers found that debriefing either had no effect, or after three years, made individuals worse.

Another study used a treatment model "based on" the Mitchell model of psychological debriefing in treating individuals who experienced a violent crime within the previous month (Rose, Brewin, Andrews, & Kirk, 1999). These individuals (N=157) were contacted and randomly assigned to an education group, a debriefing and education group, or a control group (assessment only condition). Participants were involved in an

initial interview where type of trauma and other confounding variables (age, illness, experience with domestic violence) were assessed. Follow-up interviews and assessments were conducted six months and eleven months post-treatment. The measures used in this study were the IES, the Beck Depression Inventory (BDI), and the Posttraumatic Stress Disorder Symptom Scale. The researchers found no difference in the scores of these individuals at any point of assessment. Because no between-group difference was found, it was concluded that debriefing, education, or a combination of the two, had no effect on psychological well being after experiencing a violent crime. One problem with this study was the delay in treatment. According to Mitchell and Everly (1997), debriefing should occur between 24 and 72 hours after the traumatic event, and this delay may have affected research outcomes.

Chemtob, Tomas, Law, and Cremniter (1997) examined the effectiveness of brief psychological debriefing on reducing the psychological distress found in individuals who had survived a strong hurricane. Before the debriefing (which occurred six months after the traumatic event), 25 participants from the first treatment group were given the IES. Three months after the debriefing, these individuals were given the IES again. Twenty-one participants from another group were tested, then debriefed, and retested again three months later. The debriefing model was similar to the Mitchell model, but included a two-hour lecture on psychological recovery after a disaster. The research participants seemed to be equally dispersed across the two groups, with 23 females and 11 males total. The mean age of this sample was 42. These researchers found that even though the passage of time seems to decrease individual scores on the IES, the difference in scores

was not totally explained by this fact. A t-test for independent means among the two groups (debriefed at different times) indicated that time was not the only explanation for the difference in scores, and this finding indicates that debriefing was influential.

Jenkins (1996) examined four constructs that seem to affect the level of distress in emergency responders after a critical incident and their subsequent recovery. These four constructs were perceived social support, CISD attendance, feeling like others understood their experience (empathy), and the amount of time individuals spent with people over the proceeding two days following the critical incident. Two research questions were addressed by her study: what aspects of social support are associated with acute increases in distress during the first week, and what aspects are associated with recovery in the following month?

Twenty-nine emergency medical technicians, paramedics, and firefighters were involved in this study. There were only two women in this sample, and the sample was Caucasian, except for one member. Data were collected eight to ten days and 29 to 31 days after the traumatic incident. One component of this data collection was a structured interview that gathered information on types of stress and coping resources. An incident questionnaire was used to gather demographic information, participants' experience of the critical incident, participation in debriefing, level of experienced empathy, and number of hours spent with different types of individuals (social support). A support questionnaire also assessed the types of social support used by individuals. The Symptom Check List - 90 was used to measure psychological distress, and the author made up a "crude" rating scale to assess psychosomatic distress.

The strongest and most frequent correlate of acute increases in distress was feeling less empathy from others. The availability of social support was related to lower levels of acute anger and was also viewed as more helpful to those who reported disbelief or being shocked by their experiences. The strongest recovery effects were found in those who participated in the debriefing sessions. This group recovered more rapidly from depression and anxiety. Those who rated social support as less available found the debriefing to be most helpful in coping with their experiences. Those who participated in the debriefing found their triage decisions (decisions about which patients are able to be saved) to be most distressing, not their emotional reactions. Participants also felt less helpless in the week after the incident. However, this group mentioned obsessive-compulsive symptoms in the interview. Those who did not attend were more likely to report no symptoms during the week.

Regehr and Hill (2000) evaluated the effect of debriefing on symptoms of PTSD and on overall levels of distress in Australian fire fighters after a traumatic event. One hundred and sixty-four firefighters filled out the BDI, the IES, demographic information, questions about exposure to traumatic events, and questions about the effectiveness of debriefing groups. The mean age of the participants was 37.5, and they ranged in age from 16 to 63. No information about gender was given. The researchers used independent sample t-tests to evaluate the effectiveness of debriefing groups. Significant differences were found on the IES for intrusion ($p < .01$) in that those who participated in a debriefing had a higher score. This difference in scores for intrusion may indicate that debriefing is especially helpful in dealing with intrusive recollections of a traumatic

event. Other significant scores centered on firefighters' perceptions that debriefings reduced stress levels and were personally beneficial.

The complex and difficult task of measuring the effects of CISD was discussed in an article by Hams, Baloglu, and Stacks (2002), in their study of 852 firefighters. First, the variety in type of quality of CISD interventions proved confounding. Second, these researchers employed a complex and encompassing model in order to examine the effectiveness of CISD. They examined the variables of "avoidance coping," "social support," "negative affectivity," "world assumptions," and "traumatic stress reaction." It is interesting that these researchers used the IES instead of the IES-R in their effort to measure traumatic stress reactions. The researchers found no direct contribution of debriefing to helping this population with their stress reactions or their coping skills. This finding is confounded by the influences mentioned above. No direct evidence for negative effects of CISM was found.

In conclusion, though conflicting results have been presented here, there is some evidence for the effectiveness of some type of psychological debriefing after experiencing traumatic events. Furthermore, it is the purpose of this study to determine if the Mitchell model, when applied correctly, will yield statistically significant results that provide even stronger evidence of the effectiveness of psychological debriefing in reducing psychological distress after a traumatic event.

The Effect of Timing on the Effectiveness of Debriefing

The timing of debriefing in relation to a traumatic event is a critical component of the overall effectiveness of psychological debriefing. Campfield and Hills (2001) examined the effectiveness of debriefing at different time intervals on civilian victims of robbery. One treatment group (n=36) was debriefed within 10 hours of then traumatic incident. The second treatment group (n=41) was debriefed after 48 hours ($M= 62.29$ hours), with the latest debriefing occurring a week after the traumatic incident. There were 42 women and 35 men in this sample. The authors used the Posttraumatic Stress Diagnostic Scale to gather information about the traumatic effects of the incidents. Family support was also assessed. The number and severity of symptoms was significantly reduced for the treatment group. There was also significance found for time intervals. The immediately debriefed group had the fewest symptoms, but it was due, in part, to not experiencing the symptom of having trouble sleeping or experiencing nightmares, which is a symptom of PTSD. Another reason the immediately debriefed group did better was illustrated by the pattern of improvement from the debriefing to the follow-up assessments at day two, day four, and two weeks later. At each time interval, the immediately debriefed group had significantly lower symptom severity scores and fewer symptoms. The delayed debriefing group did not do as well.

Studies with Participants from the Emergency Services

A number of studies have been conducted on the job stress experienced by emergency services personnel (Bowenkamp, 1995; Cydulka, Emerman, Shade, &

Kubincanek, 1994; Durham, McCammon, & Allison, 1985; Mock, Wrenn, Wright, Eustis, & Slovis, 1999; Raphael, Singh, Bradbury, & Lambert, 1983-84; Weiss, Mannar, Metzler, & Ronfeldt, 1995), and some have examined the effectiveness of debriefing with this population (Banks, 1998; Fullerton, McCanoll, Ursano, & Wright, 1992; Mitchell and Everiy, 1995). Durham, McCammon, and Allison (1985) sought to understand the psychological impact of a disaster on rescue workers by surveying 79 rescue personnel who treated the victims of a building explosion. The survey questions focused on the emotional and coping responses of the workers. They found that 80 percent of rescuers had at least one symptom of PTSD and that 10 percent had eight of the 21 symptoms of PTSD. The most prevalent symptom was intrusive thoughts, occurring in 74 percent of those surveyed. One point of conflict between this study and one conducted by Raphael, Singh, Bradbury, and Lambert (1983-84) was that on-scene workers had significantly more PTSD symptoms than in-hospital staff. Raphael et al. found the opposite to be true.

Durham, McCammon, and Allison found 52%) of rescuers reported family members and coworkers as being supportive in meeting their emotional needs. Thirty-six percent reported family members and coworkers as not helpful. A majority of rescuers (57%) used reminding themselves "that things could be worse" as a coping mechanism, and reported this as helpful. Other coping methods included keeping a realistic perspective on the situation and looking to others for emotional support and direction. These authors concluded that the adjustment of the individuals studied centered on these individuals "gaining mastery over the situation, searching for meaning, and seeking some self-enhancement" (Durham, McCammon, & Allison, 1985, p. 76).

Weiss et al. (1995) investigated a number of variables that affect the level of symptomatic distress in emergency medical service (EMS) personnel. After the 1989 collapse of the 1-880 freeway in San Francisco, 154 EMS workers, and 213 counterparts from the Bay Area were surveyed. These researchers found greater exposure to this traumatic event to be associated with higher levels of symptomatic distress, regardless of years of work experience. Also, "lower levels of psychological adjustment were associated with higher levels of symptomatic distress" (Weiss et al, 1995, p. 364). Locus of control, social support, and dissociate experiences were all significantly influential upon an individual's level of symptomatic distress. When the effects of exposure, adjustment, and other predictors were controlled statistically "the measures of dissociate experiences retained their relationships to the measures of symptomatic distress" (Weiss et al., 364). Adjustment seemed to be the best predictor of symptomatic distress, even though the prediction of symptomatic distress must include a number of variables. The authors concluded that level of distress is closely tied to the experiences that occurred during the stressful incident, and that these events influence the individual's ability to share those experiences with others. In conclusion, peritraumatic dissociation is a potent variable used in the prediction of future psychological problems after experiencing a traumatic event. The need for psychological balance and an integrating of unreal experiences into a current set of beliefs is necessary in coping with traumatic events.

According to Graf (1986), what police officers, and emergency service personnel in general, need in order to deal effectively with stress is social support. This researcher found an increase in number of supportive persons in an officer's social support system,

conelates significantly with a decrease in perceived occupational stress, regardless of whether or not those supportive people are associated with work. Another interesting finding in this article is that sources of stress internal to the department (e.g., supervisors, politics, lack of support services) were much more distressing and external sources of stress (e.g., interaction with the pubic).

Studies about Debriefing with Law Enforcement

The needs of law enforcement officers are unique. According to Hayes (1999), police officers are faced with a social system that does not understand the work they do. There is the threat of danger, unusual schedules associated with shift work, and social isolation that contributes to the high incidents of suicide, depression, and relationship problems among officers (Hayes, 1999). Not only are these stressors a factor to consider when examining the needs of law enforcement personnel, but one must also consider that law enforcement is a "closed culture." Officers are distrusting by nature, and they do not easily ask for help. Officers may be seen as weak and unable to do their job if they seek help.

A few studies have specifically examined the effectiveness of debriefing with law enforcement populations. Leonard and Ahson (1999) examined the usefulness of CISD in enhancing coping strategies and decreasing anger levels. Sixty male police officers between the ages of 21 and 52 from Australia participated. Thirty participants were in the treatment group and 30 in the control group. Because it was difficult for the researchers to find officers who had not been debriefed, matching was used to assign

participants to the control group. Participants were interviewed from three perspectives. One perspective assessed demographic information, one assessed the details of the traumatic incident experienced by the officer, and one assessed perceived support from the department after the traumatic experience. Along with these interviews, participants completed subscales from the Coping Scale and from the State-Trait Anger Expression Inventory.

Even though the debriefed group suffered higher levels of trauma and stress from their respective events, they did better than the group that was not debriefed. Significant differences were found in the level of anger in the group that was not debriefed and the level of satisfaction with their department in the debriefed group. Also, officers who experienced a negative life event 12 months prior to their shooting were more likely to employ maladaptive coping mechanisms.

Carlier, Voerman, and Gersons (2000) tried to determine whether multiple psychological debriefings (using the CISD model) would have a more powerful effect on PTSD symptoms than a one-time debriefing. These authors used a pre-test/post-test control group design. They were not able to assign individuals to groups randomly, so they formed their control group from a group of officers who experienced trauma before debriefing was introduced to the police department (external control group). They also used a group of officers who had declined previous debriefing offers as an "internal control group." There were 75 officers in the external control group, 82 officers in the internal control group, and 86 officers in the treatment group. No other demographic information was provided. After the treatment group went through the individual

debriefing process (which is an improper use of the model according to its designers), officers were assessed shortly before the debriefing, at 24 hours, one week, and six months post-trauma (after the second and third debriefing). The assessments used were the Spielberger State-Trait Anxiety Inventory, the Self-Rating Scale for PTSD, the IES, the Structured Interview for PTSD, the Anxiety Disorders Schedule-Revised, and the Peritraumatic Dissociative Experiences Questionnaire.

No differences were found in the scores of each group studied in the short-term, but in the long-term, those who participated in debriefings coped with trauma better than the no-treatment group. Participants were highly satisfied with the debriefing process and viewed it positively. This model used a debriefing process based on the Mitchell model, but employed individually.

Robinson, Sigman, and Wilson (1997) tried to answer the questions, "Do police officers have a high level of PTSD symptoms?" "Do officers with a higher level of PTSD symptoms have an external locus of control?" "Do those with five or less years of service on the police force have a higher level of PTSD symptoms?" and lastly, "What are the effects of specific critical incidents that are commonly faced by police officers?" One hundred and twenty-five police officers from suburban Cleveland Ohio departments were given a number of surveys to complete. One hundred and five of these officers completed the surveys. No other demographic data were reported. These surveys assessed demographic information, a "personal trauma" scale of trauma experienced off duty, a 25-item questionnaire measuring type and number of duty-related stressors with an accompanying self-report of the associated stress level experienced with these

stressors, the Impact of Events Scale - Revised (IES-R), the Symptoms Checklist - Revised, a locus of control scale, and an assessment of whether the officers had been debriefed. These questionnaires were given to officers while at work, and officers were informed that this project was voluntary. The authors concluded that police officers had significant scores on Somatization and PTSD symptomatology, that police officers did not have an external locus of control, those police officers who have been on duty 11 years or less experienced higher levels of stress, and that death encounters or exposure to death are the most traumatic events faced by officers. No information about the effects of debriefing attendance was given.

Bohl (1991) studied 71 male police officers involved in a critical incident (witnessing another officer being wounded, killing or wounding a suspect, responding to a fatal crash or other disaster, escaping death, accidental shooting, witnessing a child being injured, abused, or killed, witnessing violence, or unsuccessful rescue) within the previous three months. Forty of the 71 participants worked in departments that employed mandatory psychological interventions after a critical incident. Thirty-one did not participate in any psychological interventions. The single, one and one-half hour treatment was based on the Mitchell model of debriefing but did not follow all seven phases. Participants completed the State-Trait Anxiety Inventory, the BDI, and the Novaco Provocation Inventory (used to assess anger). The author also developed an instrument that assessed demographic information and the frequency and type of stress symptoms experienced over the preceding week. The author found that the treatment

participants were significantly less depressed, less angry, and reported fewer stress-related symptoms than those not treated.

A qualitative study by Smith and de Chesnay (1994) was conducted using semi-structured interviews. Smith acted as the interviewer, and also led CISD meetings with ten police officers. From their investigation, the authors concluded CISD is an effective intervention for reducing the psychological damage associated with police work, and that psychological reactions can be predicted and controlled. They found that traditional counseling is viewed as ineffective by police officers, so alternative interventions like CISD are appealing.

A Group Intervention with Policemen Not Based on the CISM Model

A study by Doctor, Curtis, and Isaacs (1994) shares a number of similarities with this study though it did not use the Mitchell and Everiy (1997) model of debriefing. Sixty police officers were given a pretest and posttest (consisting of a General Health Questionnaire, and a Stress Situation Questionnaire) and were "allocated" to a treatment group and a control group. One hundred and ten officers did not respond to the posttest. The non-responders were older, had more years experience, were more likely to be married, and more were male, as compared with the responders. There were no significant between-group differences between the treatment and control groups. The treatment consisted of attendance in at least one group meeting of officers with a "registrar in psychiatry." The purpose of these one-hour meetings (which met once a week for 12 weeks) was to promote the honest expression of thoughts and feelings related

to police work and to reduce the use of denial in coping with stress. These meetings were characterized by the authors as being "unstructured." Twenty-two of the 31 treatment participants attended at least one meeting, with the average attendance being about five.

Forty-six of the original 60 returned their posttests. There were no significant between-group differences. Themes that emerged in the group meetings were: lack of departmental support, frustrations with younger officers getting promotions ahead of others, boredom with work, distress over negative attitudes among the public towards officers, and frustrations with arrests not ending in convictions. The authors reported that officers valued the group meetings, but they also experienced some disillusionment with the purpose of the meetings.

The Psychological Impact of Law Enforcement Work and How to Respond

The law enforcement community is becoming more adept at identifying and responding to the stress associated with law enforcement. The themes of identifying and responding to stress are found in the *F.B.I. Law Enforcement Bulletin* for September, 2002, specifically, Harpold and Feemster's article titled "Negative Influences of Police Stress." Above average rates of spousal abuse, alcoholism, somatization, anxiety, and depression for police officers are cited, and models for reducing and preventing stress are explored.

A general examination of the effect of police work on officers' families was conducted by Alexander (1994). After surveying 401 wives of Scottish police officers, the researcher found that 25 percent of those surveyed described their husbands as

considerably stressed because of their work. Long hours, shift work, and cancelled time off were viewed as effecting domestic relationships, health, and social life.

Organizational and management practices were seen as a major source of stress and, when applied appropriately, a "powerful antidote" for the consequences of traumatizing work. Wives viewed their husbands' coping strategies (alcohol and tobacco use, thinking about work while at home, "scapegoating," and taking things out on family members) as slightly or not at all effective.

The effect of the stress associated with police work on officers' families has been explored by a number of articles. Swann and D'Agostino (1994) examined the specific relationship between an officer involved in a shooting and incidence of domestic violence committed by that officer. The authors examined officers who were fired upon or discharged their service weapon. Forty-seven out of a total of 65 officers were debriefed using "a standard critical incident debriefing procedure." No other information about the debriefing model used was given. Data were collected on the number of police officers who sought counseling for domestic problems after their shooting incident. Of the 65 officers involved in shootings, 21.54 percent sought additional counseling through the department (this study excludes officers who sought private counseling), all of which had been debriefed. All of the officers who sought additional counseling reported having domestic problems. Of the 65 officers involved in shootings, 13.85 percent reported incidents of domestic violence. Many of these officers also reported alcohol use, financial problems, and possible separation or divorce as other reasons for seeking continued counseling, it seems that the officer's shooting exacerbated existing problems

and that the rates of domestic violence among this group were higher than for the normal population.

The needs of officers and their families can be addressed, especially in the area of stress prevention and treatment. Super (1994) outlines in detail a specific and comprehensive intervention that can be used with officers and their families. This intervention includes a didactic component that reviews the common pitfalls faced by law enforcement families (e.g., dealing with emergencies, overtime stresses and unrealistic department expectations), the signs associated with marital problems (e.g., withdrawal, increased criticalness, and loss of sense of humor), and prevention of marital problems (e.g., health and wellness, communication, and financial difficulties). A model for crisis intervention with law enforcement families (based on the Mitchell and Everly model) is also outlined. Super recommends a group meeting with spouses only. Implementation of this intervention model or its components, when possible, can aid law enforcement families in coping with the specific stresses associated with this line of work.

The use of conjoint critical incident debriefings is discussed by Trompetter (1994). His model differs from Super's in that Trompetter believes spouses should be included in the initial meetings with the officers involved, and in the subsequent critical incident stress debriefings with officers. The danger of secondary traumatization is apparent and is not addressed by the author; rather, he outlines the benefits of conjoint meetings and debriefings (e.g., social support, expectancy, exploring possible misunderstandings to come, and education). The need for follow-ups and a "survivor's luncheon" (a lunch meeting for officers involved in shootings and their families) is also

stressed. The social support and education for officers and their families provided by this model seems especially valuable, but the risk of secondary fraumatization must be explored.

Nicoletti and Spencer-Thomas (2001) explored the effects of secondary traumatization on police officers, specifically, the effect of responding to civilian suicides. Secondary traumatization (otherwise known as compassion fatigue or vicarious trauma) is the stress symptoms that result from the knowledge of a traumatic event experienced by another person. Police officers are often faced with situations in which they are the ones learning of a traumatic event from another person. The only information given about the study conducted by these officers is that 103 officers were given a questionnaire based on research about Secondary Traumatic Stress. This questionnaire was divided into three "modes:" a symptom checklist, a qualitative description and a standardized questionnaire. The authors state that their results indicate that in the aftermath of a civilian suicide, many officers experience symptoms consistent with Secondary Traumatic Stress. Furthermore, officers who respond to multiple suicide calls face a cumulative stress response. The most common reactions were anger and reexperiencing the event, and humor and social support were the most used coping strategies.

The stress associated with law enforcement can lead to the development of Posttraumatic Stress Disorder (PTSD). Gersons (1989) explored the relationship between officer-involved shootings, and those officers experiencing symptoms associated with PTSD. Thirty-seven officers involved in "serious shooting incidents in which bodily

injury or death occurred" were interviewed using a set of questions based on the DSM-IV symptoms of PTSD. Gersons found that only three of the 37 participants were symptom free, and 17 fulfilled the DSM-IV diagnostic criteria for PTSD, with seven of these officers qualifying as chronic sufferers. The most prominent symptom was "recurrent and intrusive recollection of the event," followed by "hypervigilance" and constricted affect. Constricted affect seems to be the symptom that most often negatively affects officers' relationships with others. Gersons also found that one of every three officers who did not have PTSD suffered some of these symptoms. All of these officers (PTSD or no PTSD) did not look for help from mental health professionals.

Cariier, Lamberts, and Gersons (1997) also examined the relationship between police work and the development of PTSD. Seven percent of their sample (N=262 Dutch police officers) had PTSD according to the findings of their structured interview. The development of PTSD did not correlate with type of trauma (depressing or violent) and supports the idea that severity of trauma and threat may be better predictors. At three months posttrauma, PTSD correlated with introversion, difficulty in expressing feelings, emotional exhaustion at the time of the trauma, dissatisfaction with support, and insecure job status. At 12-months posttrauma, PTSD correlated with absence of hobbies, subsequent traumatic events, dissatisfaction or brooding over work, and lack of social support. Age, gender, rank, and experience did not correlate with PTSD symptoms.

DeAngelis (1995) found PTSD rates among law enforcement to be around seven percent. This rate corresponds to the PTSD rates among trauma victims and crime

victims. This rate is a little lower than the rates among fire fighters and other emergency services workers (ranging from nine percent to 16.5 percent).

Mullins (2001) posits that PTSD is the precipitating condition to police officer suicide. Mullins acknowledges that "loss of significant others, low rank/status in the group (including low group cohesion and recent reassignment), role conflict and a sense of responsibility for others" (p. 259), taking a life in the line of duty, and working with juveniles (because juveniles are often victimized by adults) are predisposing factors for suicide. The resolving of the cognitive dissonance associated with many of these events (e.g. murdering someone is different than killing someone in self-defense) seems to be the task officers face in trying to cope with these events. Unresolved cognitive dissonance may also be a precipitating factor in police officer suicide.

Mullins (2001) concluded that prevention of suicide related to PTSD is accomplished through training. Training officers, their families, managers, and administration about normal reactions to stress, and what to expect after a critical incident has ended, should be the primary goal of this type of training. Trained peer support programs are also instrumental in meeting the psychological needs of officers involved in critical incidents. Finally, Mullins recommends basic education about group processes because social support is a key component of stress-management and preventing suicide.

A helpful outline of reasons officers commit suicide is given by Janik and Kravitz (1994). The most striking reason cited is from supervisors and administrators who are perceived as out of touch with officers on patrol. Supervisors who change policy, assignments, days off, or shift hours with little or no warning or explanation reinforce this

perception. Janik and Kravitz examined the correlations between police suicides and domestic problems in their study. These researchers examined the records of 134 officers who had completed their fitness for duty evaluations. The reasons for these evaluations were, in order of frequency: "marital problems, alcohol, drugs, administrative harassment, and cumulative stress" (p. 77).

These researchers found that 55.2 percent of the evaluations they reviewed included information about suicide attempts. They found that if an officer reported marital problems, they were 4.8 times more likely to have attempted suicide. If an officer had been suspended, they were 6.7 times more likely to have attempted suicide. An interesting finding was that if an officer felt harassed by administrators, then they were less likely to attempt suicide. According to the researchers, findings support the notion that externalizing anger protects against self-destructive behavior. The article ends with a helpful list of signs that indicate an officer is at risk for suicide: "becomes overly aggressive, stays after work to drink with other police officers and uses alcohol to help with sleeping problems and to relax, buys the best bullet-proof vest and a better and more powerful pistol, puts his family into the background after his drinking and drug-using buddies, causes damage to citizens' property, and stays by himself, and watching violent movies on video cassettes" (p.78).

Haberfeld (2001) stressed the need for an appropriate setting for the expression of emotions. The difficulty of finding the right platform for this is compounded by the terms "support," "counseling," and "stress management" denoting weakness. Haberfeld recommends a required in-service for officers. This in-service should meet on a regular

basis, one that fits the needs of the particular service and the work schedules of its members. These meetings should be organized by rank, and include someone who is willing to begin the expression component of the meetings. Open discussion and the offering of solutions should also be encouraged.

There are also programs the target reduction of officer suicides (Schmuckler, 2001; Allen, 2001). Both of these programs emphasize training, clarifying misconceptions about suicide, identifying high-risk officers, helping departments avoid stigmatizing officers and formulating nonpunitive policies. Both programs have been successful for reducing suicide rates.

Further Research Possibilities: Gaps in the Literature

Deahl, Srinivasan, Jones, Neblett, and Jolly (2001) studied 106 male British soldiers exposed to stressors meeting the DSM-IV criteria for PTSD during their service in Bosnian peacekeeping missions. After being randomly assigned to a Mitchell model of debriefing, or a no treatment group, servicemen who were debriefed had significantly lower CAGE (a measure of problem alcoholic drinking) scores. These authors posited that those in the military may avoid (an essential component of PTSD) reporting PTSD symptoms and may underreport symptoms because of the pressures of the "macho military culture." Along with the need to measure alcohol consumption and dependence, these authors contended that other psychiatric conditions (ASD), social functioning and support, occupational functioning, and personality dynamics should be measured when

studying the effectiveness of psychological debriefing. None of the studies reviewed here assessed these variables that may influence the outcomes of debriefing.

In conclusion, the stress of police work and the need to address the psychological needs of police officers are evident. The focus of previous research has been on the effectiveness of debriefing in mitigating the effects of traumatic events on individuals after a traumatic event. A strong case has been made for the effectiveness of psychological debriefing after traumatic events. In light of the lack of research on helping police officers cope with the day-to-day trauma of their work, this study addresses a void in the body of research on treating psychological trauma generally, and meeting the needs of police officers and emergency services personnel, specifically.

CHAPTER ni

METHOD

Introduction

Chapter III will outline the investigative methods used in this study. The purpose of this study was to examine the effect periodic psychological debriefing (Mitchell & Everiy, 1997) had on police officers' level of depression and Posttraumatic Stress Disorder (PTSD) symptoms. This chapter will be divided into the following headings: variables in the study, hypotheses, research design, selection of participants, instrumentation, treatment, and analysis of data. This investigative method is based upon the research outlined in Chapter II.

Variables in the Study

The dependent variables assessed in this study were level of depression, and level of PTSD features. These variables were assessed in relationship to the participant's frequency of experience with the treatment (cumulative stress debriefing). These variables were also assessed through the data collection that occurred before and after the debriefing meetings.

The relationship between PTSD and depression is outlined in the DSM-IV (American Psychiatric Association, 2000). According to the DSM-IV, PTSD is associated with increased rates of Major Depression and other disorders. "These disorders can either precede, follow, or emerge concurrently with the onset of

Posttraumatic Stress Disorder" (American Psychiatric Association, 2000, p. 465). There is also evidence for a genetic predisposition of PTSD. If an individual has a family history of depression, they are at an increased risk for PTSD (American Psychiatric Association, 2000, p. 466).

Hypotheses

The hypotheses for this study were based on two conditions. The research design employed a pre-test post-test design using a treatment and control condition. Participants in the control condition completed the pretest consisting of a demographic questionnaire, the Impact of Event Scale - Revised (IES-R), the Beck Depression Inventory (BDI), the Social Readjustment Rating Scale (SRRS), no cumulative stress debriefings, and the posttest consisting of the same measures. Participants in the treatment condition completed a pretest, cumulative stress debriefings, and then the posttest. The research question was: what effect does cumulative stress debriefing have on the police officers' level of PTSD and depression symptoms. The specific hypotheses for this study are:

Ho: There will be no difference between the scores from the control condition on the Impact of Event Scale - Revised and the Beck Depression Inventory and the scores from the treatment condition on these measures after treatment.

H1: Having controlled for traumatic events unrelated to work that were experienced during the treatment phase (through the use of the Social Readjustment Rating Scale), participants in the treatment condition will have lower scores than those in the control condition on the Impact of Event Scale - Revised and the Beck Depression Inventory.

Research Design

The research design consisted of a pre-test and post-test of participants in the treatment condition and the control condition, before and after treatment (cumulative stress debriefings). The measures used in this study were the Impact of Events Scale - Revised (a 22- item self-report inventory), the Beck Depression Inventory (a 21- item self-report inventory), and the Miller and Rahe (1997) Social Readjustment Rating Scale (a 42-item checklist of stressful/traumatic events). Demographic information was collected (age, gender, race, rank, years as a police officer, number of experiences in previous psychological debriefings, number of treatment sessions attended, and shift/hours typically worked), and the treatment group was asked questions about the group meetings. The only identifying information collected was the officer's randomly assigned number.

Participation was voluntary. Identifying information was kept confidential. Officers in the control condition were offered the cumulative stress debriefing in-service after the post-test was given.

Selection of Participants

Participants in this study were selected from the local police department in a mid-size southwestern city. The department has approximately 296 officers; with the majority being male (approximately 15 female officers). From this group of 296 police officers, 40 participants were assigned either to the treatment or control condition. Only sworn

peace officers employed by this department and actively serving were eligible for this study.

Participants were drawn from a normal population of officers. No participants experienced a level of psychological distress or impairment that warranted referral to a mental health professional or local hospital. All treatment condition participants were able to adhere to the guidelines of confidentiality (see Appendix E) and the guidelines for the group meetings (see Appendix F). The treatment model used was a psychoeducational model, and specific information was discussed during the course of the treatment phase (see Appendix I).

Sampling occurred at three different time intervals: October, January, and March. The October sampling (control group one) consisted of 24 members. All participants except two were surveyed again in January and March. The two participants that dropped out did so because one was diagnosed with cancer and the other was deployed with the armed services. The January sampling was the pretest for the treatment (N=11 from patrol division and N=9 from investigations) and control (N=9 from patrol division and N=9 from investigations) groups. The March sampling was the posttest for each of these groups. Only one person dropped out at this phase of the study, and this subject was in the control group for detectives who said he did not have enough time to complete the posttest.

Participants were recruited directly by the researcher, and through announcements made by the researcher, and by the Captain or Lieutenant in charge of the officers participating from the patrol division. These announcements were brief descriptions of

the purpose of this study. Officers who participated in the treatment groups were on duty at the time of the group meetings, or were paid overtime. Officers in the control group did not receive any compensation from the police department for filling out the questionnaire packets.

Instrumentation

Impact of Events Scale-Revised

The Impact of Events Scale-Revised (IES-R) is a 22-item instrument that requests participants to indicate how much they were distressed or bothered by specific symptoms conelated with Acute Stress Disorder and Posttraumatic Stress Disorder. The IES-R takes about fifteen minutes to complete. Each item can be answered on a scale between 1 and 4, with 1 (not at all) conesponding to experiencing no symptom in relation to a specific event, and four (extremely) conesponding to experiencing these symptoms. Test instructions direct respondents to indicate how distressing each symptom had been, in relation to the previous two weeks of work.

The original Impact of Events Scale (Horowitz, Wilner, & Alvarez, 1979) has been found to be an excellent and accepted measure of the intrusion and avoidance components of PTSD (Amdur, & Liberzon, 2001; Joseph, 2000). The revised version of the hnpact of Events Scale includes seven items assessing intrusion, eight items assessing avoidance, and seven items assessing level of hyperarousal. This revised measure seems to be an excellent indicator of PTSD, and may be a good screening tool for ASD. Every

question on the IES-R assesses the DSM-IV criteria for ASD, with items 7, 13 and 14 assessing dissociative symptoms.

Weiss and Mannar (1997) found the internal consistency of the intrusion subscale of the IES-R to be between .87 and .92, the avoidance subscale to be between .84 and .86, and the hyperarousal subscale to be between .79 and .92. The test-retest correlation coefficients in a study with 429 participants for the intrusion subscale were .57, for the avoidance subscale was .51, and for the hyperarousal subscale was .59. These correlation coefficients may be low because of the relationships between the scales. The IES-R has good predictive validity for trauma based on the hyperarousal subscale (Briere, 1997). The IES subscales of intrusion and avoidance have been shown to detect changes in traumatized individuals' clinical status over time, even among different types of traumatic events with varying severity (Horowitz et al., 1979).

Impact of Events Scale - Revised Subscales

Intrusion can best be defined by the DSM-IV criterion B for PTSD. Intrusion refers to recollections, (including images, thoughts or perceptions), dreams, flashbacks, hallucinations, and dissociative episodes associated with the traumatic event. Intrusion is also any distress experienced when faced with cues associated with the event.

Hyperarousal (criterion D) is any physiological reactivity to cues associated with the event. Hyperarousal also contributes to difficulty falling or staying asleep, irritability or outbursts of anger, problems concentrating, feeling on guard, and being startled easily.

Avoidance is any attempt at avoiding thoughts, feelings, or conversations related to the

event, avoiding any reminders of the event, inability to remember important aspects of the event, loss of interest in previously pleasurable activities, feeling socially isolated, feelings of apathy, and belief that one's future is limited. Having one symptom of intrusion, two symptoms of hyperarousal, and three symptoms of avoidance, are the major components of the DSM-IV diagnosis of PTSD. (American Psychiatric Association, 2000).

The original Impact of Events Scale (IES) (Horowitz, Wilner, & Alvarez, 1979) has been used in a number of different populations in an effort to examine the effects of traumatic events on individuals. Some of these populations experienced a traumatic event first-hand: a mixed population of military and civilian individuals (Neal et al, 1994) and victims of various traumatic experiences, for instance, road traffic accidents (Mayou, Ehlers, & Hobbs, 2000), hurricane survivors (Chemtob, Tomas, Law, & Cremniter, 1997) and violent crimes (Rose, Brewin, Andrews, & Kirk, 1999). One of these studies found that the Impact of Event Scale was "the most useful dichotomous measure" and performed most efficiently as a diagnostic tool (Neal et al., 1994). The IES was used to determine the effectiveness of interventions used to treat psychological distress.

In other studies, the IES was used to determine the level of distress in individuals who witnessed a traumatic event. Some of the populations studied were police (Carlier, Voennan, & Gersons, 2000), fire fighters (Regehr, & Hill, 2000), emergency medical workers (Jenkins, 1996), disaster workers (Ursano, Fullerton, Vance, & Kao, 1999; Hyman, 2001), therapists who treat sex abuse survivors on a regular basis (Paulus, 1998),

and family members of victims of the civil war in Bosnia (Kajic, 1999). Here again, the IES was used to determine the level of trauma and the effectiveness of treatment interventions.

Robinson, Sigman, and Wilson (1997) used the Impact of Events Scale-Revised (IES-R) in their examination of job stress and PTSD symptoms in police officers. The IES-R was used to determine the severity of PTSD in this group of police officers. These researchers reported that the IES-R was especially useful in determining PTSD symptoms of intrusion, avoidance, and hyperarousal, and how these symptoms correlated with duty-related stressors (primarily encounters with and exposure to death).

Lind (2000) examined the levels of Secondary Traumatic Stress Disorder (STSD) in psychologists who treated clients with the primary diagnosis of Posttraumatic Stress Disorder. The IES-R was used to determine the level of distress in these psychologists. The researchers found social support and social activity to be important in reducing levels of STSD in psychologists.

Another study examined the usefulness of the Impact of Event Scale (IES) by focusing on the general population (Briere & Elliott, 1998). These researchers found that the IES was reliable and had concurrent validity with the Trauma Symptom Inventory and the Los Angeles Symptom Checklist, when examining upsetting events in the lives of those in the general population. The IES was also found to be helpful in predicting reactions to potentially traumatic events. Possible limitations of the IES were also discussed; especially the need for this measure to be used in screening only nonarousal-related PTSD.

The Impact of Event Scale-Revised was used to determine the impact of the Oklahoma City bombing on a sample of sixth graders two years after the event (Pfefferbaum et al., 2000). This sample was made up of participants who were not directly affected by the Oklahoma City bombing. These researchers found elevated mean PTSD symptom scores in this population.

The Impact of Event Scale-Revised was also used in testing a hypothesis about the volume of the hippocampus in trauma survivors (Bonne et al., 2001). Of the 37 subjects contacted, 10 met the DSM-IV criteria for a traumatic event. The researchers found that one week after the event, participants had a mean IES-R score of 54.30 (SD = 21.58) for non-PTSD participants, and a mean score of 67.63 (SD = 16.57) in PTSD participants. Six months after the event, the mean IES-R scores for the non-PTSD participants was 26.35 (SD = 17.56) and 56.75 (SD = 18.99) for PTSD participants. Even though these researchers used a small sample, the IES-R scores reported in this study provide a useful comparison group of scores for the current study.

The Beck Depression Inventory

The Beck Depression Inventory (BDI) is "a well-known and widely used self-report inventory that taps overall severity of depression in adolescents and adults" (Carlson, 1998, p. 177). The BDI takes approximately 15 minutes to complete, and is an accepted screening tool used in screening normal populations. The population in this study will not be, for the most part, experiencing symptoms that are the focus of clinical attention.

The BDI assesses about 67 percent of the criteria for the DSM diagnosis of affective disorders; the BDI and the items on the Minnesota Multiphasic Personality Inventory-Depression scale had a correlation coefficient between .61 and .76. Additionally, this inventory has an Alpha reliability coefficient ranging from .79 to .90 obtained from six test samples (Carison, 1998).

The Social Readjustment Rating Scale

The Miller and Rahe Social Readjustment Rating Scale (SRRS) will be used to assess 42 stressors experienced by officers that occur in his or her private life, it takes about five minutes to complete. Events such as divorce, sexual problems, and changes in living conditions, which can influence the scores obtained on the Impact of Event Scale - Revised, and the Beck Depression Inventory, will be controlled for using this measure. This is a 42 item, self-report test, in which the participant identifies with a checkmark which events he or she has experienced in the past year (see Appendix C). Each item is weighted according to the amount of stress typically associated with this event. Hock (1995) found 138 research publications in one year that employed the SRRS in their study, which makes it the most widely cited instrument used in the area of stress management. Scully, Tosi, and Banning (2000) studied the SRRS and found it is able to predict stress-related outcomes, especially when examining stress that occurred within the last 12 months. They concluded that it is a "robust" instrument that is useful in "identifying the potential for the occurrence of stress-related outcomes" (p. 875).

Treatment

Participants in the treatment condition met in small groups for no more than one hour once a week. One group was composed of officers and corporals who worked the evening, flex, and midnight shifts. The other group was composed of officers and corporals who worked as detectives in different departments (homicide, juvenile, investigations). During these meetings the group leader (the researcher) and a trained peer officer guided the members through the seven-step Mitchell and Everiy (1997) model (see Appendix F). This model is a psychoeducational model that gives participants an opportunity to psychologically process stressful events, and then offers concrete information about coping with these events and support from others who may have experienced similar events. Officers were asked to respond to the Mitchell-model questions regarding their experiences from the previous week. Also, in accordance with this protocol, each treatment group was made up of members of similar rank, from similar shifts, departments, and job descriptions.

Random assignment was not accomplished because of the constraints of the Mitchell and Everiy model; namely, the need for groups to be made up of officers of the same rank who worked together. If officers were available to participate in the group meetings they were assigned to the treatment condition. There were a few officers (N=4) randomly assigned to the control group who were able to participate in the treatment condition. Likewise, there were a few Sergeants (N=5) who were available, but because of their rank they were assigned to the control condition. The remaining officers in the control groups (N=8) were not available for the treatment group meetings. Those who

held the rank of Lieutenant and above (N=22) were excluded because there were not enough of these officers to form a group. Due to these constraints, the total number of officers available for sampling was 274.

The researcher has been trained in the use of the treatment model implemented in this study, and in group therapy leadership. Though this treatment model is psychoeducational in nature, group therapy leadership skills were needed to facilitate the proper implementation of this model, and in order to help members address issues appropriate for this setting. There were times where it was necessary to paraphrase, reframe, and explore issues related to the topic of group. The researcher is also a Licensed Professional Counselor (temporary license) and received weekly supervision from a Licensed Professional Counselor Supervisor. Documentation of group sessions was discussed with the supervisor and was kept in a locked file cabinet in a locked office. This documentation was written according to the S.O.A.P. method of writing case notes and will be kept for the standard seven years and then destroyed.

The treatment condition was a closed group. Members were asked to commit to attending all eight meetings. No members were added or dropped during the course of the group meetings.

Analysis of Data

The information gathered by the demographic and assessment questions were analyzed with a Multivariate Analysis of Covariance (MANCOVA) (Tabachnick, & Fidell, 2001). MANCOVA is appropriate because of the co-morbidity of PTSD and

depression, and because the BDI and IES-R assess components of both conditions. The dependent variables will be the scores obtained on the IES-R and the BDI. The SRRS will serve as a control for non work-related stressors that may influence IES-R and BDI scores. The demographic information obtained in the study will also be analyzed, including officer's perception of the intervention as helpful and of the department as supportive. The SRRS and the demographic information will also be examined as covariates.

Ho states: There will be no difference between the control group's scores on the IES-R and the BDI, and the treatment group's scores on these measures after treatment.

Hi states: Having controlled for traumatic events unrelated to work that were experienced during the treatment phase (through the use of the Social Readjustment Rating Scale), the treatment group will have lower scores than the control group on IES-R and the BDI. The dependent variables will be the IES-R and BDI scores. The independent variable will be participation in cumulative stress debriefings. The *Wilks' lambda*, Λ , statistic, also referred to as the tZ -statistic, will be used. If a statistically significant Λ is found, univariate analyses of covariance on each separate dependent measure will be done. If a significant F is found, pairwise post hoc Tukey tests will be conducted.

CHAPTER IV

RESULTS

The results of the statistical analyses conducted in this study are reported in this chapter. The following sections are included in this chapter: Research Design, Demographic Information, Data Management, and Results of Hypotheses Testing. A summary of the statistical analyses concludes this chapter.

Research Design

The research design consisted of a pretest and posttest of participants in the treatment (cumulative stress debriefings) condition and the control condition. The measures used in this study were the Impact of Events Scale - Revised (a 22-item self-report inventory), the Beck Depression Inventory (a 21-item self-report inventory), and the Miller and Rahe (1997) Social Readjustment Rating Scale (a 42-item checklist of stressful/traumatic events). Demographic information was collected (age, gender, race, rank, years as a police officer, number of experiences in previous psychological debriefings, number of treatment sessions attended, and shift/hours typically worked), and the treatment participants were asked questions about the intervention. The only identifying information collected was the officer's randomly assigned number.

The information gathered by the demographic and assessment questions was analyzed with a Multivariate Analysis of Covariance (MANCOVA) (Tabachnick, & Fidell, 2001). MANCOVA is appropriate because of the co-morbidity of PTSD and

depression, and because the BDI and IES-R assess components of both conditions. The dependent variables were the scores obtained on the IES-R and the BDI. The SRRS served as a control for non work-related stressors that may influence IES-R and BDI scores. The demographic information obtained in the study was analyzed, including officer's perception of the intervention as helpful and of the department as supportive. The SRRS and items from the demographic information were also examined as covariates.

Demographic Information

The final number of participants for this study was 38. The dispersion of these subjects across the research conditions (treatment and control) is given in Table 1.

Table 1. Descriptive Statistics for Participation Across Research Conditions and Groups.

	Patrol Treatment	Patrol Control	Investigators Treatment	Investigators Control	Total
Pretest	N = 11	N = 9	N = 9	N = 9	N = 38
Posttest	N = 11	N = 9	N = 9	N = 8	N = 37

One participant (2.6%) dropped out of the control condition because he "did not have enough time to complete the posttest." Two other officers filled out pretests, but dropped out of the control condition because one was called to active duty with the military, and the other was diagnosed with a serious disease. The size of the two treatment groups

(patrol and investigators) was satisfactory considering the restrictions of the treatment protocol and the amount of time needed to complete the protocol in each meeting. If the number of participants were increased, this would result in the formation of another treatment and control group. Table 2 shows the job duties of the participants in each of the research conditions.

Table 2. Work Duties.

Department	<u>Number of Officers</u>	
	Treatment	Cont
Day Shift, Patrol	0	2
Evening Shift, Patrol	3	2
Flex Shift, Patrol	2	2
Midnight Shift, Patrol	6	3
Juvenile, Investigations	3	1
Person Crimes, Investigations	4	3
Property Crimes, Investigations	2	4

The average age of the participants was 37, with three participants (8.1%) under the age of 29, 11 participants (23.7%) between the ages of 30 and 35, 11 participants (34.2%) between the ages of 36 and 40, seven participants (18.4%) between the ages of 41 and 45, and five participants (13.1%) between the ages of 45 and 50. Table 3 illustrates other demographic data. Most of the sample (86.8%) was Caucasian, with

three Hispanic officers (7.9%) and one Black officer (2.6%) participating. The department is 83% Caucasian, 16% Hispanic, and 1% Black. Most of the sample (84.2%) was male, with five females (13.2%) participating. This department is 94% male and 6% female. Half (50%) of the sample held the rank of patrolman, 13 participants (34.2%) were corporals, and five participants (13.2%) were sergeants. The department is 56% patrolman, 21% corporal, 16% sergeants, 4% lieutenants, 3% captains, and 1% assistant chiefs. All of the sergeants were participants in the control condition because they functioned as supervisors and their presence in the treatment groups would have been counterproductive and at odds with the treatment model requirements. There were not enough participants to form a treatment and control group of sergeants.

The treatment protocol calls for homogeneous groups (including rank). Only a few officers (N = 22) hold the rank of lieutenant and above, so it was almost impossible to form a homogeneous treatment and control group from these ranks. Because of this constraint, only 262 officers were available for sampling.

The average years of experience for this sample were 12 years as a police officer. One member of the treatment condition was in field training (denoted as an officer on probation) and had been on the street for less than 6 months. The average number of hours worked by this sample of officers was 44 at pretest and 45 at posttest.

Table 3. Demographic Information.

Ethnicity	Gender	Average Work Week	Years Experience	Rank
White = 33	Male = 32	Pretest M = 43.81	M= 12.61	Patrol = 19
Hispanic = 3	Female = 5	Posttest M = 44.76		Corp. = 13
Black = 1				Sgt. = 5

Officers were asked at pretest if they had previous experience with the treatment protocol. Half of this sample (50%) had no experience. Seven officers (18.4%) reported participation in one debriefing, nine officers (23.7%) reported participation in two to four debriefings, one officer (2.3%) had been to six debriefings, and one officer had been to 12 debriefings.

Participants were asked if they believed the department was supportive of them as an officer. At pretest, a majority (60.5%) of this sample answered yes. Two officers left this question unanswered, seven officers (18.4%) answered sometimes, and five officers (13.2%) answered no. At posttest, a majority (52.6%) answered yes, one (2.6%) did not answer, nine (23.7%) answered sometimes, and seven (18.4%) answered no.

Officers in the treatment condition were asked two questions about the treatment intervention at the end of the eight-week intervention. They were asked if they found the meetings to be helpful and if they thought the meetings should be continued. One hundred percent of the officers answered yes to both questions.

Attendance in the treatment groups is an extraneous variable that could have affected the obtained results on the BDI and IES-R for the treatment condition. Attendance was taken at the end of each meeting. The attendance record for each participant is given in Table 4.

Table 4. Treatment Condition Meeting Attendance.

Meetings	Number of Officers	
	Patrol	Investigations
Two meetings	0	1
Three meetings	1	0
Four meetings	0	0
Five meetings	1	1
Six meetings	4	4
Seven meetings	4	1
Eight meetings	1	2

Qualitative data was also gathered through the questionnaires. Officers were asked to explain their answers about departmental support and the treatment intervention. This data will be explored later in this chapter.

Data Management

Participants completed most of the questionnaires at the time they were dispersed. A few officers were given the questionnaires and an envelope that could be sealed and

returned to the investigator at a later date. Once the questionnaires were collected, they were coded and then stored in a locked file cabinet in a locked office away from the police department. The list that matched the randomly assigned number that was written on the questionnaires with an officer's name was also kept in this locked file and was destroyed after the posttests were collected and coded. The demographic information were separated from the Beck Depression Inventory (BDI), Impact of Event Scale - Revised (IES-R) and the Social Readjustment Rating Scale (SRRS) after the data analysis and write up was completed. There were no missing data from the questionnaires. All the questionnaires (N = 37) were returned to the researcher.

Coefficient Alphas

The reliability of the instruments used in this investigation was computed with the Cronbach coefficient alpha. The reliability of the instruments was .85 for this sample. The BDI at pretest had a reliability of .85 and at posttest was .90. The BDI has an Alpha reliability coefficient ranging from .79 to .90 (Carison, 1998). The IES-R had a reliability of .93 at pretest and .90 at posttest. Weiss and Marmar (1997) found the internal consistency of the intrusion subscale of the IES-R to be between .87 and .92, the avoidance subscale to be between .84 and .86, and the hyperarousal subscale to be between .79 and .92. The test-retest correlation coefficients, in Weiss and Marmar's study with 429 participants, for the intrusion subscale was .57, for the avoidance subscale was .51, and for the hyperarousal subscale was .59. These correlation coefficients may be low because of the relationships between the scales. The IES-R has good predictive

validity for trauma based on the hyperarousal subscale (Briere, 1997). The IES subscales of intrusion and avoidance have been shown to detect changes in traumatized individuals' clinical status over time, even among different types of traumatic events with varying severity. (Horowitz, et al., 1979). The test-retest, Pearson's correlation for the SRRS was .63, which is a fair correlation considering this measure was a simple checklist.

Results of Hypotheses Testing

The results of the hypothesis testing are given in the following sections. Descriptive and multivariate statistical analyses are reported. Following a description of each hypothesis, the effects of the treatment protocol on levels of Depression, Posttraumatic Stress Disorder symptoms, and perceptions of departmental support are given. The relationship between years of work experience and levels of Depression and Posttraumatic Stress Disorder symptoms are also considered.

Primary Research Hypothesis

H₀ states: There will be no difference between the control condition scores on the IES-R and the BDI, and the treatment condition scores on these measures after treatment.

H₁ states: Having controlled for traumatic events unrelated to work that were experienced during the treatment phase (through the use of the Social Readjustment Rating Scale), the treatment condition will have lower scores than the control condition on IES-R and the BDI. The dependent variables will be the IES-R and BDI scores. The independent variable will be participation in cumulative stress debriefings.

The descriptive statistics for the BDI and IES-R scores are given in Table 5.

Table 5. Descriptive Statistics for Treatment and Control Condition Scores on the BDI and IES-R.

Measures	M	SD	
BDI			
Patrol Control Group Pretest	6.67	4.56	9
Patrol Control Group Posttest	8.67	7.86	9
Patrol Treatment Group Pretest	6.27	5.20	11
Patrol Treatment Group Posttest	5.55	4.87	11
Investigator Control Group Pretest	6.63	6.82	8
Investigator Control Group Posttest	6.25	8.53	8
Investigator Treatment Group Pretest	6.56	4.45	9
Investigator Treatment Group Posttest	4.89	3.82	9
IES-R			
Patrol Control Group Pretest	5.11	5.93	9
Patrol Control Group Posttest	5.00	7.55	9
Patrol Treatment Group Pretest	8.55	9.38	11
Patrol Treatment Group Posttest	7.91	6.30	11
Investigator Control Group Pretest	7.63	9.98	8
Investigator Control Group Posttest	3.13	6.92	8
Investigator Treatment Group Pretest	10.89	12.58	9
Investigator Treatment Group Posttest	6.56	5.48	9

Table 5 shows lower mean scores for the patrol and investigator treatment condition ($M = 5.55$; $M = 4.89$), as compared with the patrol and investigator control conditions ($M = 8.67$; $M = 6.25$), on the BDI at posttest. This table also shows higher mean scores for the patrol and investigator treatment condition ($M = 7.91$; $M = 6.56$), as compared with the patrol and investigator control condition ($M = 5.00$; $M = 3.13$) on the IES-R at posttest.

The treatment condition had higher IES-R scores at pretest ($M = 8.55$, $M = 10.89$) than the control condition ($M = 5.11$, $M = 7.63$). The treatment condition members were experiencing more symptoms of PTSD, more intense symptoms of PTSD, or a combination. All IES-R scores fell from pretest to posttest, with both investigator groups changing more than four points.

The changes in scores on the BDI for the control condition of patrol officers rose (+2.00), while the scores for the treatment condition of patrol officers fell (-0.72) slightly from pretest to posttest. The scores for the control condition of investigators also fell (-0.38) slightly from pretest to posttest, but the scores of the treatment condition of investigators fell (-1.67) more.

The changes in scores on the IES-R for the scores for the control condition of patrol officers fell (-0.11) slightly from pretest to posttest, while the scores for the treatment condition of patrol officers fell a little more (-0.64). The scores for the control condition of investigators fell (-4.5) and the scores for the treatment condition of investigators fell (-4.33).

The range of scores on the BDI at pretest was from a score of zero, to a score of 19. At posttest, the scores ranged from zero to 27. On the BDI, a score higher than 14

represents mild depression, a score higher than 21 represents moderate depression and, a score higher than 26 represents severe depression. On the pretest, there were four BDI scores in the mild range. At posttest, two scores were in the mild range, and two scores were in the severe range.

The range of IES-R scores at pretest ranged from zero to 39. At posttest the scores ranged from zero to 24. Any score over 22 represents the mild range, and four participants fell into this range at pretest. At posttest, one person fell into this range.

The estimated marginal means and standard deviations for each research condition (treatment and control) for the BDI and IES-R at posttest are given in Table 6.

Table 6. Estimated Marginal Means and Standard Deviations for the Research Conditions for the BDI and IES-R at Posttest.

Measures	M	SD
BDI		
Control	7.337	3.599
Treatment	5.304	3.609
IES-R		
Control	4.524	5.389
Treatment	6.767	5.408

An alpha level of .05 was used for all statistical tests. The BDI, IES-R, and SRRS pretest scores were all used as covariates. The results of the MANCOVA are shown in Table 7.

Table 7. MANCOVA for the SRRS, BDI, and IES-R Pretest Scores.

Measures	Wilk's X	p	Partial Eta Squared
BDI	.313	.000	.687
IES-R	.712	.007	.288
SRRS	.892	.192	.108

There was no covariate effect for the SRRS, but there was an effect for the BDI and IES-R. This means that there was a significant relationship between the pretest and the posttest scores on these two measures (treatment and control), and substantiates the use of the pretest scores as covariates in order to control for the difference.

Table 8 illustrates the results of the MANCOVA for the research conditions.

Table 8. MANCOVA Results for Research Condition Differences.

Research Condition Effects	Wilks's X	p	Partial Eta Squared
Treatment/Control Condition Effect	.855	.104	.145
Treatment/Control/Patrol/Investigators Effect	.988	.837	.012

Table 8 shows no significant difference between the control and treatment conditions; $F = 2.449$, $p = .104$. The data indicates that the treatment intervention explains 14.5% of the variance in scores. There seems to be a trend in the treatment condition towards improvement on their scores, but this trend is not apparent when each of the treatment and control groups (patrol and investigators) are examined; $F = .179$, $p = .837$.

Table 9 shows the differences in BDI and IES-R scores between the research conditions.

Table 9. MANCOVA Results for Research Conditions on BDI and IES-R Scores.

Posttest Effects			Partial Eta Squared
Treatment/Control Condition Effect			
BDI Score Posttest	2.864	.101	.087
IES-R Score Posttest	1.552	.223	.049
Treatment/Control/Patrol/Investigators Effect			
BDI Score Posttest	0.352	.557	.012
IES-R Score Posttest	0.003	.956	.000

Table 9 shows no significant difference between the research conditions. The results for the treatment and control conditions on the BDI; $F = 2.864$, $p = .101$, and on the IES-R; $F = 1.552$, $p = .223$ may represent a trend in the treatment condition towards becoming less depressed, but this trend is not apparent when each of the treatment and control groups

(patrol and investigators) are examined. The comparison of the research condition by group (patrol and investigators) on the BDI; $F = .352$, $p = .557$, and on the IES-R; $F = .003$, $p = .956$ did not show significance.

An examination of the subscales of the IES-R was also conducted. The descriptive statistics are shown in Table 10 for the Patrol groups and Table 11 for the Investigator groups.

Table 10. Descriptive Statistics for IES-R Subscale Scores for Patrol Groups at Pretest and Posttest.

Research Condition	Subscale	M	SD	n
Patrol Control Group Pretest	Avoidance	0.21	0.22	9
	Intmsion	0.37	0.41	9
	Hyperarousal	0.13	0.24	9
Patrol Control Group Posttest	Avoidance	0.18	0.29	9
	Intmsion	0.30	0.44	9
	Hyperarousal	0.21	0.37	9
Patrol Treatment Group Pretest	Avoidance	0.32	0.43	
	Intmsion	0.49	0.43	
	Hyperarousal	0.36	0.51	
Patrol Treatment Group Posttest	Avoidance	0.35	0.33	
	Intmsion	0.39	0.33	
	Hyperarousal	0.34	0.30	

Table 10 shows the control condition means decreased for the Avoidance (-0.03) and Intmsion (-0.07) subscales and increased for the Hyperarousal (+0.08) subscale.

The treatment condition means increased for the Avoidance (+0.03) subscale, decreased for the Hyperarousal (-0.02) and Intmsion (-0.10) subscale.

Table 11. Descriptive Statistics for IES-R Subscale Scores for Investigator Groups at Pretest and Posttest.

Research Condition	Subscale	M	SD	n
Investigator Control Group Pretest	Avoidance	0.19	0.29	8
	Intmsion	0.48	0.58	8
	Hyperarousal	0.39	0.57	8
Investigator Control Group Posttest	Avoidance	0.08	0.22	8
	Intmsion	0.21	0.40	8
	Hyperarousal	0.14	0.35	8
Investigator Treatment Group Pretest	Avoidance	0.60	0.62	9
	Intmsion	0.54	0.77	9
	Hyperarousal	0.33	0.42	9
Investigator Treatment Group Posttest	Avoidance	0.26	0.30	9
	Intmsion	0.44	0.32	9
	Hyperarousal	0.19	0.25	9

Table 11 shows the control condition means decreased for the Avoidance (-0.08), Hyperarousal (-0.25) and Intmsion (-0.27) subscales. The treatment condition means decreased for the Avoidance (-0.34), Intmsion (-0.10) and Hyperarousal (-0.14) subscales.

The results of the MANCOVA performed for the IES-R subscales are shown in Table 12.

Table 12. MANCOVA for IES-R Subscales for Research Conditions at Posttest.

Subscale	Type III Sum Of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Avoidance	.18		.18	2.9	.10	.09
Intmsion	.23		.23	2.24	.15	.07
Hyperarousal	.04		.04	.69	.41	.02

An ANCOVA was performed and found that the avoidance and Intmsion scores were not significantly changed, but may represent a trend towards improvement for those in the treatment group. The Wilks's Lambda for the comparison of the treatment and control groups was .79.

A t-test was performed in order to examine officers' perceptions of the department as supportive. The mean for the control group was $M = 2.53$ and the mean for the treatment group was $M = 2.21$. At pretest, $t = -1.55$, $p = .13$. At posttest, $t = 1.2$, $p = .24$. The difference between the groups was not statistically significant.

Qualitative Data

Three questions provided opportunities for officers to explain their answers. The first question, "Do you believe the department is supportive of you as an officer?" was asked at pretest and posttest of every group. The treatment group was asked two questions about the treatment. The first question was, "did you find the in-service meetings to be helpful?" and the second question was, "should these types of meetings be continued?"

"Do you believe the department is supportive of you as an officer?"

Thirty-seven officers answered this question. A majority of the officers answered yes to this question at pretest (60.5%) and posttest (52.6%). Though they answered yes, some of their remarks provide some additional clarification and understanding about what their answer meant. Some examples of affirmative answers with caveats are: "most of the time," "overall I think they are supportive," "I do believe the department is supportive of me, however, there is a lot of peer pressure and lack of support from fellow officers. Some officers push other officers not to work for fear of retaliation from the administration," "...some of the upper department administration, I am not very confident in their support," and "I am still here."

Along with answering no to this question, officers answered by writing in "it depends," "sometimes," "they don't care," "they show favoritism," and "neutral." If some of the "yes" answers given above were coded differently, to reflect the content of their explanation, the trend in the data may be changed slightly, and in turn may reflect a

statistically significant difference between the treatment group's answers and the control group's answers.

"Did you find the in-service meetings to be helpful?"

All of the officers in the treatment group answered yes to this question. Almost all provided positive feedback in the explanation of their answer. Most viewed these meetings as helpful in relieving stress. Almost all comments centered around the perceived benefits of getting support from other officers and having the opportunity to hear that other officers have similar frustrations and experiences. A few officers commented specifically on the benefits associated with hearing from veteran officers during the meetings.

One officer reported, "On the evenings of the meetings I was able to fall asleep faster. I felt better hearing others were stressed about the same issues as I was. The meeting helped me feel like less of a failure, I missed one meeting due to heavy stress and fearing I might cry in front of my coworkers, I opted not to go and discuss it." This answer reflects some of the benefits and drawbacks associated with the treatment intervention. This answer is also an example of the mutual support experienced by group members.

"Should these types of meetings be continued?"

All of the officers in the treatment group answered yes to this question. Most commented on how they saw this intervention as helpful in reducing stress, providing

insight in to dealing with the problems associated with law enforcement work, providing support, and increasing "officer mental health and welfare." Officers reported in group and on the forms that this was a positive experience for them.

Many of the participants noted that the confidential nature of the meetings was an extremely necessary component. Some suggestions were made about the in-service. One suggestion was to rotate the meetings through different officers, shifts, and departments, another was to meet monthly instead of weekly, a third was make sure that participation was voluntary, a fourth suggestion was to conduct these meetings in an informal matter (e.g. over coffee, or at squad meetings) in order to promote unit cohesion, and the last suggestion was to use these meetings as a way to produce ideas that may improve departmental policies, and to bridge the gap between patrolmen, supervisors and administration.

Summary of Statistical Analyses

The statistical analysis of the data gathered in this study produced no statistically significant findings, thus the null hypothesis was retained. A number of trends emerged in the data that will be discussed in Chapter V. Extraneous variables that may help explain the results of the statistical analysis will also be explored in the discussion of these findings. The value of the qualitative data will also be explored. Finally, the limitations of this study and suggestions for future research will be given.

CHAPTER V

DISCUSSION

Summary of the Investigation

Law enforcement is a stressful and demanding profession. Life-threatening situations can develop without warning, and officers must be equipped to deal with the psychological effects of their work. Assisting officers in finding ways to cope effectively without burning out, becoming depressed, experiencing the symptoms associated with depression and Posttraumatic Stress Disorder (PTSD), or quitting is a necessary endeavor and the focus of this study.

Officers who face stressful and/or traumatic situations (like an officer-involved shooting) have a high chance of leaving their job within five years of an incident (Ayoob, 1980), and in light of officer shortages and the expense of training replacements, departments would do well to equip officers to face the psychological consequences of these incidents. A majority of the officers in Bmbaker's study felt tactically prepared to face a deadly-force incident, but were "not prepared for the psychological impact upon themselves, then families, and then departments after the event" (Bmbaker, 2002, p. 11). Many officers who face stressful and/or traumatic situations also have high rates of domestic problems, spousal abuse, divorce, alcohol abuse, somatization, anxiety, depression and other stress-related behaviors (Deahl, Srinivasan, Jones, Neblett, & Jolly 2001; Harpold & Feemster, 2001; Leventhal, 1978; Martin, 1981; Mitchell & Everiy, 1995), this need not be the case.

In addition to the need for psychological support after an officer experiences a traumatic incident, officers can benefit from periodic interventions that address their accumulated stress. Many times, when critical incident support is employed, the need emerges to address the stress associated with previous traumatic events or the stress associated with the day-to-day work of an officer. Cumulative stress is not normally addressed in ongoing and formal interventions by emergency service administrations (Hayes, 1999). Instead, individuals must devise their own coping methods. Pinizzotto, Davis, and Miller (2002) underscored the importance of addressing cumulative stress levels and emotional health in police officers when they stated, "officers may not realize how their emotional and psychological health can work either for or against them. To react appropriately under demanding and life-threatening circumstances, an officer's physical and emotional condition prove vitally important (Pinizzotto, Davis, & Miller, 2002, p. 4).

The current study was conducted in an effort to address issues associated with police officers' levels of critical incident-related stress, cumulative stress, and their subsequent effects (e.g., divorce, alcohol use, and job dissatisfaction). Another component of the treatment intervention was to educate officers in stress management. Police cadet training briefly covers posttraumatic stress, basic coping skills, and how to identify stress reactions in others (Texas Commission on Law Enforcement, 2002), but is limited in scope.

An on-going debriefing program can affect individual officers' level of job stress, can increase job satisfaction, and address frustrations with leadership figures in the

department. This in turn may increase departmental morale. An officer may also experience a better home and social life because his or her cumulative stress levels have been addressed. The department may also benefit from these interventions because of lower suicide and divorce rates, increased job satisfaction, fewer sick days taken, and lower job turnover rates among officers.

The review of literature indicated a lack of research on the effects of periodic cumulative stress debriefing meetings. Much research has been conducted on the effectiveness of Critical Incident Stress Debriefing (CISD) and Critical Incident Stress Management (CISM) programs, but these interventions do not emphasize addressing the levels of cumulative stress in emergency services personnel.

This study sought to answer the question: do periodic stress debriefing meetings reduce officers' level of depression symptoms and PTSD symptoms? This reduction, in turn, may lead to a reduction in officers' level of stress, a greater ability to cope with stress, enhanced personal lives and job satisfaction, and greater perceived departmental support? Though no statistically significant findings were produced by this investigation, some trends in the data may indicate that this intervention did meet some of these goals.

This study was initiated in a conversation with the assistant chief of police in charge of the patrol division. This chief then talked with the assistant chief in charge of the investigations division. Each chief contacted the captains and lieutenants in each department and informed them about the stress debriefing meetings (referred to as an in-service on stress). The researcher then met with various captains and lieutenants to give them detailed information about the requirements of the investigation (e.g., the need for

officers of similar rank and job duties to be available during work hours to meet for >one hour a week for eight weeks, or be assigned to the control group). These captains and lieutenants then informed their officers about the in-service. The researcher also contacted officers at the patrol division's shift briefings and in one-on-one meetings in the investigations division. The officers knew the researcher, and this probably helped with recruiting them for this study.

Participation was voluntary and occurred while some officers were on duty. Some officers received overtime pay for participating in the in-service after their shift had ended. The patrol group met away from the police department between the evening and midnight shift, the investigations group met in a conference room at the police department.

Meetings lasted no longer than one hour, occurred once a week, and usually lasted the whole hour. Each meeting began with the question, "what has been the most stressful or difficult part of being a police officer this week?" Each time we went around the circle and each officer participated in some degree. At the end of each meeting, the researcher taught methods for coping with and understanding the types of stress discussed during the meeting. General information about stress and coping was also presented (see Appendix J).

In both the patrol and investigator treatment groups, an officer trained in the treatment protocol was present. This seemed to be most helpful in the first meeting of each group because this trained officer answered the treatment protocol questions, interacted with the researcher, and demonstrated to the other group members the purpose

of the group meetings. This seemed to help the group stay on task and become more comfortable with the content of the meetings.

In many meetings, officers supported each other, offered suggestions, and sympathized with the officer that was speaking. The researcher paraphrased at times, and followed up with questions from the treatment protocol when appropriate (e.g., "what was your first thought after this event was over," "what was the worst part of this event," "what reactions or symptoms have you experienced that were associated with this event?"). There were times when officers did not have something extremely "stressful" to discuss, but they shared what they found to be most stressful or frustrating.

A number of topics were discussed in these meetings, and there were some themes that emerged. Some of the topics discussed were: frustration with working with Children's Protective Service, frustration with not having the time to devote to cases, frustration with coworkers, victims asking for more than the officer could give (i.e., mediating conflict between family members), depression over a grandmother "corrupting" her 15-year-old granddaughter, having trouble getting days off or getting approval for continuing education, adjusting to the move from patrol to investigations, and performance worries. The major themes that emerged in these meetings included, work hours interfering with home life and distress about changing job duties or shift times, the stress of being a Field Training Officer, ambivalence and frustration about the decision to promote and lose seniority, or not to promote and keep seniority, home stresses (especially sick relatives and family demands), adjusting to a new shift and not getting enough sleep, and overall cumulative stress.

The two topics that were discussed most frequently were frustrations with administration and supervisors, and stressful calls for service, with administrative frustrations most frequently discussed. The topics that focused on administration were: frustration with administration over following procedures too closely and not allowing for officer autonomy to do their job as they were trained, nit-picking sergeants, frustration with procedures and having to wait for a sergeant's approval before proceeding with a duty, frustration over the perceived need for administrators to be trained in effective management, frustration over the "arbitrary" manner in which the department enforced or applied regulations, frustration over the perception of certain officers being treated as "golden children," frustration with supervisors who do not know how to do the job of those they are supervising, administration being governed by fear of litigation, inconsistent enforcement of the rules by administration, and lack of support and respect from administration. Each member found administration (sergeants and above) to be the most stressful part, and that working the streets and taking calls was actually a solace from this frustration. A number of officers agreed that the stress they experienced relative to administration was more stressful than their work as a police officer.

Stressful calls included people lying, a call with a mentally ill subject with no identification that lasted four hours, sex assault with a child, a major stabbing call, belligerent and immature prisoners, accompanying a belligerent juvenile to Utah, relentless calling by a crime victim, working an officer-involved shooting case, frustration with not being able to arrest someone masturbating in a public library.

frustration with calls to domestic disputes with young children or juveniles, frustration with criminals being bonded out and then calling officers to assist bondsmen, stress associated with getting a wrecker to a scene in less than one hour, a robbery, a car/foot chase, another officer shooting a criminal, worries about when to use deadly force, a custody case, and a child abuse case. A number of these themes mirrored the themes that emerged in the study by Doctor, Curtis, and Issacs (1994).

In a number of group meetings, teaching occurred from officer to officer, sometimes about decision making and coping, other times about how decisions/problems had been faced by others. This interaction seemed especially effective and helpful, and also built a sense of group cohesion. Overall, mutual support was a highlight of this group experience for those involved. As with Dyregov (1999), emotional support, normalization, catharsis, validation, facilitation of hope, providing reassurance and education were all experienced by the treatment group members. Jenkins (1996) noted the curative power of empathy, and Brat (1986) noted the curative power of social support; both occurred in the treatment groups.

Each treatment group included a peer officer who was trained in the CISM and CISD models. In the first meeting of each treatment group, the peer officer began the group rounds by answering the CISD questions. This served to break the ice, and as a model for the other officers. It may also have served to reduce the impact of having an outsider (the researcher) ask relatively personal questions.

The guidelines for the group meetings were reviewed in the first meeting and throughout the treatment phase of this study. The need for confidentiality was

emphasized. The need to follow the treatment protocol was not overtly discussed, but the group became familiar with the protocol through the leader consistently focusing on the questions from the protocol.

Discussion of the Results

The assumptions for the use of MANCOVA were met. The groups were of similar size, and were sampled from a wide variety of departments within the police department. The members of this population were primarily white males, and so was this sample. The participation of female and minority officers was representative of the sample population. The rank of the participants was proportionate to the make up of the sample population.

The treatment meetings were frequently attended by almost all of the members. There were only two out of the 20 treatment group members that attended fewer than four meetings. Because the sample size was small, the scores obtained from these two members may have influenced the overall results of this study, if their infrequent attendance is a confounding variable.

Every sample groups' mean scores on the BDI and IES-R decreased from pretest to posttest, except for the control condition from patrol on the BDI. The participants from the treatment condition had higher mean scores on the IES-R at pretest and posttest, when compared to the control conditions; the treatment groups began the study with higher IES-R mean scores. The treatment condition group from patrol had mean IES-R scores that decreased more than the control condition means. The investigators in the

treatment condition had mean scores that decreased about the same amount as the control condition's mean scores. These changes in scores were not statistically significant.

The trend of the treatment condition scores towards improvement can be seen in the treatment/control condition effect score; $F = 2.449$, $p = .104$. This trend is also seen in the treatment/control condition effect for the BDI scores; $F = 2.864$, $p = .101$. This trend is not apparent when one looks closely at the treatment effects by group (patrol and investigator).

The sample size used in this study was small. This may have contributed to a type II error. It is possible that the null hypothesis was rejected in error.

It seems that one group (patrol or investigator) responded differently than the other to the intervention. One reason for this may be some extraneous variables (environmental stressors) that may have affected patrol officers and investigators in different ways. The first of these events was a major terrorist threat in the city that called for every investigator to be called into service. This had never occurred before in this department's history. This may explain the difference in scores between the patrol and investigator groups, because the patrol group was not called into service to investigate this event.

The second event was an officer-involved shooting in which the suspect died. This incident was discussed in the group meetings. This shooting may have impacted some of the members of the investigator treatment group because these members were responsible for investigating the officers involved in the shooting. The members in the control group did not have this responsibility during this incident.

One other extraneous variable was the attention treatment group members received from peers and possibly from supervisors. The researcher was witness, on two occasions, to treatment condition participants being mildly teased about their participation, it is possible that this type or more harsh types of teasing may have occurred during the treatment phase and in turn affected the obtained results

The MANCOVA for the research condition showed $F = 2.899$, $p = .10$ for the avoidance subscale and $F = 2.237$, $p = .15$ for the intrusion subscale of the IES-R. This may be indicating a trend in the treatment groups towards being helped by the treatment, but was not statistically significant.

It is possible that the treatment phase of this study did not last long enough. Meeting more frequently during the week, for longer periods of time (longer than an hour), and/or for longer than eight weeks, may have caused these trends to become statistically significant. One argument against meeting more than once a week would be the low frequency of stressful events experienced by officers during a week.

The IES-R scores may not have been affected as much as the BDI scores because most of the events discussed in the group did not meet the DSM-IV criteria for PTSD. Most of the events discussed were "stressful" as opposed to traumatic. This may indicate that the use of the IES-R in this study was not appropriate, or that the IES-R was not sensitive enough to measure the effects of this treatment. The IES-R results may be typical of preventative treatments, or treatments that address cumulative stress, as opposed to critical incident stress. Depression and PTSD have some features in common, and depression "can either precede, follow, or emerge concurrently with the onset of

PTSD" (American Psychiatric Association, 2000, p. 465). It is possible that the BDI was a more appropriate measure of the effectiveness of this treatment intervention.

A number of officers mentioned that they found issues with administration to be "more stressful" than their work as a police officer. This theme was discussed most often during the meetings. In one meeting, an officer went so far as to report that attending briefings and "hassling" with supervisors was "more stress inducing than trying to subdue someone twice (my) size." The most energetic, animated, and heated discussion centered on frustrations and concerns with administration. Another illustration of the level of frustration is seen in the following story. During one group meeting, officers described the toughest part of their work during the past week and the theme of administrative frustration emerged again. While each officer talked, one officer was sliding his bottle of soda back and forth in front of him, agitated by the content of what was being shared. As this officer answered the question, his agitation grew. As his agitation grew he began to punctuate his statements by hitting his bottle on the table, crescendoing in energy until his bottle exploded and his soda sprayed across the ceiling and across the room. This in turn broke some of the tension in the room and members laughed heartily.

It is possible that critical incident stress and the stress associated with the performance of the duties of a police officer were not the appropriate outcomes to be measured. The intervention in this study may have been effective in reducing the stress associated with administrative frustrations, but not as effective in reducing levels of depression or Posttraumatic Stress Disorder symptoms. This stress may be very different than the stress that is measured by the IES-R. A measure of depression that focuses on

job-related stress may also suffice as a more sensitive measure. Other measures of job-related stress, job satisfaction, and interactions with administration may have been a more appropriate tool for measuring the effectiveness of this intervention.

The sensitivity of these measures may also be an issue. Many of the officers filled out these measures three times, and some of the questions were quite personal. A defensiveness scale within these measures may have improved the overall understanding of the obtained results.

The officers in this study viewed this intervention as helpful; they thought that it should be continued. It is possible that this intervention produced significant change in the participating officers, which was reflected in their perceptions of the intervention. The use of other measures may help in quantifying the effects of this intervention.

In summary, the attempt at measuring the phenomenon surrounding depression, PTSD symptoms, and the other extraneous variables affecting this study, may have been frustrated by the dynamic nature of these phenomenon and their effects on the individuals in this sample. The fact that some trends emerged in the data is remarkable given these circumstances.

All the officers involved in this study viewed this treatment as positive and helpful. Furthermore, all of these officers thought that this treatment should be continued in some form. These officers perceived some benefit to this treatment.

Integration of the Results

Some of the variables examined in this study were also examined in previous studies. These studies were reviewed in Chapter II. The findings in these previous studies will be compared with those of the current study.

Robinson, Sigman, and Wilson (1997) found that officers with over 11 years of experience in law enforcement experienced higher levels of stress. This finding was not supported by the data collected in this study. There was no significant difference in the scores of officers with less than 11 years of experience and those with more than eleven years in the current study.

A concern that some researchers have with using psychological debriefing is that debriefing may exacerbate PTSD symptoms. Depression symptoms, or other stress reactions. This concern was not supported by this study. The treatment condition EES-R and BDI scores decreased.

Some of the results obtained in this study (especially the lower BDI scores) may contribute to the body of research that supports the use of CISM and CISD. A number of studies that found CISD reduces use of sick leave, workers compensation, staff turnover, and experienced fewer PTSD symptoms (Brom, Kleber, & Hofman, 1993; Flannery, 1998; Flannery, Fulton, Tausch, & DeLoffi, 1991; Flannery, Hanson, & Penk, 1994; Flannery, Hanson, Penk, Flannery, & Gallagher, 1995; Hokanson, 1997; Leeman-Conley, 1990; Western Management Consultants, 1996). The measures of sick leave, workers compensation, and staff turnover would be excellent inclusions in future research.

A number of uncontrolled studies (Deahl, Eamshaw, & Jones; 1994; Dineen, Pentzien, & Moteczun, 1994; Feldman, & Bell, 1991; Hytten & Hasle, 1989; McWhirter & Linzer, 1994; Meehan, 1996; Robinson & Mitchell, 1995; Sloan, 1988; Smith, & de Chesnay, 1994; Stallard & Law, 1993; Turner, Thompson, & Rosser, 1993) and "comparison" studies (Bohl, 1991; Chemtob, Tomas, Law, & Cremmiter, 1997; Ersland, Weisaeth, & Sund, 1989; Jenkins, 1996; Nuraii, 1997; Wee, Mihs, & Koehler, 1993; Yule, 1992) examined the effectiveness of CISD. These studies found CISD to be viewed as "helpful" by the participants, to lower stress-related symptoms, to reduce overall distress and levels of anger, depression, anxiety, PTSD symptoms, and to lower IES scores. The findings of the current study may also be consistent with the findings in previous research that found CISD reduced stress-related symptoms and levels of depression, and participants view CISD as "helpful." A controlled study by Boreow and Poritt (1979) found debriefing to be helpful in reducing "psychological symptoms."

The IES-R scores of those in the treatment group in the current study are at odds with the finding in Griffiths and Watts (1992). They found that debriefed emergency responders had higher IES scores than a control group, this study found no statistical difference in IES-R scores.

Cariier, Voerman, and Gersons (2000) used a similar research design in their study. They found their treatment group to have better coping skills for dealing with traumatic events in the long-term. Their posttest occurred six months post-trauma, after the treatment had concluded. The participants in this study were satisfied with the

treatment intervention and also viewed it positively. A posttest in six months of the participants in the current study would be desirable.

Carter, Lamerts, and Gersons (1997) found that PTSD correlated with introversion, difficulty expressing feelings, and dissatisfaction or lack of social support. The current intervention provided this for officers, and may have been helpful in preventing PTSD and/or higher IES-R scores.

Haberfeld (2001) and Mullins (2001) made some recommendations for helping officers cope with the stresses associated with law enforcement. Habelfeld (2001) stressed the need for an appropriate setting for the expression of emotions. The difficulty of finding the right platform for this is compounded by the terms "support," "counseling," and "stress management" denoting weakness. Habelfeld recommends a required in-service for officers. This in-service should meet on a regular basis, one that fits the needs of the particular service and the work schedules of its members. These meetings should be organized by rank, and include someone who is willing to begin the expression component of the meetings. Open discussion and the offering of solutions should also be encouraged. Mullins (2001) stated that prevention of suicide related to PTSD is accomplished through training. Training officers, their families, managers, and administration about normal reactions to stress, and what to expect after a critical incident has ended, should be the primary goal of this type of training. Trained peer support programs are also instrumental in meeting the psychological needs of officers involved in critical incidents. Finally, Mullins recommends basic education about group processes because social support is a key component of stress-management and preventing suicide.

The need to prevent suicide among police officers is emphasized by Janik and Karvitz (1994) who found the reason cited for officer suicide in many cases was supervisors and administration being perceived as out of touch with patrol officers. This theme emerged in this study. These recommendations were applied to and found in the treatment employed in this study.

In their meta-analysis of articles measuring the effectiveness of CISD, Everly, Flannery, Eyer, & Mitchell (2001) found this intervention to have an effect size of $d = 1.0$, which is large. In the current study, the Partial Eta Squared for the between group (treatment and control) difference was $d = 0.145$. This is significantly lower than the application of CISD after traumatic events. This low Partial Eta Squared may be due, in part, to the application of CISD as a preventative measure. This number may also have been low because one treatment group may have responded differently to the treatment, and/or the IES-R scores were not affected as significantly as the BDI scores. It seems the most plausible explanation of the lack of statistical significance in the current study is due to administrative stressors being more prevalent and potent than incident-related stressors.

Contributions of the Study

As noted above, studies with a large sampling of police officers (that is not limited to questionnaires only) are rare, especially among officers in the United States. This study filled in the gaps in the literature, especially in light of so many "uncontrolled" studies, and increased and broadened the understanding of the CISM and CISD models.

This study was a controlled study and meets Every, Flannery, and Mitchell's lament that there are "no truly randomized controlled studies (where one group does not receive treatment) to date" (p. 32).

Studies examining the effects and prevention of accumulated stress levels are nearly absent from the literature. An excellent application of this study would be implementing this treatment model as part of a CISM model. The debriefing protocol used in this study founded in crisis theory and intervention. Debriefing is a preventative intervention used in crisis situations that focuses on those factors that have been found in previous research to lead to psychological distress and disorders. Other goals of debriefing are the reduction of the stress and tension associated with a crisis, cognitive restructuring of beliefs (e.g., the world is unsafe), fostering intellectual understanding of the relationship between current stress reactions and the crisis, catharsis, exploring coping strategies, fostering social support, crisis resolution, and restoring the individual to adaptive functioning or pre-crisis levels of functioning. These goals are the same goals of crisis intervention, all of which were accomplished in this study.

Limitations

The sample used in this study was drawn from a population of city police officers in a mid-western town with a population over 200,000. The department has fewer than 300 officers, and was primarily white Caucasian males. The findings of this study would most likely be generalizable to populations of police officers from similar police departments.

Another limitation of this study could have been the characteristics of volunteers. The willingness of these volunteers to participate and to make use of psychological services may influence the generalizability of findings. There were some officers who declined to participate even though they would have been compensated with overtime pay or would have received an hour off of work. This may indicate a difference between those who participated and those who did not.

This study would be enhanced if it had been possible to accomplish random sampling. The constraints of the treatment protocol, the available sample, and the time constraints of those involved made random sampling of the available participants impossible. Random sampling did occur with a few of the participants, but this was not sufficient.

Recommendations for Future Research

Another posttest, a longer treatment intervention (12 weeks), and a larger sample (N) may all add to the understanding of the effect this treatment intervention has on BDI, IES-R and cumulative stress levels overall. The addition of measures of sick leave, workers compensation, and staff turnover would be excellent inclusions in future research. It may also be beneficial to include other measures to help control from extraneous variables (e.g., personality variables and circumstantial variables), and which may be more appropriate in measuring the effects of this treatment on cumulative stress levels. Continued pursuit of ways to measure and affect the levels of Depression, PTSD,

and other stressors on law enforcement personnel is necessary in order to meet the needs of those individuals who choose to put on a uniform and serve and protect the public.

The measures used in this study may not have been sensitive enough or appropriate for measuring the effects of a preventative intervention, or an intervention that addresses the officer's level of stress associated with their supervisors and administrators. Throughout the intervention frustration and anger about the interactions, performance, and expectations of supervisors were expressed. Measures that assess changes in officers' level of frustration and anger, as it relates to administration-induced stress, would have been helpful and appropriate given the topics discussed in the group meetings. This would be an excellent area to examine in future research.

In addition to measures of frustration and anger, tests that quantify job-related stress and job satisfaction may also enhance the understanding of the impact of this treatment intervention. It is possible that officers were more satisfied with their work because of their participation in the in-service meetings. It would have been helpful to gather this data during this research endeavor.

The qualitative data obtained in this study indicated that the treatment condition participants found the in-service to be helpful. Future research may benefit from a combination of qualitative and quantitative investigations. The qualitative component (e.g., structured interviews) may help in pinpointing the reasons officers find administration-related stress to be more stressful than their work as a police officer.

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APPENDIX A

THE IMPACT OF EVENTS SCALE-REVISED

Below is a list of difficulties people sometimes have after stressful life events.

Please read each item, and then indicate how distressing each difficulty has been for you

DURING THE PAST TWO WEEKS with respect to calls you've responded to as a

police officer, how much were you distressed or bothered by these difficulties?

	Not at all	A little bit	Moderately	Quite a bit	Extremely
Any reminder brought back feelings about it	0	1	2	3	4
I had trouble staying asleep	0	1	2	3	4
Other things kept making me think about it	0	1	2	3	4
I felt irritable and angry	0	1	2	3	4
I avoided letting myself get upset when I thought about it or was reminded of it	0	1	2	3	4
I thought about it when I didn't mean to	0	1	2	3	4
I felt as if it hadn't happened or wasn't real	0	1	2	3	4
I stayed away from reminders about it	0	1	2	3	4
{Pictures about it popped into my mind	0	1	2	3	4
I was jumpy and easily startled	0	1	2	3	4
I tried not to think about it	0	1	2	3	4

APPENDIX C

SOCIAL READJUSTMENT RATING SCALE

Read each item and check each item you have experienced within the last year.

_____	Death of a child or spouse.	119
_____	Divorce.	98
_____	Death of a close family member.	92
_____	Marital separation.	79
_____	Fired from work.	79
_____	Major personal injury or illness.	77
_____	Jail term.	75
_____	Death of a close friend.	70
_____	Pregnancy.	66
_____	Major business readjustment.	62
_____	Foreclosure on a mortgage or loan.	61
_____	Gain of a new family member.	57
_____	Marital reconciliation.	57
_____	Change in health or behavior of a family member.	56
_____	Change in financial state.	56
_____	Retirement.	
_____	Change to different line of work.	51
_____	Change in number of arguments with spouse.	51
_____	Marriage.	50

Spouse begins or ends work.	46
Sexual difficulties.	45
Child leaving home.	44
Mortgage or loan greater than \$ 10,000.	44
Change in responsibilities at work.	43
Change in living conditions.	42
Change in residence.	42
Begin or end school.	3g
Trouble with in-laws.	3g
Outstanding personal achievement.	37
Change in work hours or conditions.	35
Change in schools.	35
Christmas.	30
Trouble with boss.	29
Change in recreation.	29
Mortgage or loan less than \$10,000.	28
Change in personal habits.	27
Change in eating habits.	27
Change in social activities.	27
Change in number of family get-togethers.	26
Vacation.	25
Change in church activities.	22
Minor violations of the law.	22

APPENDIX D

DEMOGRAPHIC QUESTIONS

Please answer each of the following questions.

1. Please write in your randomly assigned identification number.
2. What is your age? ____
3. What is your rank? ____
4. How long have you been a police officer? ____
5. How many stress debriefings have you been to in the past? ____
6. What shift and/or department do you work in? _____
7. How many work hours do you average in a week? ____
- * 8. How many psychological debriefings have you been to in the past?
- ** 9. Did you find the in-service meetings to be helpful? ____

Please explain your answer:

** 10. Should these types of meetings be continued?

Please explain your answer:

11. Do you believe the department is supportive of you as an officer?

Please explain your answer:

Check each of the following that best describes you.

___Caucasian (White)_____Male

___Black (African American)_____Female

___Hispanic

___Asian

___Other

* Pretest Only

** Treatment Group Only

APPENDIX E

INFORMED CONSENT

By signing below, you are agreeing to participate in a new in-service program. The purpose of this program is to aid officers in dealing with the stress associated with law enforcement. You will be asked to fill out some questionnaires (approximately 50 short questions and a checklist) before and after the in-service in order to determine if the in-service was helpful and should be continued.

Only half of those who volunteer will be selected for the in-service. Those who are not selected will be asked to fill out the questionnaires now, and again in eight weeks. Those who are not selected for the in-service and are interested in participating will be offered the in-service in eight weeks when they fill out the questionnaires again.

The in-service will consist of eight, one-hour meetings over a two-month period. These meetings will occur in groups of approximately seven officers (no larger than 10 officers), of similar rank, who have similar job descriptions (day shift, narcotics), with one group leader (Andy Young). An officer who is trained in the in-service will also participate in the group meetings. The purpose of these meetings is to reduce work-related stress by answering specific questions about stressful events experienced while at work. Officers will be asked to describe the stressful event, talk about what they thought after the event was over, describe the worst part of the event, and discuss how they have been affected by the event. Officers will then be given information about how to cope with stress.

The helpfulness of the in-service will be assessed using the information gathered in the questionnaire packets. This information and research will be used to complete the requirements for a doctoral degree and may be published. All information gathered in the questionnaires will be kept confidential. Participants will be assigned a random number, and only the group leader (Andy Young) will have access to the list that matches the random number to a name. This list will be destroyed once the in-services have been completed and the second questionnaire packet has been filled out. Andy Young will be the only person with access to the questionnaire packets. During the in-service the list of names and corresponding random number will be kept in a secure location in a locked file cabinet. The questionnaire packets will ask general demographic questions (e.g. age), questions about experiencing symptoms of Depression and Posttraumatic Stress Disorder, and a checklist of stressful life events will be included.

The content of the group meetings will also be protected as much as possible, but cannot be guaranteed because other members could break the group rules of confidentiality. Participants risk social embarrassment, rank or employment problems, and other difficulties depending on what is shared during the group meetings and what is shared outside of group if confidentiality is broken. Group members may experience increased distress or psychological symptoms as a result of reviewing stressful or traumatic experiences. Disclosure of felonious activities is subject to departmental rules governing the conduct of police officers. Disclosure of thoughts or actions pertaining to harm to self or others cannot be kept confidential and warrant the involvement of appropriate individuals and must be addressed by the group leader. If a participant is

APPENDIX F

THE CISD PROGRESSION

Critical Incident Stress Debriefing, as developed by Mitchell (Mitchell and Everly, 1995) contains seven phases. Below are the prompts used in this model. Each member will have the opportunity to answer each question.

- (C) **Introduction** (5 Minutes) CISD team members introduce themselves, define expectations, set limits, and address confidentiality. See appendix H for specific issues and guidelines addressed in the first session.
- (C) **Fact Phase** (10 Minutes) Prompt: "Tell us who you are and what happened." Or "Describe the event from your perspective."
- (C-E) **Thought Phase** (5-10 Minutes) Prompt: "When you had a chance to 'think' about the incident, what were your first thoughts?" Usually participants recount the first thought they had once the event was over and they had a chance to reflect (i.e. "I can't believe I just went through that.")
- (E) **Reaction Phase** (5-10 Minutes) Prompts: "What was the worst part of this incident for you?" or "Is there any part that you wish you could erase?" Usually participants are able to quickly and concisely define and recount the worst part (i.e. seeing a child in the hospital alone).

(E-C) **Symptom Phase** Prompts: "How are you different now because of the incident?" and "What physical or behavioral changes have you experienced?" or "What has life been like since this event?" Physical symptoms described, cognitive interpretations discussed.

(C) **Teaching Phase**
(10 Minutes) After soliciting input from the group members, CISD team members teach basic concepts of trauma and trauma management. The goal is to normalize most reactions and give helpful hints to aid recovery. See appendix 1 for specific information given during this phase.

(C) **Re-Entry Phase**
(5-10 Minutes) CISD team members facilitate closure by emphasizing normalization and answering questions, but the most valuable component of the re-entry is the use of summarization to achieve a sense of closure to the event. Cognitive reframing should be encouraged, eg, the identification of positive aspects of the incident (lessons learned, silver lining, etc.).**

(C) Cognitive

(E) Emotional

** If group members experience significant distress or impairment after the group meeting, they will be approached by the group leader and proper steps will be taken to ensure the safety of the participants and the public. These steps may include referral to a

mental health professional or contact of a supervisor to advise him or her of the participant's condition. (See appendix H).

APPENDIX G

SUICIDE ASSESSMENT AND PROTOCOL

If an individual indicates a threat of suicide, the following questions will be asked in order to determine the level of risk and appropriate response. A "No Harm Contract" may be used if appropriate. If the participant is at risk for suicide, that individual will be immediately referred for evaluation by a mental health professional, probably through the local emergency room. The investigator has a Licensed Professional Counselor (LPC) temporary license and receives weekly supervision from a LPC supervisor. This supervisor will be available by phone at all hours for consultation as needed.

No Harm Contract

Date: _____

Time of Contract:

Printed name of person agreeing to contract:

1. I, _____, (____) (initials) agree not to harm myself in any way.
2. I also agree not to harm any other person. (____) (initials)
3. I agree to remove all objects from my immediate access that I could use to harm myself in any way, or to immediately harm any other person in any way. (____) (initials)

4. If at any time I should feel unable to resist the impulse to hurt myself or another person, I agree to call the numbers listed below until I reach someone and state my intentions of bringing immediate help to myself or another person: () (initials)

^^TMA" _____ . Phone Number: _____

Name: _____

Phone Number:

Name:

Phone Number:

Lubbock MHMR crisis line. 740-1414

Contact Lubbock (24hr. hotline). 765-8393

Local law enforcement. 911

5.1 agree to keep my appointment at _____ on _____ (date) with

6. Other actions I agree to take:

Signature:

Witness:

Witness:

Suicide Risk Assessment Questions

1. What type of thoughts are you having about hurting yourself?
2. What is the one thing that could happen to you that would push you to actually hurt yourself?

If #1 and #2 are denied, risk is low. If not, the following will be asked:

3. How bad do you think you would hurt yourself?
4. Exactly how would you do it?
5. How will you get what you need to hurt yourself?
6. How will you do it without anybody knowing (or do you expect someone to find you)?
7. Have you thought about when you would actually do it?
8. What things have you given (or plan to give) away?
9. Who will get your suicide note? Have you written one?
10. What have you told your family about your plans to die?
11. What things do you have to get in order before you die?
12. How will hurting yourself affect anybody else?
13. How do your religious beliefs prevent you from harming yourself?
14. What would have to happen to keep you from hurting yourself?
15. Is there anything else that you want to tell me about your suicide thoughts or plans?
16. What have you done to harm yourself in the past?

Giles, C (1997). "Structured Clinical Interview for Suicide Risk."

APPENDIX H

GROUP MEETING GUIDELINES

The following information will be covered in the first meeting and members will be asked to sign this form.

1. Group members are to respect each other's rights to confidentiality. What is said during the group meetings stays in the group. There are exceptions to this rule: if a member is a danger to themselves or others, if a member discloses criminal activity, or if a member discloses information about the abuse or neglect of an elderly person, a disabled person, or a child. If this information is disclosed, the proper authorities or mental health professionals will be notified.
2. Group time will be spent processing stressful events that occurred during work through the use of specific questions. Group time will be based on a psychoeducational approach that assists in the prevention of stress-related problems. Members have the right to attend group and not participate. Members who consistently deviate from the topics at hand while participating will be asked to leave the group. When appropriate, referral information about more appropriate settings (e.g. private counseling) for discussing personal issues will be provided.
3. Group members who experience significant distress or impairment after the weekly group meetings, or after the in-service has concluded, will be approached by the group leader and proper steps will be taken to ensure the safety of participants and the public. These steps may include referral to a mental health professional (i.e. for private

counseling) or contact of a supervisor to advise him or her of the participant's condition. When a referral is necessary, and depending on the circumstances, the group leader will either provide the participant with a list of three qualified counselors, provide necessary crisis counseling (which may include the information in Appendix G) and then assist the individual in making an appointment with a counselor, or accompany the participant to the local emergency room for evaluation. Group members may request referrals for counseling at any time.

4. Group members are free to discontinue meeting with the group at any time. If they desire a referral for counseling, support groups, etc. at that time, it will be given. It is requested that members address any concerns about group before they leave. If a member leaves their spot in the group will not be filled.

I have read, understand and agree to follow these guidelines: _____

Date:

APPENDIX I

OFFER TO CONTROL GROUP FOR TREATMENT

This IS the final questionnaire, please fill it out and return it to Mary McGuire. If you would rather return it directly to me, feel free to email me: andy.young@glcu.edu, or call: 720-7830 and I'll arrange a time to pick it up from you.

If you did not participate in the group meetings and would like to, please check below and fill in your name and a way for me to contact you.

___ I would like the opportunity to participate in the group meetings.

Name:

Contact Number:

Thank you for your help,
Andy Young

APPENDIX J

THE TEACHING PHASE

In each session of the treatment phase participants will be educated about stress, stress reactions, and ways to cope with stress. The following information will be presented.

Common Signs and Signals of a Stress Reaction:

Physical	Cognitive	Emotional	Behavioral
Chills	Confusion	Fear	Withdrawal
Thirst	Nightmares	Guilt	Antisocial acts
Fatigue	Uncertainty	Grief	Inability to rest
Nausea	Hyper-vigilance	Panic	Intensified pacing
Fainting	Suspiciousness	Denial	Erratic movements
Twitches	Intrusive images	Anxiety	Change in social activity
Vomiting	Blaming someone	Agitation	Change in speech patterns
Dizziness	Poor problem solving	Inability	Loss or increase of appetite
Weakness	Poor abstract thinking	Depression	Hyper alert to environment
Chest pain	Poor attention/ decisions	Intense anger	Increased alcohol consumption
Headaches	Poor concentration/ memory	Apprehension	Change in usual communications
Elevated	Disorientation of time, place or person	Emotional shock	Etc.
BP	Difficulty identifying objects or people	Emotional outbursts	
Rapid heart rate	Heightened or lowered alertness	Feeling overwhelmed	
Muscle tremors	Increased or decreased awareness of surroundings	Loss of emotional control	
Shock symptoms	Etc.	Inappropriate emotional response	
Grinding of teeth		Etc.	
Visual Difficulties			
Profuse sweating			
Difficulty breathing			
Etc.			

Things to Try:

WITHIN THE FIRST 24-48 HOURS periods of appropriate physical exercise, alternated with relaxation will alleviate some of the physical reactions.

Structure your time - keep busy.

You're normal and having normal reactions - don't label yourself crazy.

Talk to people - talk is the most healing medicine.

Be aware of *numbing* the pain with overuse of drugs or alcohol, you don't need to complicate this with a substance abuse problem.

Reach out - people do care.

Maintain as normal a schedule as possible.

Spend time with others.

Help your co-workers as much as possible by sharing feelings and checking out how they are doing.

Give yourself permission to feel rotten and share your feeling with others.

Keep a journal. Write your way through those sleepless hours.

Do things that feel good to you.

Realize those around you are under stress.

Don't make any big life changes.

Do make as many daily decisions as possible, which will give you a feeling of control over your life, i.e., if someone asks you what you want to eat - answer him even if you're not sure.

Get plenty of rest.

Reoccurring thoughts, dreams or flashbacks are normal - don't try to fight them, they'll decrease over time and become less painful.

Eat well-balanced and regular meals (even if you don't feel like it).

FOR FAMILY MEMBERS & FRIENDS

Listen carefully.

Spend time with the traumatized person.

Offer your assistance and a listening ear if they have not asked for help.

Reassure them that they are safe.

Help them with everyday tasks like cleaning, cooking, caring for the family, minding children.

Give them some private time.

Don't take their anger or other feelings personally.

Don't tell them that they are "lucky it wasn't worse" - traumatized people are not consoled by those statements. Instead, tell them that you are sorry such an event has occurred and you want to understand and assist them.