Predicting Work Stress Burnout in Rural and Urban Emergency Medical Technicians Through the Use of Early Recollections

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PREDICTING WORK STRESS BURNOUT IN RURAL AND URBAN EMERGENCY MEDICAL TECHNICIANS THROUGH THE USE OF EARLY RECOLLECTIONS

A Dissertation
Presented in Partial Fulfillment of the Requirements for the Degree Doctor of Philosophy

by
Susan M. Vettor
June 2002
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ABSTRACT

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by

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Problem

Literature on work-stress burnout among emergency medical technicians (EMTs) suggests that they have maintained the same levels of burnout and attrition rates for the past 20 years. The purpose of this study was to investigate the relationship between early recollections and burnout in EMTs working in urban and rural locations.

Method

A demographic questionnaire, the Staff Burnout Scale for Health Professionals (SBS-HP), and two early recollections, were used to survey 120 emergency medical technicians in Toronto, Ontario and Mojave County, Arizona to assess their level of burnout and to identify various themes in early recollections.
Results

The results from the analysis of the data from general demographic information, the SBS-HP, and the early recollections indicated that urban EMTs experienced higher levels of burnout than rural EMTs. No significant findings were found to correlate with any of the eight early recollection themes to global burnout levels, or the four sub-scales of the SBS-HP.

Conclusions

As a result of the study the following conclusion was drawn: that EMTs who work in urban areas experience higher levels of burnout than those EMTs in rural areas.
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CHAPTER I

INTRODUCTION

Background

The early 21st century is a time when prehospital emergency care has become a vital part of the health-care system. As a result there has been an increase in the demands and responsibilities placed on those individuals providing emergency medical services.

Emergency medical technicians (EMTs) experience high stress levels daily and are very susceptible to burnout. EMTs do not work in well-equipped hospitals, and must deal with working in less than sterile conditions. They must make do in their immediate environment and, in some instances, in the presence of physical danger. Oftentimes they are called to work in hostile situations where their personal safety is at risk in combination with darkness, adverse weather conditions, difficult terrain, and unpredictable dangers magnifying the pressure (Linton, Kommor, & Webb, 1993; Miller, 1995). Their job performance is often scrutinized by bystanders and the traumatized relatives of their patients (Cydulka et al., 1989).

EMTs face daily exposure to human tragedy and chronic stressors such as dealing with injury, mutilation, and death. Mitchell (1984) reported that EMTs identified the following situations as being the most stressful: death (especially of children), injured or battered children, gory sights and sounds, unnecessary calls, drug abuse patients, high-rise fires with threat to human life, mass casualties, and threats to their own health and life. The nature of a paramedic’s job demands they remain calm and unemotional in the face of life-threatening emergencies (Huder, 1987). Added to these environmental...
stressors is the constant pressure for them to perform competently. They often perceive that the public takes advantage of them by calling them to perform routine nonemergency services (Cydulka et al., 1989; Mitchell, 1984). Decreases in overall work performance have also been reported for EMTs, including inaccurate diagnosis, deficiencies in relational skills, and a tendency to trivialize the complaints of patients (Hammer, Mathews, Lyons, & Johnson, 1986). When faced constantly with such precarious situations, EMTs over time and experience develop a "thick skinned" approach to providing treatment to their patients. Palmer (1983) stated that, in an effort to protect themselves, paramedics develop numerous coping skills to assist them in dealing with the more gruesome aspects of death and dying. These include educational desensitization, humor, language alternation, scientific fragmentation, escape into work, and rationalization (Palmer, 1983). These coping mechanisms allow EMTs to continue to concentrate on treating patients whose lives they can save.

The stress that paramedics undergo is not only limited to what they experience in the field, but is also compounded by the regular monotonous routine of paperwork, lack of administrative support, low wages, long hours, irregular shifts, and attitudes of hospital personnel and law enforcement officials (Boudreaux, Mandry, & Brantley, 1998; Grigsby & McKnew, 1988; Spitzer & Neely, 1992). Previous research regarding occupational stress and paramedics has indicated that administrative and operational characteristics of emergency medical service (EMS) organizations are important determinants of paramedic occupational stress (Allison, Whitley, Revicki, & Landis, 1987; Beaton & Murphy, 1993; Graham, 1981; Mitchell, 1984). Without any systematic training or education on how to deal with potential conflict with hospital personnel or police officers, EMTs use defensive mechanisms consistent with their personalities (Graham, 1981). One of the frustrations they face daily is their position at the bottom of the medical hierarchy. The most experienced professional EMT is required to request
permission to perform the simplest of procedures from someone with far less experience in the delivery of emergency medical services outside a hospital emergency room (Hawks & Hammond, 1990).

Increased levels of stress and burnout can result in high job turnover rates, increased absenteeism, and low morale (Maslach, 1976; Maslach & Jackson, 1981; Maslach & Pines, 1978). EMTs are reported to have the highest mean burnout score observed among health professionals (Grigsby & McKnew, 1988). McHenry (1989) reported a growing awareness among both EMS leaders and public officials that the shortage of EMS personnel is nearing a crisis due to the high turnover rate. Although EMS agencies are aware of the high level of attrition among their EMT employees, they continue to pay only minimum wage and often require overtime work (Graham, 1981; Hawks & Hammond, 1990). The average length of the professional EMT career is less than 4 years (Beaton & Murphy, 1993; Graham, 1981; Huder, 1987; Mitchell, 1984), with approximately 40% of trained individuals leaving after 2 to 5 years (Graham, 1981; Hawks & Hammond, 1990; Huder, 1987).

Another drawback EMTs face is low pay. A contributing factor to this pay scale is the result of training that is relatively short, inexpensive and easy to obtain, and where a large pool of eager applicants is available. In most areas there is an ample supply of EMTs to replace those who choose to leave the field, although some areas are experiencing shortages of capable EMTs (Hawks & Hammond, 1990). Cydulka, Emerman, Shade, and Kubincanek (1997) found that new personnel are more stressed than seasoned veterans. Stress levels tend to decrease as persons become more familiar with the demands of their job; however, the downside to remaining on the job for a long period of time may be the fact that older EMTs become “hardened” or cynical, having more negative attitudes towards patients (Cydulka et al., 1997).
The current concern is that an accumulation of stress by constantly being bombarded by these horrific incidents may lead to burnout, and ultimately may result in the deterioration of the quality of care provided by EMTs to the public. This impairment of professional performance in crisis situations not only endangers the patient, but it can also impact fellow workers, family members, and ultimately the entire community.

Stress reduction in the workplace is becoming important as society moves into an era of reduced health care costs based on improved preventive care (Weiss, Silady, & Roes, 1996). Emergency medical service organizations need to accept responsibility in addressing the varying stress levels among their employees. EMTs need to begin to accept responsibility for learning proper stress management techniques to cope with stressors.

**Statement of the Problem**

The decade of the 1980s was a very prosperous time for conducting research in the area of occupational stress in EMTs (Allison et al., 1987; Cydulka et al., 1989). For a profession which has been operating in its existing form since the early 70’s (Palmer, 1989), burnout among EMTs appears to have been a persistent problem in the United States since its beginnings.

Despite the current awareness that work-stress burnout is a leading problem with the high attrition rates of EMTs (Graham, 1981; Hawks & Hammond, 1990; Herbison, Rando, Plante, & Mitchell, 1984; McHenry, 1989), EMS organizations have not been able to address the issue of global burnout among EMTs. One area which has been addressed is the development of psychological debriefing or critical incident stress management, a form of crisis intervention originally developed for use with groups of emergency workers (Dyregrov, 1989; Mitchell, 1983). A critical incident stress management team provides pre-education, on-site support, and post-critical incident
interventions to distressed emergency providers in situations which may produce symptoms of post-traumatic stress disorder such as disasters and situations with multicasualties (Hopkins, 1995). This new intervention model was developed in 1983 and plays an important role as EMS proceeds into the 21st century (Hopkins, 1995). The model of the critical incident stress management program could be used as a valuable resource when working with EMTs who are experiencing burnout not related to a critical incident. Few of the studies conducted with EMTs on work-stress burnout have addressed early detection of burnout or a constant monitoring of EMT’s level of burnout.

One of the problems with using burnout scales with perspective and practicing EMTs is that they can attempt to “fake good” on the scale in an effort to make themselves appear acceptable. Using early recollections as a projective technique minimizes the possibility of “faking good.” This would seem to necessitate a study that would investigate the relationship between early recollection themes and burnout.

**Importance of the Study**

It is known that an accumulation of stress can lead to burnout, resulting in the deterioration of the quality of care provided. Because a high percentage of paramedics experience burnout at some point in time during their career, there is an increasing sense of panic in the emergency medical services field. Grevin (1996) suggested a need to improve understanding of the relationship between personality traits and burnout of paramedics in order to design better counseling interventions and prevention activities. Research that can identify possible individuals who may be experiencing burnout early on is greatly needed.

A better understanding of personality traits and the needs of paramedics who are experiencing burnout would allow for emergency medical service organizations to develop support services for high-risk EMTs. This program would hopefully aim to
identify EMTs before they developed the major symptoms of burnout that could lead to inefficient care for the general public. This plan would also enable emergency medical service organizations to meet the needs of high risk paramedics and, through early intervention, provide counseling and education to the individual. This study hopes to contribute to this knowledge.

**Purpose of the Study**

The purpose of this study was to determine what themes in early recollections were related to both urban and rural EMT's susceptibility to burnout. This would allow for employers/counselors to identify those individuals experiencing burnout or heading towards burnout and permit the development of prevention and intervention strategies to target the EMT.

**Hypotheses**

Hypothesis 1. There is a significant relationship between the presence of various themes within the early recollections of EMTs and burnout.

Hypothesis 2. There is a significant relationship between the presence of various themes within the early recollections of EMTs and the four subscales of the Staff Burnout Scale for Health Professionals.

Hypothesis 3. There is a significant difference between burnout levels of EMTs in rural or urban locations of employment.

**Rationale**

If EMS could identify paramedics who are likely to experience burnout, they could save their organizations significant amounts of money in the areas of training, personnel management, sick leave, employee replacement costs, substitutes to cover shift, absenteeism, and employee medical costs.
Theoretical Framework

Adler was the first to use an individual's earliest memory as a standard diagnostic tool. He stated that “every expression will lead us in the same direction, toward the one motive, the one theme around which his/her personality is built” (Adler, 1998, p. 57). Adlerians believe that all the characteristics of individuals, and their whole personality, are developed by the attitudes they adopt toward their environment in early childhood (Dreikurs, 1989). Therefore, every memory, however trivial the individual may think it is, is important as it represents to that individual something memorable, and it is memorable because of its bearing on life as that individual pictures it (Adler, 1931). Memories can never run counter to one's lifestyle (Adler, 1998). The experience itself as described in the memory is not as important as the fact that this particular experience persists in memory and is used to crystallize the meaning ascribed to life (Adler, 1931). Out of the thousands of incidents in our early childhood we recall only those most relevant to our present situation (Mosak, 1972). These memories are remembered consciously or unconsciously as a form of justification of a line of conduct which is being pursued (Dreikurs, 1989). If a person is faced by a difficult situation, an individual will remember incidents where they have either conquered or failed previous difficult situations. If an individual is depressed, their memories will tend to be sad. In the same way, if a person is happy, their recollections will confirm his/her happiness. Adlerians believe that early recollections are thumbnail sketches of how an individual operates within the world at any given time. These memories are useful in understanding the circumstances in which a particular individual first formulated his/her attitude toward life, as well as aids in determining how long an individual has had a particular approach to life (Adler, 1931).

Adler used the following themes as a teaching device to describe the attitude and
behavior of individuals to their problems: the ruling type, the getting type, the avoiding type, and the socially useful type (Adler. 1956, 1979). The first three types are described by Adler (1956, 1979) as lacking in social interest, the ability for cooperation, and contribution. The fourth type is seen as having social interest, as the individual is prepared for cooperation and contribution (Adler. 1956, 1979). Mosak (1977) expanded these four initial types to eight types: getter, controller, driver, pleaser, martyr/victim, "ginner," feeling avoider, and excitement seeker. Adler (1956, 1979) and Mosak (1977) both stress that an individual cannot be characterized solely by one typology but may be a mix of several different types. Adler (1979) goes on to state that "each individual has a different meaning of, and attitude toward what constitutes success. Therefore, a human being cannot be typified or classified" (p. 68).

**Delimitations**

Data collection was limited to EMTs working in Toronto, Ontario, and Mojave County, Arizona.

**Limitations**

1. The number of EMTs included in the research sample was limited to those who completed the surveys, questionnaires, and reported at least two early recollections.

2. The EMTs in this sample may not be comparable to EMTs at other EMS organizations. There may be differences between the paramedics in Toronto, Mojave County, Arizona, and other cities due to culture, years on the job, and personal characteristics.

3. Some of the conclusions drawn from the Toronto EMT sample may not be applicable to EMTs working in rural areas.

4. Some of the conclusions drawn about EMTs in Mojave County may not be applicable to EMTs working in urban areas.
5. The instruments used to gather the data may limit the conclusions of this study. Self-report burnout measures are subject to distortion. Some EMTs may have intentionally or unintentionally minimized or exaggerated their responses. Different personality types may be more or less prone to minimize or maximize their responses on questionnaires.

**Definition of Terms**

_Aginner:_ People who oppose everything life demands or expects of them. These people rarely possess a positive program in which they stand for something. They only know they are against the wishes or policies of others. They may behave passively, not openly opposing, but merely circumventing the demands of others.

_Basic Mistake:_ Unconscious value assumptions about what is right, proper, and necessary in our lives. They are learned early in life, and influence our expectations and goal behavior.

_Burnout:_ A syndrome of emotional exhaustion, depersonalization of others, and a feeling of reduced personal accomplishment.

_Controlers:_ People who wish to control life or who wish to ensure that life will not control them. These individuals generally dislike surprises, control their spontaneity, and hide their feelings since all of these may lessen their control. As substitutes they favor intellectualization, rightness, orderliness, and neatness. With godlike striving for perfection, they depreciate others.

_Critical Incident:_ Any incident with an emotional impact of such force that it can overwhelm the normal person’s usual ability to cope.

_Dissociation:_ Compartmentalization of experience in which elements of a traumatic experience are stored in memory as isolated fragments rather than as an integrated whole. This splitting of consciousness may occur at the time the traumatic
event is happening or subsequently in the form of fragmentary recall or intrusive recollections of elements of the trauma that lack a narrative coherence.

_Drivers_: People in motion. Their overconscientiousness and dedication to their goals rarely permits them to rest. They act as if they want to have “it” (whatever it may be) completed on the day they die. Underneath they nurse a fear that they are nothing, and their overt-over ambitious behavior is counterphobic.

_Early Recollections_: A specific, one-time incident that one remembers from one’s childhood and one can picture in the mind’s eye.

_Excitement Seekers_: People who despise routine and repetitive activities, seek novel experiences, and revel in commotion. When life becomes dull, they stimulate or provoke it in order to create excitement. They require the presence of other people and often place themselves in league with others on whom they can rely to assist them in search for excitement.

_Feeling Avoiders_: People who avoid feelings may fear their own spontaneity which may move them in directions for which they have not preplanned. They hold the conviction that humans are rational beings and that reason can solve all problems. They lack social presence and feel comfortable only in situations where intellectual expression is prized. Their most valued techniques are logic, rationalization, intellectualization, and talking a good game.

_Getters_: People who exploit and manipulate life and others by actively or passively putting others into their service. They tend to view life as unfair for denying them that to which they feel entitled. They may employ charm, shyness, temper, or intimidation as methods of operation. They are insatiable in their getting.

_Life-Style_: The meanings individuals ascribe to the world and to themselves, their goals, the direction of their strivings, and the way they approach the problems of life.

_Martyrs_: Similar to victims, martyrs also suffer, but whereas victims merely
"die." the martyrs "die" for a cause or for principles. Their goal is the attainment of nobility, and their vocation is that of "injustice collectors." Some martyrs advertise their suffering to an unconcerned audience, thus accusing them of further injustice; others enhance their nobility by silently enduring and suffering.

*Peritraumatic Dissociation:* The acute dissociative response at the time of critical incident exposure.

*Pleasers:* People who need to be liked feel required to please everyone all the time. These individuals are particularly sensitive to criticism, feeling crushed when they do not receive universal and constant approval. They train themselves to read other people carefully in order to discover what might please them and shift from position to position in an attempt to please. They see the evaluations of others as the yardsticks of their worth.

*Social Interest:* The high degree of cooperation and social culture which individuals need for their very existence. It is an innate potential which is first developed within the relationship of the child and the primary caretaker.

*Victims:* People who innocently or actively pursue the vocation of disaster chasers. Associated characteristics may be feelings of nobility, self-pity, resignation, or being prone to accidents. They are people who may seek the sympathy or pity of others.

**Organization of the Study**

The study will follow the following pattern:

Chapter 1 presents the background of the study, the statement of the problem, the hypotheses, the importance of the study, purpose of the study, rationale, theoretical framework, delimitations and limitations of the study, definition of terms, and the organization of the study.

Chapter 2 focuses on the literature review relevant to the trends in research on
burnout, early recollections, emergency medical technicians, and other research findings.

Chapter 3 discusses the methods that will be used to carry out the research and data analysis, including the population, the instrumentation, and the procedures followed. The null hypotheses are stated and the statistical design described.

Chapter 4 presents the data findings and analysis of the study. It will give a brief overview of the study, the methods used, and then conclude with a presentation of the results with reference to the formulated null hypotheses.

Chapter 5 discusses the summary, conclusions, and recommendations based on the results of the study. It will be based on three major sections. The first section summarizes the problem and purpose of the study, the literature review, the methodology, and the findings. The second section discusses the findings in relation to previous literature and seeks to draw conclusions. The final section includes recommendations for practice and further research.
CHAPTER 2

REVIEW OF THE LITERATURE

Literature relevant to the study is reviewed in two sections: first, a review of the literature relevant to burnout, sources of burnout, effects of burnout, occupational stress in rural and urban EMTs, and post-traumatic stress disorder is presented. Second, a review of the literature relevant to early recollections is presented.

**Burnout**

Maslach and Jackson (1981) have described burnout as consisting of three components. The first component involves increased feelings of emotional exhaustion. Individuals in the helping professions are particularly susceptible to burnout and emotional exhaustion. They may develop negative, cynical attitudes and feelings toward their patients. As their emotional resources are depleted, they are no longer able to be as supportive as they need to be to be effective. This emotional exhaustion occurs as a result of excessive psychological and emotional demands made on them as they attempt to provide therapeutic services to patients (Jackson, Schwab, & Schuler, 1986). The second component of burnout involves the tendency to deindividuate and depersonalize patients (Jackson et al., 1986; Maslach, 1976). Depersonalization is used in order to minimize the intense emotional arousal that could affect the performance of the helping professional in crisis situations. A third component of burnout is the tendency for the helping professional to evaluate themselves negatively when assessing their work with patients (Maslach & Jackson, 1981).
Sources of Burnout

Grigsby and McKnew (1988) indicated an alarmingly high work-stress burnout rate among paramedics, using eight independent predictors of burnout. Of these eight predictors the three predictors which contributed highly to an individual’s level of burnout were: negative relations with coworkers, general job dissatisfaction, and physical threat. From this they composed a profile of a typical “burned out” paramedic. Their typical “burned out” paramedic was one who was above average in age (over 31 years), considered the work environment unpleasant, the job demands physically threatening, and the paperwork load excessive, had problems with coworkers, and viewed the requirement for periodic recertification as a threat to his/her livelihood.

In an attempt to understand the high turnover rates of EMTs, Neale (1991) studied the affect and attitudes of 103 EMTs. Data indicated that the areas of dissatisfaction among EMTs included: low pay, the lack of comfortable quarters, the inadequacy of equipment to meet the health care needs of patients, administrator’s unfamiliarity with the work-related demands, stressors faced by EMTS, and the risk of developing health problems such as back injuries and contracting contagious diseases. The study also showed that a majority of EMTs believed that they were treated poorly by the public, fire fighters, and emergency department personnel. Data also indicated that the average length of time that EMTs had planned to stay on their present jobs was around 5 years. Those with higher burnout scores planned to remain only 1 to 3 years longer.

Beaton and Murphy (1993) analyzed the various sources of job-related stress in emergency service workers. Data were collected from 1,730 firefighter/EMTs, and 253 firefighter/paramedics. Factor analysis indicated 14 categories which significantly contributed to on-the-job stress: sleep disturbance, wages, management conflict, personal safety apprehension, substandard equipment, job skills concerns, family/financial strain,
past incidents, conflict with coworkers, poor health habits, conveying tragedy to victim’s families, tedium, second job stress, and discrimination.

In a study of patient care as a source of stress, Boudreaux, Jones, Mandry, and Brantley (1996) found that the number and intensity of EMT calls was a critical factor in daily stress among EMTs, both on workdays and post-workdays, where the stress EMTs face at work may influence their home stress. Evidence was also found that the stress paramedics experience on the day before work may influence their perception of their patients.

To test the physiological effects of stress, Weiss et al. (1996) measured the cardiovascular changes of EMTs along with risk factors, tobacco, and caffeine use. These data were examined in conjunction with the effects of demographics, lifestyle, and work characteristics on burnout of EMTs to evaluate the effect of a shift in daily overall health status. Cardiovascular variables were measured once before a shift and again within 30 minutes after a shift. When changes in blood pressure and pulse were measured over the course of each shift, a significant decrease in pulse changes was found during pre-shift to post-shift with single people, EMT-Intermediates, night workers, and those younger than age 32. Data analysis indicated little variation in stress between EMTs suggesting that an intensive intervention program for the management of heart rate was not needed.

Effects of Burnout

Research was conducted by Jamner, Shapiro, Goldstein, and Hug (1991). Their findings suggested that EMTs reported higher levels of stress, alertness, and frustration and lower levels of happiness and pleasantness while on runs as compared to being at the station. Complementing these results Goldstein, Jamner, and Shapiro (1992) found that paramedics felt more unhappiness, stress, and sadness and fewer feelings of pleasantness
at work than they felt at home.

Hammer et al. (1986) studied how stress factors affected paramedics, job performance as compared to hospital employees. Using a sample of 374 paramedics and 216 general hospital employees, they found that paramedics experienced a much higher level of stress than did hospital employees. It was also found that paramedics were more likely to express their negative feelings verbally or in action (i.e., arguing, physical and verbal encounters with patients) rather than suppressing them, whereas hospital employees were less likely to express their stress, instead, suppressing it and becoming physically ill.

Cydulka et al. (1997) examined the stress levels of EMS personnel across the United States. They surveyed the entire membership of the National Association of Emergency Medical Technicians. They found that both men and women exhibited similar stress levels. Data indicated that personnel over the age of 35 demonstrated more negative attitudes towards patients, and exhibited more somatic complaints than their younger counterparts.

A study by Weiss, Marmar, Metzler, and Ronfeldt (1995) attempted to determine whether factors that have traditionally reported to predict stress in emergency medical services personnel were also factors predictive of stress when working in major disasters. The researchers studied individuals from various emergency medical services: police, firefighters, paramedics, and highway department workers. A replication was performed in two groups: those who worked the I-880 freeway collapse, and EMS personnel in the San Francisco and San Diego areas. Data collected were in response to a specific incident. For the first group it was the I-880 freeway collapse. In the latter groups each worker selected a critical incident that was the most distressing for him or her. Data analysis indicated that the levels of symptomatic distress were positively related to the degree of exposure to the critical incident. It was also found that lower levels of
psychological adjustment were associated with higher levels of symptomatic distress. A finding which also emerged from this study was that the relationship between measures of dissociative experiences and the measures of symptomatic distress remained even after the effects of exposure, adjustment, and other measures were statistically controlled.

**Occupational Stress in Urban and Rural EMTs**

In a study to understand how EMT-paramedics manifest stress differently, Cydulka et al. (1989) studied 280 EMT-paramedics, rank, job description, and area of the city served. The authors reported that in comparison to the Hammer et al. (1986) study, the total stress levels of EMT-paramedics had not changed significantly. The study by Cydulka et al. (1989) showed that EMT-paramedics expressed more negative behaviors toward patients, made more critical errors in patient care, called in sick more, and abused alcohol and drugs more. The authors believed that contributions to this increase in negative behavior were due to increasing age, increasing years working as an EMT, experiencing recent significant life events, working in areas serving a disproportionate number of violent trauma cases, and attending a large number of non-emergency calls.

Research conducted on the negative affect of rural EMTs was conducted by Revicki, Whitely, Landis, and Allison (1988). They suggested that there was a direct relationship between perceived occupational stress and mental health. They found that EMTs who reported high levels of job stress and negative job characteristics, poor supervision, and high role ambiguity, reported higher levels of depression.

A study by Whitely, Revicki, Allison, & Landis (1988) attempted to determine information regarding work-stress experienced by EMTs serving in rural areas. With questionnaires focusing on demographic variables such as age, sex, race, education, and primary occupation. EMTs were also given work related demographic information such as certification level, years of experience at current level, and if they were paid or
volunteer workers. In addition, subjects were also given the Health Professional Stresses Inventory (HPSI) to measure work-related stress. The HPSI is an 18-item, four-point Likert scale, of which the total scale score represented a global assessment of perceived work related stress. The study determined that EMTs who serve in rural areas appear to be similar to those in urban areas. Factors relating to work-related stress included administrative and operational aspects of their jobs. Data also alluded that EMTs who relate to their supervisors favorably, and have a clear understanding of their job responsibilities are less likely to report high levels of work-stress burnout. It was also found that scores EMTs received on the stress and depression scales of the HPSI did not necessarily suggest that EMTs experience extreme levels of stress and depression. Correlations of those scores did indicate that EMTs who experience higher levels of stress also report higher levels of depression, and vice versa.

**Post-Traumatic Stress Disorder**

EMTs have higher levels of exposure than civilian victims to the experiences that are implicated in the development of PTSD and other post-trauma psychological difficulties (Weiss et al., 1995). The characteristic symptoms of Post-Traumatic Stress Disorder (PTSD) include (1) re-experiencing a traumatic event, (2) avoidance of stimuli associated with the trauma and numbing of responsiveness to the external world, and (3) other autonomic, dysphoric, or cognitive reactions indicative of increased arousal. These symptoms can result from participating in or witnessing a psychologically distressing event such as seeing someone seriously injured or killed (American Psychiatric Association. 1994).

Symptoms which are indicative of distress that could lead to PTSD in paramedics include (1) persistent fatigue, increased negativity, increased cynicism, diminished job motivation, (2) increasingly hair-trigger emotions such as anger, frustration, and
Irritability, (3) chronic but minor health problems, (4) headaches or backaches unrelated to injury, (5) tightness in major muscle groups, (6) clenched jaw or fists, (7) sleep irregularities, (8) inability to feel refreshed, regardless of how much you sleep, (9) feeling chronically overwhelmed and/or relentlessly pressured, (10) diminished motivation for things you once found interesting, (11) overindulging consistently (food, caffeine, nicotine, drugs, and/or alcohol), (12) crying easily, (13) feelings of hopelessness or helplessness, (14) diminished ability to concentrate, (15) sensing that routines have turned into ruts, and (16) sense of isolation or withdrawal from your world (Democoeur, 1989). More severe symptoms include (1) outright substance abuse, (2) clinical distress, (3) feelings of persecution, (4) feelings of paranoia, and (5) suicidal feelings (Democoeur, 1989).

Paramedics are constantly at risk for developing symptoms of PTSD because of their exposure to traumatic stressors, such as natural disasters, car accidents, and fires. Research on the effects of disasters has usually focused on the immediate victim of the disaster (Fullerton, McCarroll, Ursano, & Wright, 1992). Rescue workers are also exposed to both the stress of the event itself and the stress of their role as a help provider (Raphael, 1986). Of greatest concern in the development of PTSD is the powerful stress response that occurs after a critical incident, that has the potential to overwhelm the paramedic (Linton et al., 1993). Critical incidents that have the potential to overwhelm paramedics include: major disasters, the death of a fellow paramedic in the line of duty, the injury of a fellow paramedic while trying to provide emergency services, the suicide of a fellow worker, familiarity with treatment victims, and contact with dead or severely injured children (Linton et al., 1993). PTSD can lead to implications for both the mental health of paramedics and for the care that they provide to their patients (Grevin, 1996).

Many times those who assist in providing emergency services may be affected by the catastrophic disaster themselves (Raphael, Singh, Bradbury, & Lambert, 1983-1984).
Impairment of professional performance in crisis situations not only endangers the patient, but it can also impact fellow workers, family members, and ultimately the entire community.

In an effort to understand strategies and their effectiveness for coping with post-disaster effects, Durham, McCammon, and Allison (1985) studied the presence and extent of post-traumatic stress disorder in workers dealing with disasters, in terms of loss of life and physical injury, in order to study strategies. Questionnaires were distributed 5 months after an apartment explosion to those emergency medical service personnel who participated in the extraction and treatment of victims. They found that workers on the scene were more likely to report post-traumatic symptoms than were the hospital-based helpers. Seventy percent of the professionals involved in the event experienced intrusive, repetitive thoughts about the disaster. Forty-four percent of subjects reported feelings of sadness related to the explosion and its aftermath. Fifteen percent of the subjects reported intrusive dreams about the disaster, some feelings of depression, and a sense of disturbance when exposed to press coverage of the event.

Understanding the impact of traumatic events on rescue workers is vital for training and educational purposes, as well as for providing psychological assistance. Fullerton et al. (1992) investigated the psychological responses of fire fighters to traumatic stress. Researchers used two groups of fire fighters to study the similarities. The first group of fire fighters participating was a mass casualty air disaster rescue unit from Sioux City, Iowa. The second group of fire fighters was a rescue missions unit from New York City. Data from debriefing groups indicated four characteristic responses to incidents: identification with the victims and the dead, feelings of helplessness and guilt (malfuctioning equipment, difficulty in finding victims), fear of the unknown (not knowing what they will find in a rescue attempt), and physiological reactions (nightmares, insomnia, physical exhaustion, triggering odors). Data from the debriefing

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groups also indicated four methods of stress mediation: social support (working with a partner), type of leadership (leaders modeling appropriate behavior), level of training (recalling training exercises), and rituals (treating the deceased victims).

Adults exposed to trauma may experience immediate dissociative responses at the time of exposure to the traumatic incident. Dissociative responses may include feelings of detachment, derealization, depersonalization, and out-of-body experiences (Spiegel & Cardena, 1991). Just as dissociation may protect victims from the fully conscious realization of the terror, helplessness, and panic of their situation, it may also aid emergency medical services personnel to focus on patients without the distraction of the environment during critical incidents. Support for the role of dissociation in its contribution to PTSD has been found in recent studies. Marmar, Weiss, Metzler, and Delucchi (1996) attempted to identify characteristics related to peritraumatic dissociation (dissociation at the time of a critical incident), including individual differences in vulnerability and resilience to dissociation at the time of exposure to the trauma. Rescue workers who were shy, inhibited, uncertain about their identity, or reluctant to take leadership roles, who had global cognitive styles, who believed their fate was determined by factors beyond their control, and who coped with critical incident trauma by emotional suppression and wishful thinking were at higher risk for acute dissociative responses to trauma and PTSD.

**Personality and Burnout**

McFarlane (1989) studied predisposing, precipitating, and perpetuating factors of post-traumatic stress disorder with firefighters to determine whether the severity of the trauma or the pre-morbid psychological vulnerability of the person involved was the most important factor. McFarlane studied the relative importance of the impact of the disaster, personality, and ways of coping as determinants of the morbidity of
post-traumatic stress disorder. He found that the severity of exposure to the disaster and the losses sustained were not major determinants of post-traumatic morbidity, but played a significant role in the immediate post-traumatic morbidity experience, because no major symptoms of post-traumatic stress disorder were detectable after 29 months. A history of past adversity, a previous personal or family history of psychiatric problems, and a tendency to avoid thinking about the event were all predictive of post-traumatic morbidity.

Piedmont (1993) studied the role of personal dispositions in burnout, suggesting that burnout may also reflect enduring qualities of the individual. Using a longitudinal study, Piedmont found strong correlations between burnout scores (Maslach Burnout Inventory) and measures of the five factors of the NEO-PI: Neuroticism, extraversion, openness to experience, agreeableness, and conscientiousness. This study revealed that personality plays an important role in the experience of job-related distress. Those individuals who were anxious, depressed, and unable to deal with stressors were the same individuals who experienced emotional exhaustion and depersonalization both at work and in their lives away from work.

Grevin (1996) studied the coping mechanisms and personality characteristics of paramedics. Using the Minnesota Multiphasic Personality Inventory (MMPI-2), Grevin found that individuals who choose to become paramedics may tend to share characteristics predisposing them to particular types of stress reactions. Because the post-traumatic stress disorder scale (PK) score is not related to years of experience for experienced paramedics, it was suggested that personality traits may be more of a factor in the development of PTSD in paramedics than the inherent stressors of being a paramedic, with paramedics scoring significantly higher on denial and repression as compared to normative samples, and low on regression and empathy.
Palmer and Spaid (1996) studied the associations between certain personality characteristics and burnout. Using instruments measuring authoritarianism, burnout, inner-directedness versus other-directedness, and sensation seeking, they found that certain personality characteristics were associated with burnout. Emergency medical technicians who were authoritarian and bored tended to experience burnout more often.

**Life-Style**

The life-style, or personality, is a cognitive blueprint of a person’s unique and individually created convictions, goals, and personal beliefs (Adler, 1982). Shulman and Mosak (1988) described the development of the life-style by a simple trial and error process. Children try to organize their world in an attempt to cope with it. They develop conclusions regarding their subjective experiences, which may through time become reinforced, altered, or discarded. Eventually, these conclusions become rules/convictions which permit the child to relate to the world in a less chaotic way. The development of a life-style is highly influenced by the family system. The sheer repetition of family transactions which are enacted thousands of times in daily family life has a powerful long-term effect on individuals (Teyber, 1997). These developing convictions may be true, partially true, or false. False convictions are called “basic mistakes.” “Basic mistakes” give individuals a distorted approach to life. Children view these subjective experiences “as if” they were objective realities, because their judgment and logical processes are not yet fully developed. Through these convictions children develop a life-style which will aid them in coping with the world. Adler (1956) stated that as long as a person is in a favorable situation, it is difficult to see his or her style of life clearly. However, in new situations where he/she is confronted with difficulties, the style of life appears clearly and distinctly.
Early Recollections

Early recollections were thought by Adler to be of special significance since they showed the origin of the life-style in a simple manner (Adler, 1958, 1998; Shulman & Mosak, 1988). Early recollections are those single incidents from childhood which the individual is able to reconstitute in present experience as mental pictures or as focused sensory memories. They are understood dynamically; the act of re-collecting and re-membering is a present activity, the historical accuracy of which is irrelevant (Adler, 1956; Shulman & Mosak, 1988). Over time memories evolve from fact to alterations of perceived events. In looking at early memories it is expected that those which are to be collected will not be recordings of actual events, but those which the individual perceives to have occurred in the past (Shulman & Mosak, 1988). All memories contain omissions and distortions; the individual colors and distorts, emphasizes and omits, exaggerates and minimizes in accordance with his/her inner needs (Mosak, 1958). Earliest recollections are actually interpretations of earliest experiences; they are the subjective picture of an individual's immediate environment as the prototype of the whole outside world as that individual perceives it (Kadis & Lazarsfeld, 1948).

Whether memory is a product of these selective evaluative processes, or actual reconstructions, there is evidence to suggest that it may be used as a projective technique to identify the mistaken goals or beliefs of the client (Kadis, Greene, & Freedman, 1952; Lieberman, 1957). Dinkmeyer, Pew, and Dinkmeyer (1979) hypothesized that if early recollections were projective material, the counselee could be asked to make one up or invent one so that the life-style and mistaken goals could still be assessed. An issue related to this and a concern for Adlerian counselors are individuals who insist that they are able to remember very little if anything from their childhood. Oftentimes this inability to recall early childhood recollections may be a product of non-compliance.
Although based on Adler’s theory of unity of the personality, the directive to “make up” an early recollection has seemed justified, as many Adlerians believe it would be impossible for a person to create a memory inconsistent with their life-style (Barker & Bitter, 1992). Paulk-Buchanan, Kern, and Bell-Dumas (1991) set out to test Dinkmeyer et al.’s (1979) hypothesis that an individual’s created early recollections would be similar in manifest content to his or her actual early recollections. Data indicated that when a client is unable to recall early recollections, it may be possible that a portion of the client’s life style and basic beliefs may be accessible through the use of created early recollections.

Additional research was conducted by Barker and Bitter (1992). Their study compared the interpretive value of the projective qualities in early recollections and created memory to determine whether created memories produced similar interpretive data, and whether these data were reflective of an individual’s personality. Results indicated that there was little relationship between levels of social interest projected in early recollections and created memories. Created memories tended to project higher social interest. This may indicate the desire of subjects to augment their social interest. The authors suggested caution when substituting an interpretation of created memories when individuals are unable to generate personal early recollections.

**Stability of Early Recollections**

In a study to examine the repeat reliability of early recollections, Winthrop (1958) collected the earliest recollections of 69 students. Eight weeks later, Winthrop collected a second sample of earliest memories from the same subjects. When comparing the two sets of early recollections, he found that three subjects had remembered entirely different recollections. He also found that 19 of the reported early memories showed some variability.
Hedvig (1962) tested the stability of early recollections under varying circumstances by manipulating two variables: (1) experiences with circumstances of success, failure, or neutral experience, and (2) circumstances where the administrator exhibited hostility, friendliness, or neutral experience. By comparing these results to those obtained from the Thematic Apperception Test (TAT) stories collected under the same conditions, data indicated that the early recollections were found to have greater stability than the TAT.

An additional aspect of the use of early recollections is the notion that early recollections may be used to track the progress of therapy. The content of early recollections taken at two separate times may be entirely different as new sets of recollections may be remembered. Previously recalled memories may be modified with additional information or information left out. The subjective feeling of that memory may also change in time. Eckstein (1976) evaluated the changes in early recollections in one individual after a period of 9 months. Using the Early Recollections Rating Scale (ERRS) to measure the early recollections, Eckstein found that the content of early recollections appeared to change significantly in a positive direction as a result of long-term therapy.

The theory that early recollections may be useful in assessing therapeutic outcome was studied by Saville and Eckstein (1987). They investigated whether early recollections change as mental status changes. Data were collected from hospitalized subjects at the time of their admission and again at the time of their discharge. Subjects were given an early-recollections questionnaire and ERRS for the collection and rating of early recollections. The NOSIE-30 and the Zung Self-Rating Depression Scale were used to assess mental status in the experimental group. The results of this study indicated that early recollections can and do change for many persons. Data indicated that: (1)
Early recollections tended to shift in direction to include more social interest as patients were discharged. (2) the mental status and early recollections of the control group did not change significantly, suggesting that mental status is relatively stable in normal populations, and (3) there was a significant difference between the experimental and control groups on the pre-measures. An interesting note to this finding was that the inpatient group showed scores that were not significantly different from healthy normals upon their discharge.

**Early Recollections and Personality Characteristics**

The Individual Psychology of Alfred Adler provides a holistic and systemic framework from which to investigate the interplay between personality and stress-coping resources (Kern, Gfroerer, Summers, Curlette, & Matheny, 1996). Fleishman (1984) found significant relationships between personality characteristics and coping patterns. This led to the assumption that one’s personality type may dictate one’s coping mechanisms. Adler (1937) asserted that early recollections revealed important aspects of the individual’s personality, their perceptions of the world, and a way of dealing with their perception of the world. It is believed that early memories are retained because of a selective factor in memory, and that this selective factor is not repression but rather consistency with the individual’s attitudinal frame of reference (Mosak, 1958). It is also believed that these early recollections mirror an individual’s presently held convictions, evaluations, attitudes, and biases (Dreikurs, 1973). Memory is highly selective. Early recollections are selected from a vast number of experiences because they contain adaptively useful information (Adler, 1969; Shulman & Mosak, 1988). Therefore, the retention of these incidents is not based on random occurrences and chance, but is based on past experiences concurrently manifesting the present situation and the individual’s specific approach to life (Fakouri & Zucker, 1987).
Dreikurs (1989) stated that the earliest memories of childhood were in line with a person’s basic and characteristic attitude. He believed that each individual attempts to justify his/her attitude by looking back to those experiences. Furthermore, Dreikurs stated that all memories serve to justify a definite line of conduct which is being pursued, that the human being is constantly drawing on his/her memories for fresh strength to persist in a course once chosen. For Adlerians the person’s earliest memory is especially significant as it is believed to offer an instant view of the individual’s fundamental attitude(s). It offers us an opportunity to see at one glance what that individual has taken as the starting point for his/her development.

Mosak (1968) proposed that the symptoms of an individual’s neurosis were interrelated through central life-style themes. Using the central themes which included getters, controllers, drivers, pleasers, martyrs/victims, “aginners,” feeling avoiders, and excitement seekers, he was able to develop a theory which could account for shifting of symptoms of clients. This theory was based on the content of early recollections of individuals with varying diagnostic neuroses. An individual with a paranoid personality would have early recollections which would contain themes of a controller, pleaser, martyr/victim, and “aginner.” In another example, an individual with hypochondriasis would have early recollections which would contain themes of martyr/victim and excitement seeker.

Barrett (1980) assessed how useful the early recollection was as a quick multi-purpose personality measure. Barrett asked 50 subjects to record a detailed description of what was believed to be their earliest childhood recollection. Early recollections were scored using three personality traits: anxiety, need-approval, and internal-external locus of control. Personality traits of each recollection were also scored according to the standard scale of the Manifest Anxiety Scale (MAS), the Marlowe-Crowne Social Desirability Scale, and the Adult Norwiki-Strickland Internal-External Scale (ANSIE).
Correlations of ER ratings to the MAS, ANSIE, and Marlowe-Crowne scores for males were .38, .39, and .43 respectively. These correlations suggested that the use of the first early recollection reflected general personality traits. These correlations, however, were not strong enough to substitute the early recollection for a standard diagnostic test.

Caruso and Spirrison (1994) studied the relationship between early childhood memories and personality traits and coping variables, using the early memory relationship scoring system (EMRSS) to predict attachment style, mood, and clinical symptomatology in conjunction with the MMPI-2. Their research showed evidence of a relationship between early recollections and personality functioning and coping abilities. They found that the amount of activity within an early memory was predictive of a subject's emotional stability. They also found that nonpathological personality traits had significant relationships with early recollections.

Kern et al. (1996) examined the relationship between personality styles and coping resources. The Basic Adlerian Scales for Interpersonal Success-Adult Form (BASIS-A) was used to analyze the individual's early recollections. The Coping Resources Inventory for Stress (CRIS) was used to measure stress-coping resources. They found that perceptions of early childhood experiences were related to the ability to cope with stress. People who felt that they fit into a group as a child and saw their family of origin as comfortable and accepting, tended to have more social support resources as adults. Conversely, people who saw their family environment as unpredictable, unfair, or dangerous tended to lack social support as a coping resource.

**Early Recollections as a Projective Technique**

Chaplin and Orlofsky (1991) examined the validity of early recollections as a projective device. They compared the early recollections of men with a history of alcohol abuse with early recollections from a comparable group of non-alcoholic men.
Subjects included veterans who were inpatients in an alcoholism treatment program and veterans from service organizations. Subjects in the control group were screened for alcoholism by the Short Michigan Alcoholism Screening Test (SMAST). The Manaster-Perryman Manifest Content Early Recollection Scoring Manual and the EMRSS were used to score and interpret the early memories of early recollections of the alcoholics and non-alcoholics. In addition to these tests the Social Interest Scale (SIS), the Nowicki-Strickland Locus of Control Scale for Adults (ANSIE), and the Rosenberg Self-Esteem Scale (RSE) were given. They found support for the use of early recollections as a projective technique capable of revealing personality traits thought to characterize alcoholics. The early recollections of alcoholics reflected less social interest, a more external locus of control, greater passivity, more negative affect, a more negative self-concept, and a lower level of psychosocial maturity. This finding supported the viability of early recollections as a projective technique. Data also indicated changes in the locus of control of alcoholics when memories were collected at the beginning and end of their treatment program. The second finding supported the idea of a shift in the content of early recollections taken from an individual at separate times. These selectively recalled incidents were remembered because they were consistent with an individual's psychological state at the time they were recalled.

A study by Fowler, Hilsenroth, and Handler (1995) investigated the value of specific queries in eliciting early memories. These direct queries (i.e., feeling of being content) for specific recollections are believed to allow for projective material. The purpose of the study was threefold: (1) to present this set of theoretically derived queries relevant to object relations theory and clinical practice, (2) to assess the projective viability of these queries, and (3) to present case vignettes that support their clinical utility.

The study selected subjects based on clinical and non-clinical groups. The
The clinical group was taken from a university-based psychological clinic, where staff were presented with instructions for the collection of early memories. The clinical group was comprised of 29 individuals who in addition to the eight early memories also had a completed a Rorschach and an MMPI-2. The non-clinical group was comprised of 32 undergraduate psychology students.

Scales used from the Rorschach included the Mutuality of Autonomy scale and the primary and secondary process manifestations of aggression obtained from the Holt scale. The Mutuality of Autonomy scale was chosen because it is based on the belief that a patient’s portrayal of relationships between animate and inanimate objects on the Rorschach would correspond to the patient’s experience and definition of human relationships. The Holt scale was used because it differentiates between primary and secondary levels of aggression. The primary level is a form of primitive, murderous, and sadomasochistic aggression, whereas the secondary level is nonlethal form of hostility and aggression that is expressed in socially acceptable ways. Scales used on the MMPI-2 included the Ego Strength scale and the Anger scale. The Ego Strength scale was used as a measure of adaptability, resiliency, reality testing, feelings of personal adequacy, and effective functioning. The Anger scale was used to assess the presence of anger control problems. Early memories were scored using the Social Cognition and Object Relations scale. Particular attention was paid to the Affect Tone scale and the Complexity of Representations scale. The Affect Tone scale assessed the affective coloring of narrative data along a continuum of malevolence to benevolence. The Complexity of Representations scale measured the extent to which the patient clearly differentiates the self from others.

The results showed that comparisons between clinical and nonclinical early memories demonstrated significant differences. The memories of the clinical group contained more negative affect, accompanied by victimization, compared with the
memories of the nonclinical group. Data indicated that patients with poor differentiation of self and other, as manifested in the Rorschach, would exhibit the same pattern in their early memories. Data also indicated a significant correlation between the complexity of the Representations scale and the Mutuality of Autonomy scale scores. This supported the hypothesis that patients with poor differentiation of self and other as manifested in the Rorschach would exhibit the same pattern in their early memories. It was also found that Affect Tone scores for the early memories were correlated with the Anger scale of the MMPI-2. In addition to these findings, a strong correlation was found between Ego Strength and mean Affect Tone. Research related to the third purpose of this study showed that important themes embedded in early memories emerge in the transference relationship, and that the therapist can use the data from the early recollections to aid treatment by connecting an individual’s past and present forms of relating.

Additional research by Fowler, Hilsenroth, and Handler (1996) studied whether there were significant differences in their ability to differentiate clinical patients’ early memories from those of nonclinical subjects when using interpersonal and written methods of collecting early memories. They found that using a written method of collecting early memories could lead to erroneous or misguided interpretations as subjects could possibly use their freedom and time to select less troubling and conflict-laden memories. Results of the study supported interpersonal influences on projective data. In this study the interview method proved to be the superior method of collecting early-memories data, as it more clearly differentiated clinical from nonclinical subjects.

Using Early Recollections for Diagnostic Purposes

To test the theory that current patterns of coping with problems in life are related to what is selectively recalled about childhood, Jackson and Sechrest (1962) examined the relationship between early recollections and various diagnoses. Their study contained
several hypotheses: (1) early recollections of individuals with an anxiety disorder would contain themes of fear, (2) early recollections of individuals with depressive disorders would contain themes of abandonment, (3) early recollections of individuals with obsessive-compulsive disorders would contain themes of strong prohibitions, and (4) early recollections of individuals with gastro-intestinal disorders would contain themes of gastro-intestinal distress. Data were collected from a total of 77 subjects, 20 with anxiety disorders, 20 with depressive disorders, 20 with obsessive-compulsive disorders, and 17 with gastro-intestinal disorders. A control group composed of 40 students was also studied. Results indicated that, more than in the other groups, the early recollections of individuals with anxiety disorders were characterized by themes of fear, the early recollections of individuals with depressive disorders were characterized by themes of abandonment, and the early recollections of individuals with gastro-intestinal disorders were characterized by themes of gastro-intestinal distress. It was also found that themes of sex were more frequent among the obsessive-compulsive group, and themes of illness, accidents, and trauma were more common among those with anxiety disorders, gastro-intestinal disorders, and those in the control group.

Wolfman and Friedman (1964) studied the relationship between patients' symptoms and their early memories. Early memories were taken from seven impotent males who had sought counseling. In addition to this group, early recollections were taken from a control group of eight male outpatients who did not report impotence as a symptom. Data indicated a significant relationship between the symptom of impotence and the recollection of leg injuries. Seven of the eight impotent males' early recollections contained references to injuries or dysfunctions of the legs. None of the control group members' recollections contained any references to the legs.

To determine whether there was a relationship between early recollections, present life-style, and future goals and aspirations, Hafner and Fakouri (1978) studied a
group of hospitalized patients. Data were collected from 119 patients who were admitted to an acute psychiatric inpatient unit. After each patient was admitted, they were given a 1 hour interview by a psychologist. To determine their present life-style, patients were asked. “What problems brought about your need for treatment?” A second question dealt with the patient’s future plans, “What would you do if you were well and free of this problem?” Patients were also asked the additional question of “Is there anything else I need to know in order to help you?” This question provided an opportunity for the patient to freely add information to help clarify his or her prior statements. Two early recollections were obtained from each patient.

The results of the study showed that of the 119 patient interviews, a total of 118 incidents of early recollections, crisis, and future plans were identified. Of the 118 incidents, 68 related the early childhood recollections to present crises, 33 related the present crisis to stated future plans, and 17 related the early recollections to stated future plans. These data indicated a stronger relationship between memories of the past and the present crises than between present crises and future plans or between past memories and future plans.

In an attempt to understand whether early recollections could be used for differential diagnosis, Hafner, Corotto, and Fakouri (1980) investigated the manifest content of early recollections of individuals diagnosed with varying categories of schizophrenia. Subjects participating in this study included hospitalized individuals of which: 30 were diagnosed as chronic undifferentiated type, 30 were diagnosed as paranoid, and 30 were diagnosed as schizoid-affective type. Two early recollections were taken from each subject. Data indicated that the themes of early recollections were significantly different ($X^2 = 22.08, p < .05$). Paranoid schizophrenics more frequently reported new situations in their themes, while the chronic undifferentiated type exhibited
the lowest proportion of "new situation" themes. This finding supported the view that paranoid schizophrenics are more sensitive than nonparanoid schizophrenics to new and novel stimuli.

Fakouri, Hartung, and Hafner (1985) compared the early recollections of a group of depressed individuals and "normals" to determine the differences between the two groups. A total of 50 subjects were used in this study. Twenty-five of these subjects were patients diagnosed as having an adjustment disorder with depressed mood and were in treatment for depression at a mental health center. The "normal" control group consisted of 25 individuals who had never been in treatment for psychological problems. Two early recollections were obtained from each subject. The Manaster-Perryman Manifest Content Early Recollection scoring system was used in the scoring and analysis of the content of each recollection. The scoring system contains seven clusters: characters, themes, concern with detail, settings, active/passive, internal/external control, and affect. Data indicated four clusters where the two groups were significantly different. In the character cluster, depressed individuals reported significantly more references to group activities than did the normal group. The themes cluster indicated that depressed individuals recalled significantly more anxiety-provoking or threatening situations in their memories than did the control group. In addition, the depressed group had significantly more negative themes than did the normal group. In the control cluster, the normal group had significantly more recollections that suggested internal control than did the depressed individuals. Finally, in the cluster concerned with affect, the depressed group recalled significantly more incidents with negative affect than did the normal group.

A study by Hyer, Woods, and Boudewyns (1989) studied the phenomenology of early recollections among Vietnam veterans with PTSD. Their study attempted to find the personality correlates of early recollections among this group of veterans. Subjects
for this study included 60 male inpatients at a Veterans Administration Medical Center who had been diagnosed as having post-traumatic stress disorder. As part of the testing, subjects completed the MCMI and MMPI, and were able to give two of their earliest childhood recollections. The early recollections were scored using three methods: (1) according to goals identified by Kadis et al. (1952), (2) according to the Early Recollection Rating Scale (ERRS), and (3) using the Manaster-Perryman Manifest Content Early Recollection Scale. Results of the study suggested that the early recollections of Vietnam veterans with PTSD reflected less social interest. These veterans often pursued goals in a more "devious" social manner and pursued more negative outcomes and themes, especially in regard to trauma. A second finding suggested that early recollections were related to long-term personality styles only in a small way. These early recollections appeared to have an independent relationship to personality style as measured by the personality scales.

In an effort to study current mood states as retrieval cues for the selection and recall of early childhood memories, Acklin, Sauer, Alexander, and Dugoni (1989) attempted to predict depression using earliest childhood memories. Data were collected from 212 student volunteers who completed the Beck Depression Inventory (BDI), the Profile of Mood States, and recollection of their earliest childhood memory. The results of this study indicated that early recollections may be reliably used to distinguish depressed from nondepressed subjects, therefore, confirming the theory of mood dependent recall.

In a similar study, Allers, White, and Hombuckle (1990) studied early recollections to detect depression in the elderly. Fifteen senior citizens ranging in age from 66 to 91 were randomly selected and interviewed. All subjects were asked to complete a BDI as well as asked to recall three early childhood memories. Early recollections were analyzed by using the Manaster-Perryman Manifest Content Early
Recollection Scoring Manual. Data indicated a significant positive correlation between BDI scores and (1) passivity, (2) external locus of control, and (3) negative affect in reported early recollections.

A study by Williams and Manaster (1990) studied the personality characteristics of anorexics, bulimics, and bulimic anorexics. This study examined the perceptions that these three groups have of their role in life: passive or active, in control or controlled by others. Using early recollections and responses to the TAT, the authors investigated the way that these individuals viewed themselves and the world. Subjects for this study included 55 females of which 9 were anorexics, 6 were bulimic anorexics, 10 were bulimics, and 30 subjects were in the control group. Subjects in the three eating disorder groups were recruited from inpatient/outpatient treatment facilities. Subjects in the control group were university students. Subjects were asked to recall three of their earliest childhood memories in addition to giving responses to TAT cards. The Manaster-Perryman Manifest Content Early Recollection Scoring Manual was used to evaluate manifest content. The TAT was also scored using several items from the Manaster-Perryman Manifest Content Early Recollection Scoring Manual. Data from the three eating disorder groups differed from the subject group. All three of the eating disordered groups showed greater external locus of control and greater negative affect. Anorexics showed greater passivity and a tendency to detach from others and from their own feelings. The eating disorder groups presented a narrower range of subjects in their memories, suggesting that they may have a narrower perspective.

Early Recollections and Vocational Choice

Manaster and Perryman (1974) investigated the proposition that the manifest content of early recollections differed in comparison among persons choosing different occupations. They found significant differences between groups of students in teaching,
counseling, nursing, biology, and accounting.

Hafner and Fakouri (1984) compared the early recollections of students majoring in accounting, secondary education, and psychology. Data indicated that the manifest content of early recollections may be useful for distinguishing among academic majors and their potential success in that particular field. Accounting students significantly reported early recollections that showed marked internal control, little visual detail, and a low frequency of references to people or animals. Education majors significantly reported school as the setting for the early recollection and gave recollections that were characterized by external control. Education and psychology majors both revealed more nonfamily members and visual details in their early recollections than did accounting majors. Psychology majors significantly reported more fear or anxiety-provoking or threatening situations. In the category of concern with details, psychology students reported significantly more motor activities (vigorous physical exercise).

In another study, Fakouri, Fakouri, and Hafner (1986) compared the early recollections of 35 students preparing for nursing careers with 38 students enrolled in other programs. Each subject was asked to recall two early childhood recollections which were scored using the Manaster-Perryman Manifest Content Early Recollection Scoring Manual. Data indicated that nursing students identified significantly more themes involving mastery, motor activities, fear and anxiety-provoking situations, and greater initiation of action in their recollections than the control group.

Hafner, Fakouri, and Etzler (1986) studied the manifest content of early recollections in an effort to distinguish between similar occupations. They compared the manifest content of early recollections of students preparing for careers in chemical, electrical, and mechanical engineering in an attempt to discover personality differences among the groups that may be significant for vocational choices. A total of 90 subjects, 30 from each discipline, were studied. All subjects were seniors enrolled in a school of
engineering program. Subjects were asked to recall two of their earliest childhood recollections. The Manaster-Perryman Manifest Content Early Recollection Scoring Manual was used in scoring the content of the early recollections. Data indicated that chemical engineering majors were significantly more unclear about the setting of their early recollections, and expressed significantly more external control in their early recollections. Data also indicated that electrical engineering students' early recollections mentioned a group or groups of people significantly more often than the other two groups. In addition, the themes of electrical engineers significantly mentioned illness/injury to self, another person, or animal more often. Mechanical engineering students mentioned family members significantly more often than did the other two groups. In addition, the early recollections of mechanical engineering students contained significantly more themes of mastery, unfamiliar situations, and hostility.

Elliott, Amerikaner, and Swank (1987) examined whether early recollections could be used to predict an individual's vocational choice. Their study focused on three hypotheses: (1) Vocational interests, as derived from subjects' early recollections, will be significantly related to the current occupation of research subjects, (2) Vocational interests, as measured by the Vocational Preference Inventory (VPI), will be significantly related to the current occupation of research subjects, and (3) Vocational interests, as derived from early recollections, will be significantly related to vocational interest as measured by the VPI. Subjects included 80 university students, all of whom had been employed for at least 1 year in the field in which they were studying. Subjects were asked to complete the VPI and to recall five of their early childhood recollections. Each recollection was rated by 10 adjective descriptives of each theme from Holland's description of the six occupational themes: realistic, investigative, social, artistic, enterprising, and conventional. Data indicated support for the three hypotheses, as judges were able to reliably select the vocational interest of the subjects with the same moderate
level of accuracy as the VPI.

In a study to determine whether the use of early recollections could be a valuable tool for the selection of criminal and noncriminal justice majors, Coram and Shields (1987) compared the early recollections of 40 criminal and noncriminal justice majors. Each subject was asked to recall two early recollections. The content of the early recollections was scored using the Manaster-Perryman Manifest Content Early Recollection Scoring Manual. Data indicated significant differences in several areas between majors in criminal justice and nonmajors. The variable of mother was mentioned more frequently by subjects in the criminal justice group than any other character. The authors interpreted mothers as having more of an influence on subjects than father figures. It seemed as if the subject’s interest in police work was influenced by interest in control and authority. Other significant differences between criminal justice majors and non-majors included visual detail, illness and injury, the theme of new situations, outdoor settings, travel settings, and home of someone other than family. There were all indicative of a career in criminal justice. Therefore, these findings more clearly described the personality dynamics of those interested in the criminal justice field.

McFarland (1988) examined the early recollections of women who were actively engaged in two different occupations: medical technology and nursing. The Manaster-Perryman Manifest Content Early Recollection Scoring Manual was used to analyze the content of the early recollections. Data indicated that nurses had early recollections that de-emphasized nonfamily persons and nonfamily settings and assumed an other-oriented locus of control. The medical technologists provided early recollections that emphasized internal control, mastery, and visual alertness.

**Themes of Striving With and Without Social Interest**

Just as the life-style of individuals remains constant, regardless of their varying
behavior, a particular theme for an early recollection can manifest itself in many different forms. Each individual strives towards a goal of significance and security. This is called the “fictional goal” (Adler, 1956). Manaster and Corsini (1982) stated that Adlerians generally equate social interest with positive mental health. Social interest is viewed as a sense of belongingness with humankind and a willingness to contribute to others for the greater purpose of humankind. Persons without social interest are viewed as psychologically unhealthy.

Adlerians do not consider human beings as types because every person has an individual style of life (Adler, 1956). The types described by Adler, and later by Mosak (1979), are used as conceptual devices to make the similarities of individuals more understandable (Adler, 1956). Adler was able to characterize individual life-styles through central themes: the ruling type, the getting type, the avoiding type, and the socially useful type (Adler, 1956). Mosak developed a more extensive set of central themes which included getters, controllers, drivers, pleasers, martyrs, victims, “aginners,” feeling avoiders, and excitement seekers (Mosak, 1958, 1968).

**Early Recollection Themes and EMT Burnout**

Early recollection themes may be useful in predicting paramedic burnout. The life-style typologies of Mosak (1958; 1968) provide a useful framework for discussing the dynamics of paramedics as these dynamics relate to stress and burnout. Paramedics, with the following early recollection themes, may be susceptible to burnout: controllers, pleasers, martyrs/victims, “aginners,” and feeling avoiders.

Controllers may be susceptible to burnout because the sole nature of a paramedic’s occupation can be described as one of no control. Paramedics are not able to control the surroundings of their immediate work environment.

Pleasers may be susceptible to burnout because a paramedic cannot save
everyone. The paramedic who needs to be good may experience guilt as a result of being unable to save patients, which may in turn affect their job.

Martyrs/victims may also be susceptible to burnout. Paramedics cannot effectively help others if they are caught up in their own struggle of personal justification.

"Aginner" may be susceptible to burnout. Their tendency to be oppositional could compromise the health and well-being of their patients. The rebellious nature of the "aginner" may make it difficult for them to work collaboratively with other health care professionals.

Feeling avoiders may be susceptible to burnout. Their lack of affective awareness and tendency to internalize feelings may make it difficult for paramedics to recognize the symptoms of burnout in themselves.

There are also early recollection themes that may make paramedics resistant to burnout. These themes include the following: getters, drivers, and excitement seekers.

Getters may be resistant to burnout. They are more concerned about what they can get out of a job (i.e., paycheck, hero status) and are less likely to be emotionally involved in their work.

Drivers may be resistant to burnout. Drivers are dedicated workers who are actively ambitious. Their goals help them focus on the overall objective realities of their jobs.

Excitement seekers may be resistant to burnout. The work of a paramedic is one that is marked by the unknown. Each call to which a paramedic responds is different and potentially exciting.

Chapter Summary

Mosak (1977) maintained that early recollections constitute a quick device for uncovering an individual's unconscious attitudes. It is possible that early recollections
might be used for rapid screening of paramedics. It is unlikely that a potential paramedic would want to endorse items on a burnout inventory that would identify them as either burned out or susceptible to burnout. Early recollections would provide a projective assessment that would make it more difficult for subjects to “fake good.”
CHAPTER 3

RESEARCH METHODOLOGY

This was an ex post facto study undertaken to investigate the relationship of the early recollections of paramedics in Toronto, Canada, and Mojave County, Arizona, experiencing burnout. It entailed comparing the different types of early recollections and the results from the Staff Burnout Scale for Health Professionals (SBS-HP) that were used to categorize the study population into three categories: minimal burnout, moderate burnout, and severe burnout. In this chapter, I describe in detail the methods used in the investigation.

Population and Sampling

The subjects of this study were 132 male and female EMTs out of a pool of 900 (G. Goldberg, personal communication. November 15, 1999) from the city of Toronto, and a pool of 200 (J. Stein, personal communication, November, 19, 2001) from Mojave County. Participants in Toronto and Mojave County were self-selected. Those in Toronto were recruited through an advertisement placed in their payroll and through announcements during upgrade training, those in Mojave County were recruited though announcements during their tape and chart reviews. These subjects were actively working as EMTs in Toronto, the Greater Toronto Area (GTA), and Mojave County, and were at various levels of training, and length of time employed.

The subjects were told in a letter that they were participating in a study to investigate the early recollections and burnout of paramedics. They were encouraged to
respond as honestly as possible to the questionnaires and were assured of confidentiality since all of the questionnaires would be anonymously coded with consecutive numbers.

**Variables**

The independent variables in this study are the eight early recollection themes as identified by Mosak (1968) as being controllers, pleasers, victims/martyrs, "aginners," feeling avoiders, getters, drivers, and excitement seekers. The one dependent variable in this study was the burnout level, comprised of four sets of burnout scores obtained from the Staff Burnout Scale for Health Professionals (SBS-HP): general dissatisfaction with work score, psychological and interpersonal tension score, physical illness and distress score, and unprofessional patient relationship score.

**Instrumentation**

EMTs were asked to complete the following instruments: (1) a demographic questionnaire, (2) request for information form, and (3) the SBS-HP. After completing the inventories subjects were then asked to recount two of their earliest childhood memories. The entire assessment process took between 15 to 20 minutes per subject.

Following is a description of the instrumentation that was used in the study.

**Demographic Questionnaire**

The Demographic Questionnaire asked each EMT to provide information on age, gender, marital status, number of children, years as an EMT, level of EMS certification, job title, number of hours on shift, average number of runs per day, highest level of education received, and ethnicity. The questionnaire also asked EMTs to indicate what the most stressful part of their job is, in addition to giving recommendations on reducing the amount of on-the-job stress (see Appendix A).
Request for Information Form

The Request for Information form asked each paramedic whether they would like to receive information regarding the results of the study. EMTs were given the option to receive a summary of the results through mail or a telephone call. Those individuals wishing to receive this information were requested to provide their name, address, and phone number.

Early Recollection Inventory

The Early Recollection Inventory is a tool adapted from the Life-Style Inventory (Mosak & Shulman, 1988) for collecting a subject's two earliest childhood recollections. The instrument consists of a page of instructions. Subjects are asked to recall two of their earliest childhood recollections. In addition to recalling these memories, subjects are asked to recall: (1) how old they were at the time of the recollection, (2) the feeling associated with the recollection, and (3) the most vivid part of the recollection. Subjects are first prompted for an early recollection by reading the first statement "Close your eyes. I want you to think back as far back as you can. What is the first memory that comes to mind? Something about which you can say, “One day I remember . . . .” Please describe this memory in as much detail as possible." The second recollection is prompted by reading the following statement, “What memory comes to your mind next?"
The Staff Burnout Scale for Health Professionals

The Staff Burnout Scale for Health Professionals (SBS-HP) is a 30-item inventory. Twenty of the items measure burnout as defined by Maslach (1976) and Maslach and Jackson (1981). A lie scale of 10 items is included to identify tendencies to "fake good." It consists of 20 items, 7 items covering job dissatisfaction and strain, 7 items covering psychological and interpersonal tension, 3 items covering physical illness and distress, and 3 items covering unprofessional patient relationships.

The SBS-HP assesses the adverse psychological, psychophysiological, and behavioral dimensions of the burnout syndrome. This includes psychological or cognitive (e.g., "I often think of leaving my job"), affective (e.g., "I frequently feel frustrated and angry with my clients"), behavioral (e.g., "I avoid spending any extra time with my clients"), and psychophysiological (e.g., "I frequently leave work with a headache") reactions related to burnout. Jones (1980a) found that the SBS-HP has four factors consisting of: (1) general dissatisfaction with work, (2) psychological and interpersonal tension, (3) physical illness and distress, and (4) unprofessional patient relationships.

Description and Scoring of the Staff Burnout Scale for Health Professionals

The SBS-HP asked EMTs to judge how often certain behaviors occur by responding to a 6-point Likert scale ranging from "agree very much" to "disagree very much." EMTs check the boxes for each statement which corresponds to their behavior. For scoring purposes, a key was provided where responses to statements are given a corresponding score: "agree very much" is assigned a score of 7, "agree pretty much" is assigned a score of 6, "agree a little" is assigned a score of 5, "disagree a little" is assigned a score of 3, "disagree pretty much" is assigned a score of 2, and "disagree very
much” is assigned a score of 1. There is no explanation in the guidelines of the SBS-HP for the absence of the use of a score of 4 in the Likert scale. It is assumed that a score of 4 was omitted from the study as it would be considered neutral. The range of scores for burnout are broken down into four categories which include: job dissatisfaction and strain, psychological and interpersonal tension, physical illness and distress, and unprofessional patient relationships. Scores in the job dissatisfaction and strain category range from a possible 7 to 49. These scores represent the relative frequency of certain behavior(s) related to employee attitudes towards the work environment. Scores in the psychological and interpersonal tension category range from a possible 7 to 49. These scores represent the relative frequency of certain behavior(s) related to resiliency social skills. Scores in the physical illness and distress category range from a possible 3 to 21. These scores represent the relative frequency of behavior(s) related to presence of physical symptoms and impact on workday. Scores in the unprofessional patient relationship category range from a possible 3 to 21. These scores represent the relative frequency of behavior(s) related to irritation and loss of interest in patients. A total score is produced by adding the scores for the four burnout factors. Scores can range from a low of 20, indicating no burnout, to a high of 140, suggesting severe burnout.

A lie scale of 10 items is included in the inventory to identify tendencies of EMTs to “fake good.” In order to avoid response sets, the 10 items are interspersed throughout the inventory, with 5 scored in a positive direction and 5 in a negative direction. Jones (1980b) recommended that for each Lie Scale item, a subject should be given a point for choosing the most extreme “good” option. If the total value for any subject is 7 or more, Jones (1980b) recommended that the subject be eliminated from the study.

Reliability

The Split-half reliability coefficient of the SBS-HP has been reported as .93
(Jones, 1980a). It has also been reported that test items correlate the overall burnout score at the .001 level of confidence or less (Jones, 1980b). The range of correlation coefficients between items and the total burnout score is .52 to .82 with an average of .71 (Jones, 1980c, 1981). The relatively high intercorrelations suggest that an underlying construct of the burnout syndrome is being measured.

Validity

The validity of a test or inventory is frequently defined as the extent to which a test measures what it is supposed to measure (McMillan & Schumacher, 1997). The degree of correlation found between ratings and scores on the burnout inventory is a function of (1) the manner in which the variable being rated is defined, (2) the degree of complexity of the variable being rated, (3) the amount of insight, knowledge, and ability of the subject doing the ratings, and (4) the extent to which the individual doing the ratings is influenced by standards of social acceptability.

Validation studies on the SBS-HP are reported by Jones (1980a) and support the use of the measure with health professionals. In a series of studies using hospital personnel, Jones (1980b, 1981) found that SBS-HP scores significantly correlated with job turnover, absenteeism tardiness, serious on-the-job mistakes, alcohol and prescription drug use, and extended work breaks.

Various studies have been conducted comparing ratings and scores on the variables of the SBS-HP. In one study, Jones (1980a) found that higher patient-to-staff ratios were reliably correlated with higher SBS-HP scores for health professionals. Using the Maslach Burnout Inventory (MBI), Barad (1979) also found that larger client caseloads were correlated with higher burnout scores among Social Security employees.

In another study Jones (1980b, 1980c) found that nurses who held highly traumatic jobs within a hospital had reliably higher SBS-HP scores than nurses holding
less traumatic jobs. Jones (1980b) also found that nurses who worked the night and rotating shifts within a hospital setting scored higher on the SBS-HP than did nurses who worked the day shift.

Procedure

Permission to conduct the research with the participating population in Toronto was obtained by contacting Dr. Gerry Goldberg, Staff Psychologist, Ron Kelusky, General Manager, and Peter MacIntyre, Co-ordinator of EMS Education and Development at Toronto Ambulance. In Mojave County permission was granted through two of the County’s base hospital co-ordinators, Sue Kearn, Kingman, Arizona and Diane Irwin, Bullhead City, Arizona. Each of the above-mentioned individuals was informed of the content of my study and given a copy of the first three chapters of this research project. In Toronto, prior to collecting data, an announcement was placed in the Toronto Ambulance payroll, giving a short description of the study and inviting EMTs to participate, giving them my telephone number and e-mail address should they wish to participate (see Appendix B). In Toronto, data were collected over a period of 4 months. The subjects in this study were primarily recruited through classes offered at Toronto Ambulance for upgrade training, although some subjects contacted me through reading the payroll announcement. In Mojave County, data were collected over a period of 4 months. Subjects participating were primarily recruited through monthly tape and chart meetings. Potential subjects in classes were given a brief description of the content of the study and were told that their participation in the study was strictly voluntary. It was explained to each EMT that if he/she wished at any time to refuse to answer any question or to terminate the study, he/she would be free to do so. Once they agreed to participate, EMTs were given a packet of materials containing (1) a patient information form (see Appendix A), (2) an informed consent letter (see Appendix A), (3) a general
demographic questionnaire (see Appendix A), (4) the Staff Burnout Scale for Health Professionals, and (5) the request for information form. All of these instruments can be individually administered or self-administered in a group format. However, for the purposes of this study, the packets were given on an individual basis and administered by me. When each subject was given a packet, a short introduction and explanation of the study was presented. Participants were told that all information would be held confidential as subjects would be identified by consecutive identification numbers rather than using participants’ names. Subjects were then asked to complete all of the materials in the packet as honestly as possible. When the materials of the packet were completed, the administrator then asked each subject to recall two of his/her earliest childhood memories, the feelings associated with each of these memories, and what the most vivid part of these memories were. These data were recorded on a tape cassette with the subjects’ identification number recorded prior to the collection of the memories. Once the early recollections were taken, all of the materials, except for the patient information form and request for information form, were placed in the original folder and given a subject identification number. The subject was given the patient information form should they have any future questions regarding the study. The request for information form was placed in a separate envelope. Interviews in Toronto were conducted on the premises of Toronto Ambulance. In Mojave County these interviews were conducted at various sites which included local fire stations and Mohave Community College. All interviews were conducted in a private area with minimal disruptions.

Judging of Early Recollections

The early recollections were scored by three independent individuals. All of the judges had a graduate level education in counseling psychology, and were familiar with the use of early recollections. Judges were given two, 30-minute training sessions prior
to scoring any of the subject's early recollections. During training, judges were given a packet of materials containing: (1) two sections of sample early recollections taken from Mosak, Schneider, and Mosak's (1993) Life-style workbook, (2) copies of sample recollections taken from EMTs not included in this study, and (3) Early Recollection Evaluation Forms containing the eight early recollection themes and their descriptions. At the beginning of the training session, judges were given an introduction to the purpose of the study and were asked to open their packets and go through the materials (see Appendix C for specific instructions). After a basic introduction to the various themes, judges were asked to go through Mosak et al.'s (1993) early recollections and indicate on the sheets which themes they felt were appropriate for each recollection. Once all of the judges had completed the first section of Mosak et al.'s (1993) workbook, we discussed our findings. In keeping with the procedures of the study for situations in which there was a discrepancy between the three judges, the judges stated why they believed their chosen theme to be valid for that particular early recollection, and whether or not they would choose to change their thematic choice. Judges were given the second section of Mosak et al.'s (1993) workbook to complete by the second training session. In addition, judges were given the sample recollections taken from EMTs not included in this study and were required to complete the Early Recollection Evaluation Form for each. On the second day of training, which occurred 1 week after the initial training day, each judge went over the second section of Mosak et al.'s (1993) workbook, and discussed their findings. Judges also reported what themes they felt were prevalent for each of the 28 recollections provided a week earlier. The themes chosen for each of the 28 recollections by each of the three judges were recorded. In instances where there was a discrepancy between all three judges for a recollection, each judge was asked to state why he or she chose that particular theme. After each judge stated the reason why he or she chose a specific theme(s), voting occurred by secret ballot to determine whether any judge had
decided to change his or her opinion for any theme(s) present for that recollection.

Upon completion of these tasks, judges were then provided with the early recollections of the participants that had been transcribed from audiotape, as well as the Early Recollection Evaluation Forms (Appendix A) on which they were asked to indicate the presence of a theme(s) for each early recollection.

**Description and Scoring of the Early Recollection Evaluation Form**

Judges were given the 240 transcribed early recollections in addition to 240 Early Recollection Evaluation Forms. Each judge was instructed to independently read each of the 240 early recollections of the EMTs and evaluate for each recollection which of the eight themes were present in each recollection, indicating so by checkmark(s). For scoring purposes, a zero was assigned for those recollections where a judge did not agree that a theme was present. For recollections where the judge agreed that a theme was present, a 1 was assigned.

After each judge completed evaluating the 240 early recollections, the Early Recollection Evaluation Forms for each recollection were compared across the three judges. For a theme(s) to be considered as present, it was required that two out of the three judges must agree on the presence of that particular theme(s). For scoring purposes, those recollections where none of the judges believed a theme was present were assigned a score of zero. For recollections where only one out of the three judges agreed on the presence of a theme, the theme was also assigned a score of zero. For recollections where two judges agreed on the presence of a theme, the theme was assigned a score of 1. For recollections where three judges agreed on the presence of a theme, the theme was assigned a score of 1. In the event that all three judges disagreed on the predominant theme of an early recollection, the judges were called upon to discuss reasoning for
choosing a particular theme(s). The group then were asked to vote by secret ballot what theme(s) they chose to be predominant for a recollection. If after the vote judges were still unable to determine at least one main theme for a recollection, that particular subject was removed from the study. Inter-rater reliability for scoring by judges was .448.

In order to statistically analyze each of the early recollections for each EMT, the predominant scores for both recollections were added to formulate one score. These scores ranged from 0 where there was no common theme between the early recollections, 1 where a theme was deemed prominent in one recollection but not in the other, and 2 where the theme was prominent in both recollections provided by that particular EMT.

**Null Hypotheses and Analysis**

The following null hypotheses were tested to answer the research questions:

**Hypothesis 1.** There is no linear combination of the eight early recollection themes which predict global burnout.

**Hypothesis 2.** There is no significant canonical correlation between the linear combination of the eight early recollection themes and a linear combination of the four burnout scales.

**Hypothesis 3:** There is no significant difference between burnout levels of EMTs in rural or urban locations of employment.

**Statistical Design**

The null hypotheses were tested as follows:

**Hypothesis 1** was tested by regression analysis, to determine if any of the eight early childhood recollections is a good predictor of burnout.

**Hypotheses 2** was tested by canonical correlation, to assess if there is a correlation between the four subscales of the SBS-HP and the eight early childhood recollections.

**Hypothesis 3** was tested by t-Test to compare means between the two groups.
An alpha of .05 was used to test the hypotheses.

**Limitations**

1. EMTs may not be willing to divulge their early recollections or they may claim to not remember anything from their childhood.

2. EMTs who are experiencing burnout may avoid becoming a participant for fear of the consequences of the results of the testing procedure.

**Chapter Summary**

In general, the purpose of the study was to investigate the early recollections of paramedics and their relationship to burnout. Paramedics were chosen for this study because they have one of the highest rates of burnout.

Information was obtained by having subjects complete a demographic questionnaire, request for information form, the Staff Burnout Scale for Health Professionals (SBS-HP), and were asked to relate two of their earliest childhood recollections.

The Early Recollection Evaluation Forms was utilized to classify subjects' early recollections into one of eight dominant themes: controller, pleaser, victim/martyr, "aginner," feeling avoider, getter, driver, and excitement seeker.

The three research questions were restated in the form of three null hypotheses. The corresponding null hypotheses stated that there were no differences between the groups of EMTs and themes of early recollections and burnout.

Data were analyzed using 2-way ANOVA, 1-way ANOVA, t-Test, linear regression analysis and canonical correlation.
CHAPTER 4

DATA FINDINGS AND ANALYSIS

The purpose of the study was to analyze the early recollections of rural and urban emergency medical technicians to determine what themes of early recollections are good predictors of a EMT's susceptibility to burnout.

Chapter 3 addressed the methods used in gathering the data for this research study. This chapter presents the findings of the study. It begins with a brief review of the study, the methods used, and then concludes with a presentation of the results with reference to the formulated null hypotheses.

The data were collected from 55 EMTs in Toronto, and from 77 EMTs in Mojave County, Arizona. Subjects were those individuals who volunteered their time to participate in the study. Of those subjects who participated in the study, a total of 12 subjects were omitted due to various conditions. Six of the subjects from the Toronto EMTs were omitted due to malfunctioning of audiotape equipment. One of the Toronto subjects and 4 of the Mojave County subjects were omitted due to inability to recall early childhood recollections. In addition, 1 subject from Mojave County was omitted from the study due to having a cumulative lie scale score of 7. These omissions left a sample of 48 EMTs from Toronto, and 72 EMTs from Mojave County.

Three instruments were employed in the study: a demographic survey, early recollection inventory, and the Staff Burnout Scale for Health Professionals (SBS-HP). The confidentiality of the EMTs was maintained at all times.
Description of the Population

Table 1 provides the general demographic data for the sample under study. The study population consisted of 120 subjects. While the entire sample ranged from 22 years of age to 62 years of age, the sample was predominantly composed of EMTs (51.7%) between the ages of 31 to 40, with a mean age of 37.49 and standard deviation of 7.18. Proportionately more males (84.2%) than females (15.8%) participated in the study. In regard to marital status, the largest group of EMTs (67.5%) reported being married, and the second largest group of EMTs (15%) reported being single. In relation to number of children, the largest group of EMTs (34.2%) had two children and the second largest group (30.8%) were without children. The majority of EMTs (93.3%) participating in the study were Caucasian. When comparing the level of education attained by each EMT, the majority (45.8%) attended some college but had not attained a degree.

Table 2 provides a description of EMS demographic variables. The largest group of EMTs (28.3%) reported having worked between 11 to 15 years as an EMT; the second largest group were subjects who worked between 6 to 10 years (25%). The mean number of years an EMT worked within their field was 11.53 years with a standard deviation of 6.85. With regard to EMS level of certification, the majority of EMTs (51.7%) had paramedic training, EMTs with basic training accounted for 38.3% of subjects, and only 10% of subjects had intermediate training. The number of hours on shift varied between both rural and urban settings, with EMTs (57.5%) in rural areas working 24-hour shifts, and EMTs (40%) in urban areas working 12-hour shifts. Data indicated that 55.8% of EMTs averaged between 6 to 10 runs per shift. The mean for average number of runs was 6.64 with a standard deviation of 3.44.
### TABLE 1
DESCRIPTION OF THE STUDY POPULATION BY GENERAL DEMOGRAPHIC VARIABLES

<table>
<thead>
<tr>
<th>Demographic Variable</th>
<th>Rural (N=72)</th>
<th>Urban (N=48)</th>
<th>Total (N=120)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>63 (52.5%)</td>
<td>38 (31.7%)</td>
<td>101 (84.2%)</td>
</tr>
<tr>
<td>Females</td>
<td>9 (7.5%)</td>
<td>10 (8.3%)</td>
<td>19 (15.8%)</td>
</tr>
<tr>
<td><strong>Marital Status</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>9 (7.5%)</td>
<td>9 (7.5%)</td>
<td>18 (15.0%)</td>
</tr>
<tr>
<td>Married</td>
<td>47 (39.2%)</td>
<td>34 (28.3%)</td>
<td>81 (67.5%)</td>
</tr>
<tr>
<td>Separated</td>
<td>1 (0.8%)</td>
<td>0 (0.0%)</td>
<td>1 (0.8%)</td>
</tr>
<tr>
<td>Divorced</td>
<td>7 (5.8%)</td>
<td>3 (2.5%)</td>
<td>10 (8.3%)</td>
</tr>
<tr>
<td>Remarried</td>
<td>7 (5.8%)</td>
<td>2 (1.7%)</td>
<td>9 (7.5%)</td>
</tr>
<tr>
<td>Widowed</td>
<td>1 (0.8%)</td>
<td>0 (0.0%)</td>
<td>1 (0.8%)</td>
</tr>
<tr>
<td><strong>Number of Children</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>20 (16.7%)</td>
<td>17 (14.2%)</td>
<td>37 (30.8%)</td>
</tr>
<tr>
<td>1</td>
<td>6 (5.0%)</td>
<td>7 (5.8%)</td>
<td>13 (10.8%)</td>
</tr>
<tr>
<td>2</td>
<td>24 (20.0%)</td>
<td>17 (14.2%)</td>
<td>41 (34.2%)</td>
</tr>
<tr>
<td>3</td>
<td>14 (11.7%)</td>
<td>6 (5.0%)</td>
<td>20 (16.7%)</td>
</tr>
<tr>
<td>4</td>
<td>7 (5.8%)</td>
<td>1 (0.8%)</td>
<td>8 (6.7%)</td>
</tr>
<tr>
<td>5</td>
<td>1 (0.8%)</td>
<td>0 (0.0%)</td>
<td>1 (0.8%)</td>
</tr>
<tr>
<td><strong>Ethnicity</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caucasian Non-Hispanic</td>
<td>66 (55.0%)</td>
<td>46 (38.3%)</td>
<td>112 (93.3%)</td>
</tr>
<tr>
<td>African-American/Non-Hisp.</td>
<td>0 (0.0%)</td>
<td>0 (0.0%)</td>
<td>0 (0.0%)</td>
</tr>
<tr>
<td>Hispanic/Latino</td>
<td>4 (3.3%)</td>
<td>0 (0.0%)</td>
<td>4 (3.3%)</td>
</tr>
<tr>
<td>Asian or Pacific Islander</td>
<td>0 (0.0%)</td>
<td>1 (0.8%)</td>
<td>1 (0.8%)</td>
</tr>
<tr>
<td>Native American</td>
<td>2 (1.7%)</td>
<td>1 (0.8%)</td>
<td>3 (2.5%)</td>
</tr>
</tbody>
</table>

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Table 1 - Continued.

<table>
<thead>
<tr>
<th>Demographic Variable</th>
<th>Rural (N=72)</th>
<th>Urban (N=48)</th>
<th>Total (N=120)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Education</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High School</td>
<td>5 (4.2%)</td>
<td>0 (0.0%)</td>
<td>5 (4.2%)</td>
</tr>
<tr>
<td>Some College</td>
<td>50 (41.7%)</td>
<td>5 (4.2%)</td>
<td>55 (45.8%)</td>
</tr>
<tr>
<td>College Degree</td>
<td>11 (9.2%)</td>
<td>25 (20.8%)</td>
<td>36 (30.0%)</td>
</tr>
<tr>
<td>Some University</td>
<td>1 (0.8%)</td>
<td>9 (7.5%)</td>
<td>10 (8.3%)</td>
</tr>
<tr>
<td>University Degree</td>
<td>5 (4.2%)</td>
<td>7 (5.8%)</td>
<td>12 (10.0%)</td>
</tr>
<tr>
<td>Graduate Degree</td>
<td>0 (0.0%)</td>
<td>1 (0.8%)</td>
<td>1 (0.8%)</td>
</tr>
<tr>
<td>More than 1 Graduate Degree</td>
<td>0 (0.0%)</td>
<td>1 (0.8%)</td>
<td>1 (0.8%)</td>
</tr>
</tbody>
</table>

**Basic Data**

**Early Recollection Themes**

The composition of reported early recollections of urban and rural EMTs is shown on Table 3. Urban EMTs had on average a higher rate of recollections containing themes of the getter (.42) where rural EMTs reported only (.18) for the getting theme. Urban EMTs also reported the controlling theme (.19) more often than rural EMTs (.08). Feeling avoider themes were reported at .21 for urban EMTs and at .14 for rural EMTs. On average, rural EMTs reported recalling early recollections with a driving theme at .29, where urban EMTs reported at a rate of .04. Rural EMTs more frequently reported recollections with excitement seeking themes with .78 as opposed to urban EMTs who reported at .60. Early recollections that were reported at similar rates were those of the pleaser with urban EMTs reporting a mean of .17 and rural EMTs a mean of .15. A
TABLE 2

DESCRIPTION OF THE STUDY POPULATION
BY EMT DEMOGRAPHIC VARIABLES

<table>
<thead>
<tr>
<th>Demographic Variable</th>
<th>Rural (N=72)</th>
<th>Urban (N=48)</th>
<th>Total (N=120)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Years Worked as EMT</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0 - 5</td>
<td>17 (14.2%)</td>
<td>11 (9.2%)</td>
<td>28 (23.3%)</td>
</tr>
<tr>
<td>6 - 10</td>
<td>22 (18.3%)</td>
<td>8 (6.7%)</td>
<td>30 (25.0%)</td>
</tr>
<tr>
<td>11 - 15</td>
<td>20 (16.7%)</td>
<td>14 (11.7%)</td>
<td>34 (28.3%)</td>
</tr>
<tr>
<td>16 - 20</td>
<td>4 (3.3%)</td>
<td>8 (6.7%)</td>
<td>12 (10.0%)</td>
</tr>
<tr>
<td>21 - 25</td>
<td>8 (6.7%)</td>
<td>4 (3.3%)</td>
<td>12 (10.0%)</td>
</tr>
<tr>
<td>26 - 30</td>
<td>1 (0.8%)</td>
<td>1 (0.8%)</td>
<td>2 (1.7%)</td>
</tr>
<tr>
<td>31 - 35</td>
<td>0 (0.0%)</td>
<td>2 (1.7%)</td>
<td>2 (1.7%)</td>
</tr>
</tbody>
</table>

| **EMS Level of Certification** |            |             |               |
| EMT-Basic               | 11 (9.2%)  | 35 (29.2%)  | 46 (38.3%)    |
| EMT-Intermediate        | 7 (5.8%)   | 5 (4.2%)    | 12 (10.0%)    |
| EMT-Paramedic           | 54 (45%)   | 8 (6.7%)    | 62 (51.7%)    |

| **Number of Hours on Shift** |            |             |               |
| 8                       | 1 (0.8%)   | 1 (0.8%)    | 2 (1.7%)      |
| 12                      | 2 (1.7%)   | 47 (39.2%)  | 49 (40.8%)    |
| 24                      | 69 (57.5%) | 0 (0.0%)    | 69 (57.5%)    |

| **Average Number of Runs** |            |             |               |
| 0 - 5                    | 37 (30.8)  | 8 (6.7%)    | 45 (37.5%)    |
| 6 - 10                   | 30 (25.0%) | 37 (30.8%)  | 67 (55.8%)    |
| 11 - 15                  | 3 (2.5%)   | 3 (2.5%)    | 6 (5.0%)      |
| 16 - 20                  | 2 (1.7%)   | 0 (0.0%)    | 2 (1.7%)      |
second similar finding was with the martyr/victim theme with urban EMTs at .79 and rural EMTs at .75. Finally, with the aginner theme urban EMTs reported an aginner type theme at .10 and rural EMTs reported at .11.

**Burnout**

Table 4 gives information on the distribution of scores for the complete sample on each of the SBS-HP subscales. It is evident from this table that scales on all of the subscales were spread over much of the possible range of scores, providing good variance for the statistical analyses.

Table 5 gives information on the distribution of scores for the complete sample of burnout scores. Scores for the SBS-HP can range from 20 (no burnout) to 140 (severe burnout). Scant data are given by Jones (1980b) in regard to quantifying the various levels of burnout between these two scores. It is evident from this table that scales on most of the variables were spread over much of the possible range of scores, providing good variance for the statistical analyses. The total mean burnout scores obtained by the subjects were very similar to the mean burnout scores obtained by Jones (1980b) in samples he obtained from hospital-based nurses (57.5), hospital-based health professionals (59.0), and geriatric counselors and service workers (55.5).

**Testing of the Null Hypotheses**

This section addresses each null hypothesis formulated for this study and gives the results of the statistical testing of each.

**Null Hypothesis 1**

*There is no linear combination of the eight early recollection themes which*
<table>
<thead>
<tr>
<th>Early Recollection Theme</th>
<th>Frequency</th>
<th>Frequency</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Getter</td>
<td>Urban</td>
<td>20</td>
<td>.42</td>
<td>.61</td>
</tr>
<tr>
<td>Controller</td>
<td>Urban</td>
<td>9</td>
<td>.19</td>
<td>.39</td>
</tr>
<tr>
<td>Driver</td>
<td>Urban</td>
<td>2</td>
<td>.04</td>
<td>.20</td>
</tr>
<tr>
<td>Pleaser</td>
<td>Urban</td>
<td>8</td>
<td>.17</td>
<td>.38</td>
</tr>
<tr>
<td>Martyr Victim</td>
<td>Urban</td>
<td>38</td>
<td>.79</td>
<td>.77</td>
</tr>
<tr>
<td>Aginner</td>
<td>Urban</td>
<td>5</td>
<td>.10</td>
<td>.31</td>
</tr>
<tr>
<td>Feeling Avoider</td>
<td>Urban</td>
<td>10</td>
<td>.21</td>
<td>.41</td>
</tr>
<tr>
<td>Excitement Seeker</td>
<td>Urban</td>
<td>29</td>
<td>.60</td>
<td>.64</td>
</tr>
<tr>
<td>Getter</td>
<td>Rural</td>
<td>13</td>
<td>.18</td>
<td>.42</td>
</tr>
<tr>
<td>Controller</td>
<td>Rural</td>
<td>6</td>
<td>.08</td>
<td>.28</td>
</tr>
<tr>
<td>Driver</td>
<td>Rural</td>
<td>21</td>
<td>.29</td>
<td>.49</td>
</tr>
<tr>
<td>Pleaser</td>
<td>Rural</td>
<td>11</td>
<td>.15</td>
<td>.43</td>
</tr>
<tr>
<td>Martyr Victim</td>
<td>Rural</td>
<td>54</td>
<td>.75</td>
<td>.67</td>
</tr>
<tr>
<td>Aginner</td>
<td>Rural</td>
<td>8</td>
<td>.11</td>
<td>.36</td>
</tr>
<tr>
<td>Feeling Avoider</td>
<td>Rural</td>
<td>10</td>
<td>.14</td>
<td>.39</td>
</tr>
<tr>
<td>Excitement Seeker</td>
<td>Rural</td>
<td>56</td>
<td>.78</td>
<td>.63</td>
</tr>
</tbody>
</table>
### TABLE 4
DISTRIBUTION FOR THE COMPLETE SAMPLE OF SCORES ON EACH OF THE SBS-HP SUBSCALES

<table>
<thead>
<tr>
<th>SBS-HP Variables</th>
<th>N</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Possible Range</th>
<th>Actual Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Job Dissatisfaction &amp; Strain</td>
<td>120</td>
<td>23.08</td>
<td>9.64</td>
<td>7 - 49</td>
<td>7 - 49</td>
</tr>
<tr>
<td>Psychological Interpersonal Tension</td>
<td>120</td>
<td>16.02</td>
<td>6.62</td>
<td>7 - 49</td>
<td>7 - 37</td>
</tr>
<tr>
<td>Physical Illness &amp; Distress</td>
<td>120</td>
<td>10.39</td>
<td>4.70</td>
<td>3 - 21</td>
<td>3 - 20</td>
</tr>
<tr>
<td>Unprofessional Patient Relationships</td>
<td>120</td>
<td>7.25</td>
<td>4.28</td>
<td>3 - 21</td>
<td>3 - 21</td>
</tr>
</tbody>
</table>

### TABLE 5
DISTRIBUTION FOR THE COMPLETE SAMPLE OF BURNOUT SCORES

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>Poss. Range</th>
<th>Act. Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Burnout</td>
<td>120</td>
<td>56.72</td>
<td>20.79</td>
<td>20 - 140</td>
<td>21 - 126</td>
</tr>
</tbody>
</table>
predict global burnout.

A zero-order correlation (see Table 6) was performed. Results of the correlation indicated three significant relationships between early recollection themes and the four burnout subscales. The first significant relationship was a positive correlation between the controller's early recollection and the subscale of physical illness and distress (0.19). This was indicative that an EMT reporting an early recollection with controlling themes was likely to score high on the physical illness and distress scale of the SBS-HP. A second significant relationship was a negative correlation between the driver's early recollection and the subscale of physical illness and distress (-.18). This was indicative that an EMT who recalls an early recollection with driver themes was likely to not report experiencing any symptoms on the SBS-HP. The third significant relationship was a positive correlation between the martyr/victim early recollection theme and psychological interpersonal tension (.20). This was indicative that an EMT whose early recollection's main theme was a martyr/victim, was likely to report experiencing psychological and interpersonal tension on the SBS-HP.

This hypothesis was statistically analyzed using direct method multiple regression analysis. The largest multiple $R$ obtained was 0.242, which indicated that 5.8% of the variance in burnout was accounted for by the eight early recollections. With $\alpha = .10$ multiple regression did not yield any variables which correlated significantly with burnout. Table 7 gives the multiple regression analysis results, with an $R = 0.058$ and $p = 0.551$, the null hypothesis was retained.
<table>
<thead>
<tr>
<th></th>
<th>Job Dissatisfaction &amp; Strain</th>
<th>Psych. Inter Tension</th>
<th>Physical Illness &amp; Distress</th>
<th>Unprof. Patient Relations</th>
<th>Burnout</th>
</tr>
</thead>
<tbody>
<tr>
<td>Getter</td>
<td>-.062</td>
<td>-.136</td>
<td>.066</td>
<td>-.024</td>
<td>-.064</td>
</tr>
<tr>
<td>Controller</td>
<td>.133</td>
<td>.007</td>
<td>.189*</td>
<td>.072</td>
<td>.122</td>
</tr>
<tr>
<td>Driver</td>
<td>-.042</td>
<td>-.065</td>
<td>-.185*</td>
<td>.011</td>
<td>-.082</td>
</tr>
<tr>
<td>Pleaser</td>
<td>.001</td>
<td>-.091</td>
<td>.046</td>
<td>.126</td>
<td>.008</td>
</tr>
<tr>
<td>Martyr Victim</td>
<td>.121</td>
<td>.202*</td>
<td>.013</td>
<td>.103</td>
<td>.144</td>
</tr>
<tr>
<td>Aginner</td>
<td>.041</td>
<td>-.162</td>
<td>.063</td>
<td>-.036</td>
<td>-.025</td>
</tr>
<tr>
<td>Feeling Avoider</td>
<td>-.059</td>
<td>.079</td>
<td>.059</td>
<td>-.069</td>
<td>-.002</td>
</tr>
<tr>
<td>Excitement Seeker</td>
<td>-.029</td>
<td>.005</td>
<td>-.029</td>
<td>-.050</td>
<td>-.027</td>
</tr>
</tbody>
</table>

*Correlation was significant at the 0.05 level (2 tailed).
Null Hypothesis 2

There is no significant canonical correlation between the linear combination of the eight early recollection themes and a linear combination of the four burnout scales.

This hypothesis was statistically analyzed using canonical correlation analysis (see Table 8). The first eigenvalue was .251 yielding a canonical correlation of .501. The test of significance yielded a chi square of 34.33 with $df=32$ and $p=.3567$. Therefore, this hypothesis was retained. There was no significant correlation between a combination of burnout subscales set of variables and the early recollection themes set of variables.

Null Hypothesis 3

There is no significant difference between burnout levels of EMTs in rural or urban locations of employment.

This hypothesis was statistically analyzed using a $t$-test to compare means between the two groups. Table 9 provides a comparison of mean burnout levels and mean subscale scores of the SBS-HP of EMTs from the urban area of Toronto to the EMTs from the rural area of Mojave County. As seen in Table 9, average burnout levels for urban EMTs were found to be higher than that of their counterparts in rural locations. It was also noted that the average scores for all four sub-scales of the SBS-HP were higher for urban EMTs.

A $t$-test was conducted to determine whether there was a significant difference between burnout levels of EMTs in urban and rural settings. Results of the $t$-test, noted in Table 10, indicated that there was a significantly higher level of burnout for urban EMTs. Another significant finding, shown in Table 10, indicated that urban EMTs experienced a higher level of physical illness and distress than rural EMTs.

An explanation for why urban EMTs experience a higher level of burnout than
### Table 7

**Hypothesis 1: Multiple Regression Analysis of Burnout and Early Recollection Themes**

<table>
<thead>
<tr>
<th>Variable</th>
<th>b</th>
<th>Std Error</th>
<th>beta</th>
<th>t</th>
<th>prob</th>
</tr>
</thead>
<tbody>
<tr>
<td>Getter</td>
<td>2.383</td>
<td>4.497</td>
<td>.059</td>
<td>.530</td>
<td>.597</td>
</tr>
<tr>
<td>Controller</td>
<td>11.473</td>
<td>6.353</td>
<td>.183</td>
<td>1.806</td>
<td>.074</td>
</tr>
<tr>
<td>Driver</td>
<td>-0.750</td>
<td>5.200</td>
<td>-.015</td>
<td>-.144</td>
<td>.886</td>
</tr>
<tr>
<td>Pleaser</td>
<td>3.558</td>
<td>5.299</td>
<td>.070</td>
<td>.672</td>
<td>.503</td>
</tr>
<tr>
<td>Martyr/Victim</td>
<td>8.956</td>
<td>4.577</td>
<td>.305</td>
<td>1.957</td>
<td>.053</td>
</tr>
<tr>
<td>Aginner</td>
<td>2.218</td>
<td>6.124</td>
<td>.036</td>
<td>.362</td>
<td>.718</td>
</tr>
<tr>
<td>Feeling Avoider</td>
<td>5.213</td>
<td>5.856</td>
<td>.099</td>
<td>.890</td>
<td>.375</td>
</tr>
<tr>
<td>Excitement Seeker</td>
<td>5.585</td>
<td>4.513</td>
<td>.172</td>
<td>1.237</td>
<td>.219</td>
</tr>
</tbody>
</table>

\[ R^2 = 0.058, \ F_{18,111} = 0.862, \ \text{prob} = 0.551. \]

### Table 8

**Hypothesis 2: Canonical Correlation of SBS-HP Subscales and Early Recollections**

<table>
<thead>
<tr>
<th>Eigenvalue</th>
<th>Canonical Correlation</th>
<th>Number of Eigenvalues</th>
<th>Chi-Square</th>
<th>Degrees of Freedom</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.25128</td>
<td>0.50128</td>
<td>1</td>
<td>34.33</td>
<td>32</td>
<td>0.3567</td>
</tr>
<tr>
<td>0.17045</td>
<td>0.41286</td>
<td>2</td>
<td>19.13</td>
<td>21</td>
<td>0.5765</td>
</tr>
<tr>
<td>0.13454</td>
<td>0.36679</td>
<td>3</td>
<td>9.32</td>
<td>12</td>
<td>0.6751</td>
</tr>
<tr>
<td>0.03256</td>
<td>0.18046</td>
<td>5</td>
<td>1.74</td>
<td>5</td>
<td>0.8841</td>
</tr>
</tbody>
</table>
### TABLE 9
HYPOTHESIS 3: COMPARISON OF RURAL VERSUS URBAN BURNOUT LEVELS

<table>
<thead>
<tr>
<th>Location</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Rural</strong></td>
<td>(N=72)</td>
<td></td>
</tr>
<tr>
<td>Burnout</td>
<td>53.35</td>
<td>19.11</td>
</tr>
<tr>
<td>Job Dissatisfaction</td>
<td>21.99</td>
<td>9.28</td>
</tr>
<tr>
<td>Interpersonal Relationships</td>
<td>15.36</td>
<td>6.47</td>
</tr>
<tr>
<td>Physical Illness and Distress</td>
<td>8.86</td>
<td>4.20</td>
</tr>
<tr>
<td>Unprofessional Behavior</td>
<td>7.18</td>
<td>4.10</td>
</tr>
<tr>
<td><strong>Urban</strong></td>
<td>(N=48)</td>
<td></td>
</tr>
<tr>
<td>Burnout</td>
<td>61.77</td>
<td>22.34</td>
</tr>
<tr>
<td>Job Dissatisfaction</td>
<td>24.73</td>
<td>10.04</td>
</tr>
<tr>
<td>Interpersonal Relationships</td>
<td>17.00</td>
<td>6.78</td>
</tr>
<tr>
<td>Physical Illness and Distress</td>
<td>12.69</td>
<td>4.52</td>
</tr>
<tr>
<td>Unprofessional Behavior</td>
<td>7.35</td>
<td>4.60</td>
</tr>
</tbody>
</table>

### TABLE 10
HYPOTHESIS 3: *t* TEST FOR URBAN VERSUS RURAL BURNOUT LEVELS AND SUBSCALES

<table>
<thead>
<tr>
<th>Subscale</th>
<th>t</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Burnout</td>
<td>2.210</td>
<td>118</td>
<td>.029*</td>
</tr>
<tr>
<td><em>4 Subscales of SBS-HP</em></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Job Dissatisfaction</td>
<td>1.535</td>
<td>118</td>
<td>.127</td>
</tr>
<tr>
<td>Interpersonal Relationships</td>
<td>1.333</td>
<td>118</td>
<td>.185</td>
</tr>
<tr>
<td>Physical Illness and Distress</td>
<td>4.746</td>
<td>118</td>
<td>.000*</td>
</tr>
<tr>
<td>Unprofessional Behavior</td>
<td>.217</td>
<td>118</td>
<td>.829</td>
</tr>
</tbody>
</table>

*Significant at the .05 level (2 tailed).
rural EMTs may be related to the fact that in this study urban EMTs worked 12-hour shifts while the vast majority of rural EMTs (95.8%) worked 24-hour shifts. To further investigate this relationship, a one-way ANOVA (see Table 11) was conducted to determine the relationship between burnout and shift hours. The test was found to be significant at 0.021; this indicated that EMTs who work a 12-hour shift (urban EMTs) experienced a higher level of burnout ($M=61.78$, $SD=21.82$) than those who worked 24-hour shifts ($M=52.97$, $SD=20.79$) (see Table 11). The null hypothesis was therefore rejected.
FURTHER ANALYSES

Further analyses of data were conducted in order to better understand the relationship of burnout to various demographic variables. Several significant relationships were noted. It was found that there was a significant correlation between burnout and the average number of runs EMTs conducted on a daily basis. A correlation using the Pearson's correlation was conducted, and a correlation coefficient of .206 was found which was significant at the .05 level. This finding indicated that EMTs who have a higher number of average runs per day tend to experience a higher level of burnout (see Table 13).

A second significant finding in relationship to burnout was between ethnicity and number of children. In order to get a clearer picture of this relationship, both ethnicity variables and number of children were categorized as follows. Because 93.3% of the sample population was Caucasian, ethnicity was broken down into two categories: Caucasian and Non-Caucasian. For comparisons, the number of children was broken down categorically into three variables: zero children, one to two children, and three plus children. Table 14 gives information on the distribution of scores for the complete sample for ethnicity and number of children. A two-way ANOVA was initially conducted to determine the relationship between these factors. As shown in Table 15, the interaction effect between number of children and ethnicity was found to be statistically significant at 0.02. A test of simple effects was conducted since there was a significant interaction between number of children and ethnicity. As Table 16 indicates and referring to the means and standard deviations shown in Table 14, Non-Caucasians with 1-2 children had significantly higher burnout levels ($M=102.50, SD=33.23$) than Caucasians with the same number of children ($M=57.54, SD=20.75$). All other groups were not significantly different. Table 17 shows One-way analysis of variance results.
for testing the relationship between number of children and burnout levels for Caucasians and Non-Caucasians. For both Caucasians and Non-Caucasians, statistically significant differences in burnout levels among the three groups (number of children) were found. Using Tukey HSD for post-hoc multiple comparison, Caucasians with no children had significantly higher burnout levels ($M=60.11$ $SD=20.56$) than those with 3 or more children ($M=47.21$ $SD=14.98$). However, those with no children and 1-2 children had statistically similar burnout levels. Similarly, those with 1-2 children had statistically the same burnout levels as those with 3 or more children.

Another significant relationship in reference to burnout was found between ethnicity and certification status. In studying this relationship the previously ascribed categorical variables for ethnicity of Caucasian and Non-Caucasian were utilized. Table 18 gives information on the distribution of scores for the complete sample for ethnicity and level of certification. Table 19 indicates that these variables were tested using a two-way ANOVA which yielded a significant interaction effect ($F_{(2,114)}=3.171, p=0.046$). Test of simple effects was performed to further examine the nature of the interaction effects. The $t$ tests in Table 20 and the means and standard deviations found on Table 18 indicate that Non-Caucasian EMT-P reported significantly higher burnout levels ($M=84.00$, $SD=38.30$) than Caucasian EMT-P ($M=54.04$, $SD=17.43$). It also appears that
TABLE 14
DISTRIBUTION FOR THE COMPLETE SAMPLE OF ETHNICITY AND NUMBER OF CHILDREN

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Caucasian</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0 Children</td>
<td>35</td>
<td>60.11</td>
<td>20.559</td>
</tr>
<tr>
<td>1-2 Children</td>
<td>52</td>
<td>57.54</td>
<td>20.752</td>
</tr>
<tr>
<td>3+ Children</td>
<td>25</td>
<td>47.24</td>
<td>14.981</td>
</tr>
<tr>
<td>Total</td>
<td>112</td>
<td>56.04</td>
<td>19.990</td>
</tr>
<tr>
<td><strong>Non-Caucasian</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0 Children</td>
<td>2</td>
<td>76.50</td>
<td>2.121</td>
</tr>
<tr>
<td>1-2 Children</td>
<td>2</td>
<td>102.50</td>
<td>33.234</td>
</tr>
<tr>
<td>3+ Children</td>
<td>4</td>
<td>42.75</td>
<td>7.365</td>
</tr>
<tr>
<td>Total</td>
<td>8</td>
<td>66.13</td>
<td>30.045</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0 Children</td>
<td>37</td>
<td>61.00</td>
<td>20.333</td>
</tr>
<tr>
<td>1-2 Children</td>
<td>54</td>
<td>59.20</td>
<td>22.554</td>
</tr>
<tr>
<td>3+ Children</td>
<td>29</td>
<td>46.62</td>
<td>14.166</td>
</tr>
<tr>
<td>Total</td>
<td>120</td>
<td>56.72</td>
<td>20.790</td>
</tr>
</tbody>
</table>

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TABLE 15

TWO-WAY ANOVA FOR BURNOUT:
COMPARING ETHNICITY AND NUMBER OF CHILDREN

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethnicity</td>
<td>2416.461</td>
<td>1</td>
<td>2416.461</td>
<td>6.408</td>
<td>.013*</td>
</tr>
<tr>
<td>Children</td>
<td>6711.630</td>
<td>2</td>
<td>3355.815</td>
<td>8.898</td>
<td>.000*</td>
</tr>
<tr>
<td>Ethnic. x Child.</td>
<td>3035.870</td>
<td>2</td>
<td>1517.935</td>
<td>4.025</td>
<td>.020*</td>
</tr>
<tr>
<td>Error</td>
<td>42992.776</td>
<td>114</td>
<td>377.130</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected Total</td>
<td>51432.367</td>
<td>119</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Significant at the .05 level.

TABLE 16

t TESTS FOR BURNOUT BETWEEN CAUCASIANS AND NON-CAUCASIANS

<table>
<thead>
<tr>
<th></th>
<th>t</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 Children</td>
<td>-1.112</td>
<td>35</td>
<td>.274</td>
</tr>
<tr>
<td>1-2 Children</td>
<td>-2.963</td>
<td>52</td>
<td>.005*</td>
</tr>
<tr>
<td>3 or more Children</td>
<td>0.582</td>
<td>27</td>
<td>.566</td>
</tr>
</tbody>
</table>

*Significant at the .05 level.
TABLE 17
ONE-WAY ANOVAS FOR BURNOUT AND ETHNICITY

<table>
<thead>
<tr>
<th></th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Caucasian</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>2633.751</td>
<td>2</td>
<td>1316.875</td>
<td>3.440</td>
<td>.036*</td>
</tr>
<tr>
<td>Within Groups</td>
<td>41721.026</td>
<td>109</td>
<td>382.762</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>44354.777</td>
<td>111</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Non-Caucasian</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>5047.125</td>
<td>2</td>
<td>2523.563</td>
<td>9.922</td>
<td>.018*</td>
</tr>
<tr>
<td>Within Groups</td>
<td>1271.750</td>
<td>5</td>
<td>254.350</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>6318.875</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Significant at the .05 level.

Caucasian EMT-I experienced higher burnout levels ($M=63.09$, $SD=14.98$) than Non-Caucasian EMT-I ($M=34.00$). However, this comparison should be done cautiously since there was only one (1) Non-Caucasian EMT-I. The analysis of variance result in Table 21 shows that for both Caucasians and Non-Caucasians, no statistically significant differences in burnout levels were detected among the three types of EMTs.

**Summary**

1. Martyr-victim and Excitement-seeker appear to be the most dominant recollection themes for both rural and urban EMTs.

2. There were no significant relationships between the eight recollection themes and
<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Caucasian</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EMT-B</td>
<td>42</td>
<td>56.83</td>
<td>24.052</td>
</tr>
<tr>
<td>EMT-I</td>
<td>11</td>
<td>63.09</td>
<td>14.983</td>
</tr>
<tr>
<td>EMT-P</td>
<td>59</td>
<td>54.04</td>
<td>17.426</td>
</tr>
<tr>
<td>Total</td>
<td>112</td>
<td>56.04</td>
<td>19.990</td>
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<tr>
<td><strong>Non-Caucasian</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EMT-B</td>
<td>4</td>
<td>60.75</td>
<td>20.646</td>
</tr>
<tr>
<td>EMT-I</td>
<td>1</td>
<td>34.00</td>
<td>-----</td>
</tr>
<tr>
<td>EMT-P</td>
<td>3</td>
<td>84.00</td>
<td>38.301</td>
</tr>
<tr>
<td>Total</td>
<td>8</td>
<td>66.13</td>
<td>30.045</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EMT-B</td>
<td>46</td>
<td>57.17</td>
<td>23.595</td>
</tr>
<tr>
<td>EMT-I</td>
<td>12</td>
<td>60.67</td>
<td>16.571</td>
</tr>
<tr>
<td>EMT-P</td>
<td>62</td>
<td>55.61</td>
<td>19.454</td>
</tr>
<tr>
<td>Total</td>
<td>120</td>
<td>56.72</td>
<td>20.790</td>
</tr>
</tbody>
</table>

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TABLE 19
TWO-WAY ANOVA FOR BURNOUT: COMPARING ETHNICITY AND CERTIFICATION STATUS

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethnicity</td>
<td>12.642</td>
<td>1</td>
<td>12.642</td>
<td>.030</td>
<td>.862</td>
</tr>
<tr>
<td>Certification</td>
<td>1379.427</td>
<td>2</td>
<td>689.713</td>
<td>1.645</td>
<td>.197</td>
</tr>
<tr>
<td>Ethnicity x Certification</td>
<td>2658.298</td>
<td>2</td>
<td>1329.149</td>
<td>3.171</td>
<td>.046*</td>
</tr>
<tr>
<td>Error</td>
<td>47787.798</td>
<td>114</td>
<td>419.191</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected Total</td>
<td>51432.367</td>
<td>119</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Significant at the .05 level.

TABLE 20
T-TESTS FOR BURNOUT BETWEEN CAUCASIANS AND NON-CAUCASIANS

<table>
<thead>
<tr>
<th></th>
<th>t</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMT-B</td>
<td>-0.314</td>
<td>44</td>
<td>.755</td>
</tr>
<tr>
<td>EMT-I</td>
<td>1.859</td>
<td>10</td>
<td>.093</td>
</tr>
<tr>
<td>EMT-P</td>
<td>-2.724</td>
<td>60</td>
<td>.008*</td>
</tr>
</tbody>
</table>

*Significant at the .05 level.
TABLE 21
ONE-WAY ANOVAS FOR BURNOUT AND ETHNICITY

<table>
<thead>
<tr>
<th></th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Caucasian</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>779.729</td>
<td>2</td>
<td>389.865</td>
<td>.975</td>
<td>.380</td>
</tr>
<tr>
<td>Within Groups</td>
<td>43575.048</td>
<td>109</td>
<td>44354.777</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>44354.777</td>
<td>111</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Non-Caucasian</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>2106.125</td>
<td>2</td>
<td>1053.063</td>
<td>1.250</td>
<td>.363</td>
</tr>
<tr>
<td>Within Groups</td>
<td>4212.750</td>
<td>5</td>
<td>842.550</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>6318.875</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

There were no significant linear relationships between the eight recollection themes and the four burnout subscales.

4. Urban EMTs reported experiencing a higher level of burnout than rural EMTs.

5. For Caucasians, those with no children appeared to experience the highest level of burnout.

6. For Non-Caucasians, those with 1-2 children seemed to experience the highest level of burnout.

7. Non-Caucasians with paramedic level of certification experienced higher burnout levels than Caucasians.
CHAPTER 5

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

This chapter is divided into three major sections. The first section summarizes the problem and purpose of the study, the literature review, and the methodology. The second section summarizes and discusses the findings in relation to previous literature and seeks to draw conclusions. The final section includes recommendations for practice and further research.

Summary

Problem

Burnout among EMTs is a leading problem in the United States and Canada. This trend has continued from the 20th century into the 21st century. EMTs are faced with the everyday uncertainty of what will happen next. There are a number of factors that contribute to the high turnover rate of EMTs in the workplace including the unpredictability of front-line life-threatening situations, hostility at the trauma scene, persistent visual images of trauma, boredom, and the non-essential transfer of patients.

Although much research has been conducted on the causes and effects of burnout on EMTs, this research was mainly conducted in the 1980s. No studies have addressed an understanding of early childhood recollections and personality in relation to burnout.

Purpose of the Study

My primary purpose for this study was to analyze the early recollections of EMTs
in Toronto, Canada, and Mojave County, Arizona, from winter 2000 to winter 2002, and to assess their level of burnout. The results from this research should assist administrators in identifying EMTs experiencing burnout in order to develop more effective prevention strategies to target those at risk. It was hoped that the results of this research would assist Toronto Ambulance and Mojave County Emergency Services in identifying at-risk EMTs and to assist in screening EMTs who might be susceptible to burnout.

**Overview of Related Literature**

Literature relevant to the study was reviewed in two sections: first, studies examining burnout; sources of burnout, effects of burnout, and post-traumatic stress disorder were reviewed. Then, a review of the literature relevant to early recollections was presented.

**Burnout**

The rapid turnover rate of EMTs has been a problem among EMS since the early 1980s (Neale, 1991). Research into contributing factors to the work-stress burnout rate among EMTs has found that low salaries, poor interpersonal relationships with co-workers, general job dissatisfaction, excessive paperwork, the possibility of working in physically threatening environments, the risk of developing health problems and being exposed to contagious diseases, dealing with dying patients and their relatives, and continued educational recertification have all contributed to this phenomenon (Beaton & Murphy, 1993; Grigsby & McKnew, 1988; Neale, 1991). Other factors noted as sources of stress for EMTs include the number of runs done per shift in addition to duties performed during these runs (Boudreaux et al., 1996). Previous research suggests that EMTs experienced higher levels of stress while on-call, resulting in negative attitudes towards patients that are, at times, not only verbal, but physical (Cydulka et al., 1997;
Hammer et al., 1986; Jamner et al., 1991). Studies also identified that increased age of EMTs and length of time employed as an EMT correlated with the level of occupational stress (Cydulka et al., 1989). Whitley et al. (1988) reported that EMTs working in rural and urban locales experienced similar work-stress-related demographics. Administrative problems, lack of opportunity for promotion, low wages, and scheduling were contributing factors of occupational stress for both rural and urban EMTs.

A study by Revicki et al. (1988) noted a direct relationship between perceived occupational stress and increased depression. EMTs experience a higher level of exposure to events implicated in the development of PTSD symptoms (Fullerton et al., 1992; Weiss et al., 1995). When EMTs experience repeated exposures to these stressful events, at times placing their own lives at-risk, they can experience a powerful stress response. Critical incidents which include major catastrophies, injury or death of a fellow EMT in the line of duty, and contact with severely injured or dead children can lead to PTSD (Linton et al., 1993). In these events, rescue workers are exposed not only to the stress of the event itself, but their own reaction to that event as a health provider and their evaluation of their professional performance during these incidents (Raphael, 1986; Raphael et al., 1983-1984).

**Early Recollections**

Adler (1937) believed that early recollections were a reflection of an individual’s personality, and that certain memories were retained as a blue print for that individual to provide as an attitudinal reference point from which to gauge similar circumstances. Dreikurs (1989) stated that all memories serve to justify behavior, while Mosak (1968) proposed that the content of an individual’s early recollections could be grouped into certain lifestyle themes, and that these themes reflected that individual’s personality.
Although early recollections have been useful in identifying general personality traits, research findings do not support the substitution of early recollections for standard diagnostic tools in screening people (Barrett, 1980). A study by Caruso and Spirrison (1994) focused on the use of early recollections and personality traits and found that activity within a recollection was predictive of an individual's emotional stability. A study performed by Acklin et al. (1989) attempted to predict depression using early childhood recollections. Results of this study indicated that early recollections were a reliable method to distinguish depressed from nondepressed subjects.

**Methodology**

This ex post facto study was undertaken to investigate the relationship between the early recollections and the level of burnout in EMTs employed in Toronto, Canada, and Mojave County, Arizona. The subjects of this study were 132 EMTs, 12 of whom were omitted from the study due to varying circumstances ranging from malfunctioning of recording equipment, inability to recall early childhood recollections, and having a high lie scale score. Of the remaining 120 EMTs who participated in the study, there were 48 from Toronto, Canada, and 72 from Mojave County, Arizona. The data were then analyzed for the whole group, and then for urban and rural EMT populations.

**Instrumentation**

A demographic questionnaire was used to collect information on age, gender, marital status, number of children, years as an EMT, level of EMS certification, job title, number of hours on shift, average number of runs per day, education level, and ethnicity. A request-for-information form was provided for participants to receive feedback on results of the study. The Staff Burnout Scale for Health Professionals (SBS-HP) was used to examine global burnout levels, and to identify job dissatisfaction, psychological and interpersonal tension, physical illness and distress, and unprofessional patient
relationships. In addition, EMTs were also required to participate in a short audiotaped interview, and were asked to recall two of their earliest childhood recollections. Comparisons were made between the eight early recollection themes and global burnout levels, and the following four sub-scales of the Staff Burnout Scale for Health Professionals (SBS-HP): job dissatisfaction and strain, psychological interpersonal tension, physical illness and distress, unprofessional relationships, and global burnout levels. Statistical analyses were also conducted to make comparisons of burnout levels between rural and urban EMT populations.

Findings and Discussions on Hypotheses

As a result of the review of literature, the following three null hypotheses were developed as the framework for this research.

1. There is no linear combination of the eight early recollection themes which predict global burnout.

2. There is no significant relationship between the linear combination of the eight early recollection themes and a linear combination of the four burnout scales.

3. There is no significant difference between burnout levels of EMTs in rural or urban locations of employment.

Hypothesis 1 was statistically analyzed by using multiple linear regression analysis. It was found that only 5.8% of the variance in burnout was accounted for by the eight early recollections. This indicated that there was no significant relationship between the eight early recollection themes and burnout. A possible explanation as to why findings were insignificant may be due to a less than optimal inter-rater reliability level between judges on scoring of early recollections. Judges maintained an average reliability rate of .448, meaning that judges agreed on early recollection themes less than 50% of the time. In addition, the mean burnout level of EMTs studied was 56.72 and
while consistent with past research with hospital-based professionals (Jones, 1980b), this mean burnout level may not have been high enough to find a clearer connection between burnout and early recollection themes. The eight early recollection themes chosen may not have been appropriate as descriptive categories for burnout. Another possible explanation is that early recollections may not solely be a good predictor of burnout, but may be useful for qualitative data in addition to a diagnostic tool.

Hypothesis 2 was statistically analyzed by using canonical correlation to compare scores of early recollections against the four subscales of the SPS-HP. The results of the data indicated that there was no significant relationship between the eight early childhood recollections and the four subscales of the SBS-HP. The findings for this hypothesis may not have been supported due to possibilities of poor inter-rater reliability and mean burnout levels as stated for hypothesis 1.

Hypothesis 3 was statistically analyzed by using the t test to compare mean scores of global burnout levels of EMTs from both rural and urban locations. It was found that those EMTs who worked in urban locations experienced a significantly higher level of burnout than did EMTs who worked in a rural location. This may be due to the fact that urban EMTs reported more physical illness and distress than did the rural EMTs.

General Overview of Results

The overall results of data analysis in relation to burnout, the sub-categories of the SBS-HP, and the eight early childhood recollections were inconclusive. Further analysis of the various demographic variables of EMTs and burnout resulted in several findings. The first finding was that urban EMTs reported a significantly higher level of burnout than did rural EMTs. This may be due to the fact that urban EMTs work a 12-hour shift as opposed to rural EMTs who work 24-hour shifts. The length of shift may account for urban EMTs having a higher level of burnout than rural EMTs. Rural EMTs
have more time during their shift to process traumatic events than do urban EMTs. Rural EMTs also have more time to attend to the follow-up of patient care during their shifts. The average number of runs performed by EMTs during their shift was also a good predictor of burnout. EMTs who performed a greater number of runs experienced a higher level of burnout. This finding is supportive of previous research conducted on EMT burnout (Boudreaux et al., 1996). A reasonable explanation of this finding is that when EMTs run from call to call they have little time to process and get closure on what they have just experienced. This feeling of being on the go in life-or-death situations, in conjunction with situational variables such as time of transport, traffic, and severity of injuries, increases the level of anxiety of EMTs. Without the necessary time to process and calm down between calls, EMTs are literally going with the flow of adrenaline.

Other findings in this study included that the most predominant early recollections for EMTs were those with martyr-victim and excitement seeker themes. In addition, Caucasian EMTs with no children experienced a high level of burnout, while Non-Caucasians with 1-2 children also experienced a high level of burnout. In relation to level of certification, Non-Caucasians with paramedic level of certification experienced higher burnout levels than Caucasians. A reasonable explanation for the small number of Non-Caucasians working as EMTs is that careers in EMS run through generations. As a result, Caucasians may come to expect work-stress burnout through their learned experience with family members. Whereas, Non-Caucasians may have difficulty adjusting to traumas without prior expectations/experiences. As EMTs, the paramedic level is the highest level of certification. With this level of certification comes a higher level of training, more years on-the-job, the ability to perform advanced life-support procedures, and increased liability. Although EMTs working at the paramedic level may be more certain of how to do their job, the responsibility that goes along with that higher
level of certification can be at times overwhelming.

Conclusions

Expected results of a relationship between work-stress burnout and early recollections of EMTs were not evident from this study. Vettor and Kosinski (2000) attempted to make an intuitive case to predict and identify people who were susceptible to burnout. While early recollections have been used in prior research for the purpose of aiding in diagnostics, in no studies found were they used as the sole indicator for any form of diagnosis. Rather, various themes chosen to be studied in early recollections were used as supplementary data to add to findings from validated diagnostic tools.

The analysis of data indicated that additional research and study are required to fully understand and conceptualize the psychological dynamics involved among early recollections and their impact on burnout. The data indicated that urban EMTs experienced a higher level of burnout than EMTs working in the rural location.

General Application to EMT Population

Obvious differences exist between EMTs working in rural and urban locations. The remote location of patients is an issue for both. EMTs in urban areas may need to climb 50 floors in a high-rise building while rural EMTs may find themselves having to abandon their vehicles in remote areas to approach the scene of trauma on foot. The length of transport is also an issue for all EMTs. In urban areas it is not unusual for emergency rooms to turn people away. As a result, EMTs must go from hospital to hospital at times in rush-hour traffic to drop off patients. In rural areas, the nearest hospital may be an hour or more away.

Implications

The purpose of this study was to investigate the relationship between early
recollections and the level of burnout of EMTs from Toronto, Canada, and Mojave County, Arizona. Although there is research supporting the idea that certain personality types tend to experience burnout more often than others (McFarlane, 1989; Palmer & Spaid, 1996), the findings of this study did not support the notion that there seems to be a pattern in the personalities of EMTs who experience burnout. Although there is research stating that work location has no impact on level of burnout (Whitely et al., 1988), this study indicated that EMTs who work in urban locations had a higher level burnout than those in rural areas.

This study also indicated that EMTs with a paramedic level of certification, and one to two children, and/or who work in urban areas have an increased risk of experiencing burnout. This was supportive of research stating that EMTs with higher levels of certification experienced a greater level of burnout (Cydlulka et al., 1989).

**Recommendations**

**Recommendations for Mental Health Service Providers**

The results from this study have implications for mental health service providers who are working with EMTs:

1. There is a need to understand the role of burnout in the experience of EMTs' ability to perform their job duties. EMTs need to be provided with education on the symptoms of burnout.

2. There is a need to understand the linkage between burnout, the number of runs per day, and types of runs EMTs are called to.

3. There is a need to develop a further understanding of the effects of location on work-stress burnout.
**Recommendations for EMTs**

I propose to make the following recommendations for EMTs.

1. Colleges and universities providing training for students pursuing careers as EMTs should provide thorough education on symptomatology of burnout.

2. EMTs entering the workforce should be supervised and monitored by staff on a month-to-month basis individually or in small groups to debrief on various on-the-job experiences to prevent burnout.

3. EMTs should be provided with a selection of possible appropriate services to aid in the minimization of burnout symptoms.

4. A structured program should be developed for EMTs who experience calls with mass casualties to aid in debriefing EMTs immediately after traumatic calls.

5. Because urban EMTs experience a higher level of burnout than those EMTs working in rural areas, EMTs working in urban locales should be rotated among various locations within that area.

**Recommendations for Further Study**

Based on the findings of this study, recommendations for further study include:

1. There should be another study replicating what has been completed to compare results to determine the validity of the initial research.

2. A study investigating the connection of early recollections and burnout levels should be conducted using EMTs who are currently receiving mental health services for work-stress burnout.

3. This study should be replicated with professionals from various areas of emergency medical services to include fire fighters, police officers, emergency room physicians, and nurses.
4. A study investigating the longitudinal effects of burnout on EMTs and early recollections from the beginning of an EMT's career throughout the first 5 years may give more information in this area. It may indicate whether early childhood recollection themes change over time.
APPENDIX
APPENDIX A

QUESTIONNAIRES
PARTICIPANT INFORMATION FORM

Predicting Work-Stress Burnout in Rural and Urban Emergency Medical Technicians

Through the use of Early Recollections

Dear Participant:

Andrews University supports the practice of informed consent and protection for human subjects participating in research. The following information is provided for you to decide whether you will participate in the present study. You are free to withdraw at any time.

I am interested in studying the use of early memories in detecting susceptibility to burnout in paramedics. This information is important as it will help us to develop early interventions in the detection of stress and burnout. You will be asked to fill out several questionnaires, one which is an informed consent letter. The second includes general demographic information. The third questionnaire is the Staff Burnout Scale for Health Professionals. You will then be asked to recall two of your earliest childhood memories.

Your participation is solicited but strictly voluntary. I assure you that your name will not in any way be associated with the research findings. The information will be identified only through a code number. No names will be included on any of the statistical files which are available to others. All information derived by the study will be used only for research and teaching purposes. Please inform me if you would be interested in receiving a summary of the results of the study by indicating so on the attached form.

If you would like additional information concerning this study before or after it is completed, please contact me by email or mail. Thank you very much for your time, and I appreciate your interest and cooperation.

Sincerely,

Susan M. Vettor
Doctoral Student

e-mail: susanv@andrews.edu

160 Bell Hall
Andrews University
Berrien Springs, MI 49085
PARTICIPANT CONSENT

Predicting Work-Stress Burnout in Rural and Urban Emergency Medical Technicians through the use of Early Recollections

I have read the participant information form about the nature and procedures of the study, have received a copy, and understand it in full. I agree to participate in the study and I consent to have the information used for the purposes of this study.

I have been assured that Ms. Susan Vettor will respond appropriately to any questions that I may have. I can withdraw from the study at any time and this will not put me at any disadvantage. The persons conducting this study subscribe to the ethical conduct of research and to the protection at all times to the dignity, rights, interests, and safety of its participants.

__________________________________________________________________________
Signature of Participant ____________________________ Date

__________________________________________________________________________
Signature of Witness ____________________________ Name of Witness

ID#
DEMOGRAPHIC QUESTIONNAIRE

This questionnaire is being used for research purposes. All information will be treated with strict confidentiality. We do not need your name. Please answer the question the best that you can.

ID#

1. Age: _____

2. Gender: Male ( ) Female ( )

3. What is your marital status: Single ( ) Married ( ) Separated ( ) Divorced ( )
   Remarried ( ) Widowed ( )

4. How many children do you have: ______________

5. Years worked as a paramedic: ______________

6. What is your level of EMS certification: EMT-B/Level 1 ( )
   EMT-I/Level 2 ( )
   EMT-P/Level 3 ( )

7. Number of hours on shift: __________

8. Job Title: ________________________________

9. Average number of runs per day: ________________________________

10. What is your highest level of education received:
    High School ( ) Some College ( ) College Degree ( )
    Some University ( ) University Degree ( )
    Some Graduate School ( ) Graduate Degree ( )
    One or more Graduate Degrees ( )

11. What is your ethnicity:
    White/Caucasian Non-Hispanic ( ) Black/Non Hispanic ( )
    Hispanic/Latino ( ) Asian or Pacific Islander ( )
    Native American ( ) Other (Specify): ____________________________
12. What is the most stressful part of your job:

____________________________________________________________________

____________________________________________________________________

____________________________________________________________________

13. How would you recommend the stress be eased:

☐ Educating the public on health services

☐ Training in self-defense

☐ Shorter shifts

☐ Having counseling services available

☐ Reduce the amount of paperwork

☐ Increase the amount of paramedics within my unit

☐ Other(s) (please specify) ______________________

____________________________________________________________________

____________________________________________________________________

____________________________________________________________________

____________________________________________________________________
REQUEST FOR INFORMATION FORM

Please send me the information on the results of this study.

I would like to talk with you about the results.

Name: ____________________________________________

Title: ____________________________________________

Address: _________________________________________

Address: _________________________________________

City: _____________________________________________

Province: Ontario

Postal Code: _______________________________________

Phone Number: ___________________________________
EARLY RECOLLECTION FORM

ID#

1. Instructions: I want you to think back as far back as you can. What is the first memory that comes to mind. Something about which you can say. “One day I remember...”

Please describe this memory in as much detail as possible.

How old were you when this happened:

How did you feel:

Most Vivid:

2. Instruction: “What memory comes to your mind next?”

How old were you when this happened:

How did you feel:

Most Vivid:

PROMPTS: What is a memory you have before the age of 8

Are there any other details you can recall about this memory
Dear Judge:

I am interested in studying the use of early recollections in detecting susceptibility and resistance to burnout. As a result of your experience in the field of psychology you have been asked to participate as an expert judge. You are asked to read the early recollections provided and for each recollection fill out this form by indicating which themes you believe to be present by placing a checkmark or an x in the corresponding box. It is not expected that any early recollection will meet all of the descriptors given for each theme but rather have components of that theme within the early recollection. You are asked to indicate any theme(s) which may occur in the recollection. You are also asked to place the identification number of the recollection on this form.

- Getter: Exploits and manipulates life and others by actively or passively putting others into their service. They tend to view life as unfair for denying them that to which they feel entitled. They may employ charm, shyness, temper, or intimidation as methods of operation. They are insatiable in his/her getting.

- Controller: People who wish to control life or who wish to ensure that life will not control them. They generally dislike surprises, controls their spontaneity, and hides their feelings since all of these may lessen their control. As substitutes they favor intellectualization, rightness, orderliness, and neatness. With their godlike striving for perfection, they depreciates others.

- Driver: Are people in motion. Their overconscientiousness and dedication to their goals rarely permit them to rest. They act as if they wants to have “it” (whatever it may be) completed on the day they die. Underneath they nurse a fear that they are nothing, and their overt, overambitious behavior is counterphobic.

- Pleaser: Are people who need to be liked, they feel required to please everyone all the time. Particularly sensitive to criticism, they feel crushed when they do not receive universal and constant approval. They train themselves to read other people carefully in order to discover what might please them and shift from position to position in an attempt to please. They see the evaluations of others as the yardsticks of his/her worth.
Martyr/Victim  Everything befalls victims. Innocently or actively they pursue the vocation of disaster chaser. Associated characteristics may be feelings of nobility, self-pity, resignation, or proneness to accident. Secondarily, they may seek the sympathy or pity of others. Martyrs are in some respects, similar to victims. Martyrs also suffer, but whereas victims merely die, martyrs dies for a cause or for principle. Their goal is the attainment of nobility, and their vocation is that of injustice collectors. Some martyrs advertise their suffering to an unconcerned audience, thus accusing them of further injustice. Others enhance their nobility by silently enduring and suffering.

Aginner  People who oppose everything life demands or expects of them rarely possess a positive program in which they stand for something. They only know they are against the wishes or policies of others. They may behave passively, not openly opposing but merely circumventing the demands of others.

Feeling Avoider  People who avoid feelings may fear their own spontaneity which might move them in directions for which they have not preplanned. They hold the conviction that man is a rational being and that reason can solve all problems. They lack social presence and feel comfortable only in those situations where intellectual expression is prized. Their most valued techniques are logic, rationalization, intellectualization, and talking a good game.

Excitement Seeker  Excitement seekers despise routine and repetitive activities. They seek novel experiences and revel in commotion. When life becomes dull, they stimulates or provokes it in order to create excitement. They require the presence of other people and often places themselves in league with others on whom they can rely to assist them in search for excitement. Some excitement seekers, however, do not involve others and find excitement through fears and rumination.
APPENDIX B

CORRESPONDANCE
Susan Vettor from Andrews University in Michigan is conducting a study on paramedics and work-stress burnout. This study will require approximately 15 - 20 minutes of your time, during which you will be asked to complete a brief interview and questionnaires. Of course, your participation will be voluntary and strictly confidential. This study will be conducted in December and in March at various locations within the department. We hope that you will assist her in this study.

Should you have any questions about this study, you may contact Susan Vettor at (905) 856-3539 or via email at susanv@andrews.edu
February 29, 2000

1337 Wolcott Ave.
St. Joseph, MI
49085

James Lucchesi
Adler School of Professional Psychology
65 East Wacker Place, Suite 2100
Chicago, IL
60601-7203

Dear Mr. Lucchesi,

I am writing to you to request permission to copy Unit 19 “Early Recollections -- Typological Approach” and Unit 25 “Early Recollections -- Sequential Analysis (Types)” from the Mosak, Schneider, and Mosak’s *Life Style: A Workbook*. In addition I am also requesting permission to copy the descriptions of the following themes: the getter, driver, controller, pleaser, opposer, victim, martyr, feeling avoider, and excitement seeker taken from Mosak’s book *On Purpose*.

I am very interested in using these materials as part of my dissertation titled “Predicting Work-Stress Burnout in Emergency Medical Technicians through the use of Early Recollections.” The materials from *Life Style: A Workbook* will be used in training judges to recognize various themes present in early recollections. Whereby the descriptors taken from *On Purpose* will be used as the indicators for the themes, on judging evaluation forms.

Should you have any questions about my research or the use of these materials feel free to contact me at (616) 983-8719 or by email at susanv@andrews.edu.

Sincerely,

Susan Vettor, M.A.
Doctoral Student
Andrews University
Berrien Springs, MI
49104

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July 12, 1999

Susan Vettor  
Andrews University  
1337 Wolcott Ave.  
St. Joseph, MI 49085

Dear Ms. Vettor:

This letter entitles Susan Vettor the ability to make up to one hundred and fifty (150) copies of the Staff Burnout Scale for Health Professionals (SBS-HP) Test. Payment of $100.00 was received and includes both the photocopying as well as one copy of the manual. This permission is limited to use by Ms. Vettor for her dissertation purposes. This permission does not allow Ms. Vettor the ability to distribute, sell, transfer rights or attempt to utilize or duplicate the materials or proprietary scoring methods and results in a manner that infringes on NCS’s copyrights without the express approval and proper prior written consent of NCS. At the same time, this permission does not allow any test items to be included in Ms. Vettor’s dissertation.

NCS typically does not permit individuals the ability to translate, change or alter an instrument in any way. However, due to the type and circumstances of your request, NCS will permit Ms. Vettor the ability to copy the SBS-HP Test only.

If you have any questions, please feel free to call me at (847) 292-3347.

Sincerely,

Lauren Shohet  
SRA Product Manager

---

Workforce Development Group  
Chicago Office: 9701 West Higgins Road, Rosemont, IL 60018-4720  1-800-221-8378  
Minneapolis Office: 5605 Green Circle Drive, Minnetonka, MN 55343  1-800-627-7271, Ext. 5959

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APPENDIX C

INSTRUCTIONS FOR JUDGES TRAINING
Day One

Examiner: I want to thank everybody for coming to the first day of training. As you know, you have been selected to participate in the study that I am conducting on burnout and paramedics. At this time I would like to reinforce the fact that your participation as judges in this study is strictly on a voluntary basis. As judges, you are going to be asked to evaluate approximately 300 early recollections. What you are going to be looking for in these recollections are some basic themes, of which include: getters, controllers, drivers, pleasers, martyrs/victims, aginners, opposers, feeling avoiders, and excitement seekers. Before I actually give you the recollections from paramedics who were involved in this study, we are you to conceptually understand these various themes. Let's start by opening the packets and go through the various materials. If you look closely you'll notice that there are three different items in the packets. The first is a copy of training materials for early recollections taken from Mosak, Schneider, and Mosak's (1993) Life Style A Workbook. This workbook is used in training Adlerians to understand the life-style, of which early recollections are a component. The sections we will be using involve having to label various recollections or groups of recollections. themes in addition to the descriptions of the various components which make up these themes.

Instruction: I would like you to take some time now to read through the various themes, and please, feel free to ask me any questions you may have.

Examiner: I also want to reinforce the fact that not all recollections will meet all of the descriptors of any recollection, but, may contain various components of a theme or themes. Lastly, included in the packet are twenty-eight samples of early recollections taken from fourteen paramedics. these recollections are not going to be included in the study, but will be used specifically for training purposes.

Instruction: If everyone could now turn to the workbook materials. I would like you to read each recollection and by using the descriptors on the early recollection rating form, I would like you to indicate which theme or themes you feel best fit each recollection. I would like you to begin working individually, on unit 19 which includes recollections 1 through 37. Remember you must indicate a theme for each recollection, and that each recollection may have more than one theme present.

<Have judges begin evaluating section one of the workbook materials>
Examiner: Now that everyone has completed the first section of the workbook, I would like to take some time to address any questions you may have about what we just did.

<Ask for questions>

Examiner: What I would like to do now is go through each recollection and have you state which theme or themes you believed to be present.

<Go through recollections in section 1 noting how each judge evaluated each recollection, making special note of those recollections where all three judges disagreed on the theme(s) present>

Examiner: What I am going to do now is go through those recollections where all of the judges disagreed on the themes they believed to be present and get an understanding of why you chose a particular theme or themes over another.

<Ask each judge to state what theme they chose and why>

Examiner: After hearing the reasons why each judge chose a particular theme or themes, would any of you choose to change your original choice of theme or themes and also explain why you would now make those changes?

<Note the changes made by each judge>

Examiner: Since we are running out of time. What I would like to do is have everyone complete a few items between now and the next time we meet. One of the items I would like you to work in is the second section of I would like you to do is read each recollection carefully, and taking into consideration the commentaries on the feeling and most vivid part of the recollection, use the early recollection evaluation forms and indicate by checkmark or x which theme(s) are present. Also please indicate on the evaluation form the identification number of the recollection. And I will see everyone next week.

Day Two

Examiner: What I would like to do first today is answer any questions anyone has about the homework assignment given last week. Was everyone able to complete the workbook section, and evaluate the twenty-eight recollections? Did anyone have any problems?
Examiner: So what I would like to do first today is go over the second section of the workbook and see how everyone rated the groups of recollections. If you remember, the assignment was to rate the six different groups of early recollections with a predominant theme or themes.

Examiner: Just like last time I would like to go through those recollections where all of the judges disagreed on the theme or themes they believed to be present and get an understanding of why you chose a particular theme or themes over another.

Examiner: After hearing the reasons why each judge chose a particular theme or themes, would any of you choose to change your original choice of theme or themes and also explain why you would now make those changes?

Examiner: Does anyone have any questions about what we just did?

Examiner: Now what I would like to do is go over the twenty-eight recollections given by the fourteen paramedics. I wanted to specifically note that how we will be proceeding at this point is going to be very similar to how we will be judging the recollections of actual participants. So before we start with the sample recollections I would quickly like to go over how we will be proceeding with the official judging procedures and keep this section as close as possible to the actual process we will be following. What will happen is that I will distribute the recollections as I did last week and have you complete the evaluations individually. Once you have completed evaluating the early recollections of paramedics I will gather the early recollection evaluation forms from each of you. Using a spread sheet (see Appendix) I will then process how each judge evaluated each recollection. In cases where each judge indicated a different theme for a recollection, we will reconvene as a group and each judge will state their reason(s) for choosing a particular theme(s). Taking this information into consideration, we will then vote. Now getting back to the task at hand, I
would like each judge to quickly go over the theme(s) they selected for each of the 28 recollections.

<The examiner should then indicate the themes each judge states recording them on a spread sheet, making particular note of those themes where the three judges disagreed on themes>

Examiner: What I would like to do now is go through the recollections one by one, where each judge differed on the presence of a theme(s) and have each judge state what theme(s) they believed to be present and why. Taking into consideration this information, we will then vote by secret ballot on your final opinion of the presence of theme(s) for that recollection.

<For each instance, state the identification number of each recollection>

Examiner: This concludes the training process for this study. Does anyone have any questions before we depart? Should you think of any questions feel free to contact me at any time. Within the next week I will begin to giving each of you some of the official recollections of paramedics participating in this study for evaluation. I would like to thank you all for participating as judges in this study.
REFERENCE LIST


Beaton, R. D., & Murphy, S. A. (1993). Sources of occupational stress among firefighter/EMTs and firefighter/paramedics and correlations with job-related outcomes. *Prehospital and Disaster Medicine, 8*(2), 140-149.


Curriculum Vita

Susan M. Vettor
Mohave Mental Health Clinic, Inc.
1145 Marina Blvd.
Bullhead City, AZ 86442
(928) 758-5905

Education

Andrews University, 2002
Ph.D. Counseling Psychology

Adler School of Professional Psychology, 1997
M.A. Counseling Psychology

Andrews University, 1994
B.Sc. Psychology

Professional Experience

2001 - 2002 SMI therapist at Mohave Mental Health, Inc., Bullhead City AZ.
2000 - 2001 Psychology Intern at Pilgrim Psychiatric Center, West Brentwood, NY.
1997 - 2000 Doctoral counseling student at Andrews University Counseling and Psychological Services Center, Berrien Springs, MI.
1996 - 1997 Masters counseling student at Adler Counseling and Consulting Center, Toronto, Ontario Canada.
1997 Masters counseling student at the Adventist Counseling Center, Toronto, Ontario Canada.

Publications