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Emergency Medical Service Career Longevity: Impact of Alignment Between Preemployment Expectations and Postemployment Perceptions

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Abstract

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Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

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Abstract

The purpose of this qualitative study was to investigate whether there were differences between the preconceived notions of emergency medical technicians and paramedics prior to entering the profession and their notions of the vocation after facing the realities of the job. The contribution of alignment or misalignment to job satisfaction and the intention to leave the profession was also further investigated. This research is important as there currently is a gap in the literature pertaining to the factors affecting career longevity of emergency medical service (EMS) professionals. The degree of fit between individual and occupational characteristics guided this phenomenological study according to Lowman's theoretical model of career assessment and counseling. Study participants (n = 10) were recruited from organizations providing EMS training courses and ambulance service providers in New York State. Data were collected from semistructured interviews and the information was coded into themes. Key findings indicated aligned expectations and experiences of altruism led to satisfaction, physical challenges not considered prior to employment were associated with intent to leave the profession, and a perception of EMS as a transient career. This study's implications for positive social change are that its results will likely aid organizations in developing strategies to retain prehospital service workers, resulting in improved responses to the medical emergencies of communities and improvements in the care provided to society's sick and injured.

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Dedication

This work is dedicated to my parents, Josephine and Carmine Belotto. They taught me everything I ever needed to know and succeed in this life. Now that the chapters of this dissertation are complete, I look forward to writing Chapter 6; dedicating my life to giving back and doing the good work of the Lord, Jesus Christ.

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I am grateful for my family and friends who believed in me and kept telling me I could do this. I am also thankful for my colleagues and friends who helped me by participating on panels and providing feedback on the data coding process.

Finally, I must acknowledge the research participants: the emergency medical technicians, paramedics, and paramedic students who committed to this research, not just by giving their time, but by providing the candid and poignant descriptions of their personal experiences. It is their stories that comprise the substance of this work.

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Chapter 1: Introduction to the Study

Introduction

In this qualitative study, I examined whether the preconceived notions of individuals entering the emergency medical services (EMS) profession were aligned or misaligned with the realities of the job. In addition, if a misalignment did exist, whether this contributed to workplace dissatisfaction and the intention to leave the profession was also investigated. Due to an increasing demand for emergency medical technicians (EMTs) and paramedics, the recruitment and retention of EMS professionals has become a critical issue for the industry as many agencies have reported difficulty in maintaining adequate staffing levels (Freeman, Slifkin, & Patterson, 2009). Therefore, this study was necessary as without a better understanding of why EMS workers decide to leave the profession, ongoing staffing shortages could compromise the ability of EMS agencies to respond to projected increasing call volumes (U.S. Department of Labor, Bureau of Labor Statistics, 2014). The results of this study may have positive social change implications as improved staffing levels may result in saved lives and reduced morbidity as communities will receive the benefits of prompt responses to medical emergencies.

In this chapter, I will present a synthesis of selected literature in order to shed light on issues pertaining to the recruitment and retention of EMS professionals. Projections for an increasing percentage of the elderly population and how this is driving projections for increasing emergency call volumes and demand for EMTs and paramedics will be explained in the problem statement. The research questions will illustrate the focus of the study on whether preconceived notions are aligned or misaligned with job

realities and if misalignment leads to dissatisfaction and the intention to leave the profession. The underlying philosophies with regard to work environments and career behaviors that drive the study will be explained in the theoretical framework. I will also provide the rationale and advantages of the qualitative research method to examine the topic under study in the nature of the study section, while terminology will be explained in the definitions section. Finally, issues related to bias and the transferability of the results of this study will be discussed in the limitations.

Background

EMS is an intricate network of services that includes the initial response, evaluation, rescue, and management of patients experiencing trauma and medical emergencies in an environment outside of the hospital (prehospital), and transport to a medical facility by trained personnel (National Registry of Emergency Medical Technicians, 2001–2015b). EMTs and paramedics responded to over 36 million calls for help in the United States in 2009 (Federal Interagency Committee on EMS, 2012). Due to recent projections for the aging of the U.S. population (U.S. Census Bureau, 2014), medical emergencies and call volumes are expected to increase to even higher levels in the near future (U.S. Department of Labor, Bureau of Labor Statistics, 2014). Driven by these projections, employment for EMTs and paramedics has grown at a greater rate than any other allied health profession, including registered nurses (RN), licensed practical nurses (LPN), nursing aids, and medical assistants (U.S. Department of Transportation, National Highway Traffic Safety Administration, 2008). Employment for EMTs and paramedics has also grown at a greater rate than any other public safety profession,

including police and sheriff's patrol officers and firefighters (U.S. Department of Transportation, National Highway Traffic Safety Administration, 2008).

Historical Roots of EMS

The evolution of prehospital care and transportation of the sick and injured has deep historical roots. Biblical references speak of the Good Samaritan who tended to the wounds of an injured traveler and transported him to an inn for further care (Luke 10:25, New International Version). In the not so distant past, a call for a medical emergency would have likely resulted in the arrival of a hearse to the door. As recent as the 1960s, half of the ambulance services in the United States were provided by morticians (National Academy of Sciences, National Research Council, 1966). The hearse was an efficient vehicle as it could accommodate the transportation of individuals in the supine position on litters that could easily be removed from the vehicle and rolled into a medical facility. Over the years, however, realizations that more than rapid transport was needed to increase chances of survival, fueled advances in the field with regard to training personnel and the development of procedures emphasizing initial care and stabilization at the scene of an emergency prior to transport (Mabry & DeLorenzo, 2014).

Military influences. Much of the history of prehospital care is steeped in the care and removal of injured soldiers from the battlefield. Credit for the first prehospital system is often given to the chief physician in the army of Napoleon who realized the importance of moving medical services forward into the field, using mounted surgeons and litter bearers trained in first aid (Blagg, 2004). The theme of "stay and stabilize" over "scoop and run" was advanced during World War I through the use of splinting and better

control of hemorrhage prior to transport, thereby reducing subsequent amputations and mortality due to femur fractures, one of the most fatal injuries of the war (Kirkup, 2003).

Subsequent wars brought new technologies to react to new weapons, different types of injuries, and higher casualty rates. The helicopter ushered the next phase of rapid transport from the battlefield during the Korean War; however, medical care was still not administered during transport (Iserson & Moskop, 2007). The Vietnam War era gave birth to the helicopter medical evacuation (MEDEVAC), where trained combat medics could actually provide care to several patients during transport to hospitals (Mabry & DeLorenzo, 2011). Through the 1960s and 1970s, returning veterans with both prehospital training and wartime experiences helped to advance the development of our modern EMS systems (Shah, 2006).

The modern era of EMS begins. The startling fact that a soldier in a combat zone could receive better care and had a better chance of survival than a civilian involved in an accident on one of America's highways helped to underscore problems in the system and usher in the modern era of EMS. A landmark paper issued by the National Academy of Sciences National Research Council (1966) called for training standards for ambulance personnel, systems enabling communication between personnel at the scene and emergency facilities, and standards for the design and construction of ambulances that were suitable for the rendering of care during patient transport.

While wartime experiences and the rising death rate due to highway accidents underscored the need for prehospital care in trauma emergencies, advances in medicine were improving the ability to treat early complications of medical emergencies such as

acute myocardial infarction (Adgey & Pantridge, 1970). The age of the mobile intensive care unit arrived in Ireland in 1966 with the implementation of an ambulance stocked with the equipment usually found in hospital coronary care units, including a battery operated electrocardiograph (EKG) monitor and direct current (D.C.) defibrillator (Kernohan & McGucken, 1968). Unlike the unit in Ireland that was staffed by a physician and nurse, programs in the United States, beginning in 1968, started using specially trained personnel called paramedics (Eisenberg, Pantridge, Cob, & Geddes, 1996). Advances in medicine and technology and the documented successes of early prehospital care programs (Pantridge & Geddes, 1967) fostered a slowly changing perception of EMS. Organizations, such as the American Heart Association and the American Red Cross, embraced the new pharmaceutical therapies and concepts, such as cardiopulmonary resuscitation and defibrillation, while the growing confidence of medical and community leaders cultivated the perception that EMS was not simply a transportation service (Shah, 2006).

EMS today. Advanced life support (ALS) protocols now encompass a range of interventions formerly only available in hospital emergency departments and coronary care units. Typical ALS protocols allow paramedics to perform endotracheal intubation, monitor EKGs, start intravenous lines, and administer medications to address numerous medical and trauma emergencies at the scene of an emergency and en route to the hospital (The Regional Emergency Medical Advisory Committee, New York City, 2015). In just five decades since the first mobile intensive care unit, EMS in the United States has grown into a system encompassing approximately 80,000 EMS vehicles, including

ambulances, helicopters, and boats, and over 800,000 EMS personnel (Federal Interagency Committee on EMS, 2012).

EMS in the future. In addition to the tremendous growth in the capacity of the service, the scope of prehospital protocols continues to be explored. The potential to reduce the time to thrombolytic treatment for stroke patients may be possible in the future with the use of a Stroke Emergency Mobile: special units staffed with paramedics and neurologists and equipped with CT scanners (Ebinger et al., 2014). While the boundaries of prehospital care protocols may continue to be extended, one of the greatest potentials for EMS may lay in its ability to become a health promotion agency.

A vision for EMS in the future is the transition from a solely reactive service to one that also provides proactive services, effectively reducing the need for individuals to call 9-1-1 (Kirkwood, 2011). This vision seeks to leverage the mobility and round the clock availability of EMS resources to address healthcare needs in underserved communities and populations (Erich, 2012). Colleges are already training community paramedics to fill the gaps in the current healthcare system (Hennepin Technical College, 2012). These graduates are trained in the treatment of chronic illnesses and community health monitoring, including skills such as health screening, health instruction, disease management, wound care, dispensing immunizations, and safety programs (Hennepin Technical College, 2012).

Avoiding emergency departments and preventing hospital admissions are key concepts emphasized in much of healthcare reform (Munjal & Carr, 2013). Innovative models for the future see EMS arriving at a patient’s home and coordinating elements of

care by linking the patient to the most appropriate community resources, whether they would be social services or healthcare services that could be provided more efficiently and at lower cost in a setting other than the hospital. Typical calls to 9-1-1 often include cases that would be better served by transportation to a patient's primary care physician, urgent care center, dialysis center, shelter, or even to the house of a relative or neighbor (Munjal & Carr, 2013). As paramedics and EMTs serve as the first contact with healthcare service for many patients, future models see much greater potential to utilize the skills of EMS professionals to more effectively influence the pathways of patients' overall care (Evans, McGovern, Birch, & Newbury-Birch, 2013). These models would entrust to EMS a greater responsibility to ensure a patient's first destination is the most appropriate place for them to begin their healthcare journey, resulting in more appropriate use of acute healthcare resources and improving the overall service provided to patients.

Workforce Planning

Shaped by an increasing awareness of the need to provide initial medical care at the scene of an emergency, the scope of prehospital care protocols has expanded over the latter half of the 20th century (The Regional Emergency Medical Advisory Committee, New York City, 2015). With the attendant advances in medicine and an environment of increasing confidence in the abilities of EMS professionals to perform the necessary skills, EMTs and paramedics are in a position to provide even more sophisticated and complex interventions in the future (Ebinger et al., 2014). Given their role as first contact with the healthcare system (Evans, McGovern, Birch, & Newbury-Birch, 2013), they are also poised to be key players in healthcare reform through their ability to coordinate more

efficient use of healthcare resources (Munjal & Carr, 2013). Given the vision for the expanding roles for these professionals in the future, in addition to projected increases in employment demand, workforce planning is crucial to ensure that an adequate workforce will be there to accept these new responsibilities.

Intention to Leave the Profession

Understanding workforce turnover is complicated by the difficulty in tracking individuals who have already left a job or profession. In addition, the act of quitting is likely the result of a complex withdrawal decision process, with variables associated with each stage exerting influence and mediating the final decision to quit (Mobley, 1977). Therefore, researchers have found it more practical and informative to focus on the examination of the antecedents of actually leaving (Chapman, Blau, Pred, & Lopez, 2009). Considered to be proximal antecedents to leaving, the intent to leave and intent to search are generally considered to be the strongest markers to explain turnover behaviors (Blau & Gibson, 2011). Midproximal antecedents, such as job satisfaction and commitment to the organization and profession, have a moderate impact, while distal antecedents such as perceptions of job characteristics, such as salary and working conditions, affect satisfaction (Blau & Gibson, 2011). The experience of job dissatisfaction may initiate a cascade of events that leads from thinking of quitting to evaluations of alternatives and costs of quitting to the intention to leave or stay at one's current job (Mobley, 1977).

Classification of Job Satisfaction

Factors associated with job satisfaction can be classified into intrinsic and extrinsic categories. Extrinsic factors are related to the job environment and include salary, working conditions, company policies, and interpersonal relationships with supervision (Randolph, 2005). Intrinsic factors can be divided into two categories. Intrinsic content factors are related to the work itself, are controlled primarily by the individual, and include self-efficacy factors such as accomplishing career objectives, doing meaningful work, helping people, the challenge of the practice, and relationships with colleagues (Randolph, 2005). Intrinsic context factors may be less tangible, are controlled by outside forces, and include factors such as professional growth opportunities, career advancement, and recognition of accomplishments (Randolph, 2005).

Recruitment and Retention

A critical element in the planning for the development of any workforce is the ability to project workforce demand and implement strategies to meet that demand (Anderson, 2004). Workforce demand is typically determined by the number of people currently employed in a profession plus replacements required for vacated positions (turnover), plus projections for future needs (U.S. Department of Transportation, National Highway Traffic Safety Administration, 2008). While the field of EMS is one of the most rapidly growing allied health and public safety careers (U.S. Department of Transportation, National Highway Traffic Safety Administration, 2008), many EMS agencies have reported high rates of turnover (Patterson et al., 2010) and many agencies

have reported that they are not fully staffed (Freeman, Slifkin, & Patterson, 2009). Due to the demand to replace vacated positions and meet projections for increases in new positions, recruitment and retention has become an important issue for the industry and a focus for some researchers.

Response to Gaps in the Research Literature

The purpose of this qualitative study was to explore the effect of preconceived notions of the EMS profession on perceptions after individuals had entered the field. The findings from this study may fill gaps in the understanding of effective recruitment and retention policies for the EMS profession. The study participants were asked to share their insights and attitudes based on their professional experiences. These insights may fill in the gaps with regard to specific factors that affect job satisfaction and the intention to leave the profession.

Little is known about why EMTs and paramedics decide to leave the field of EMS (U.S. Department of Transportation, National Highway Traffic Safety Administration, 2011). Studies that have attempted to describe the factors associated with retention have had limitations. While some researchers sought to identify factors associated with satisfaction; their studies were not designed to link dissatisfaction with the intention to leave the profession (Brown, Dawson, & Levine, 2003). Studies that were designed to link levels of satisfaction and intention to leave were limited in the ability to specifically link a particular source of dissatisfaction with the intention to leave (Chapman, Blau, Pred, & Lopez, 2009). In this study, I sought to address these gaps that existed in the literature by exploring the specific factors that were associated with dissatisfaction,

examining why these factors became sources of dissatisfaction, and ascertaining if dissatisfaction with particular aspects of the job were actually linked to intentions to leave the profession. With this deeper understanding of EMT and paramedic perspectives, employers and industry leaders will be better able to formulate practical solutions to these problems.

Problem Statement

Many EMS agencies do not operate at full staffing levels with many reporting difficulties with recruitment and retention (Freeman, Slifkin, & Patterson, 2009). In a national survey of directors of rural and urban EMS systems, half of all agencies reported personnel vacancies, while 37% of the respondents reported that recruitment was a constant problem (Freeman, Slifkin, & Patterson, 2009). It appears that a myriad of factors, including job dissatisfaction, contribute to the intention to leave the field. With projections for a rising percentage of the population over the age of 65 (U.S. Census Bureau, 2014), expected increases in age-related medical emergencies are driving greater employment demands for EMTs and paramedics (U.S. Department of Labor, Bureau of Labor Statistics, 2014). These projections have propelled the EMS profession into becoming the fastest growing allied health and public safety occupation in the country (U.S. Department of Transportation, National Highway Traffic Safety Administration, 2008).

While a review of the research literature revealed numerous studies with regard to job satisfaction and intention to leave for other health professionals, such as physicians and nurses, there appeared to be a dearth of studies pertaining to EMS professionals

overall. In addition, the existing studies were limited (Chapman, Blau, Pred, & Lopez, 2009; Perkins, DeTienne, Fitzgerald, Hill, & Harwell, 2009) and results were sometimes equivocal (Blau & Chapman, 2011; Patterson, Probst, Leith, Corwin, & Powell, 2005). Therefore the problem was that while it was known that the retention of EMS professionals is currently in crisis, it was not know for certain what specific factors are associated with dissatisfaction and the intention to leave the profession (Perkins, DeTienne, Fitzgerald, Hill, & Harwell, 2009; U.S. Department of Transportation, National Highway Traffic Safety Administration, 2011). In addition to the fact that little is currently known about why they leave, the lack of understanding of occupational supply and demand has contributed to conditions where workforce planning for the EMS profession has been largely nonexistent (U.S. Department of Transportation, National Highway Traffic Safety Administration, 2011). In the absence of a robust research literature, finding a consensus that leads to a clear understanding of the issues affecting dissatisfaction and the intention to leave the profession is not possible.

Purpose of the Study

Because different employees may enter a job with different expectations, responses to given situations, such as working conditions or opportunities for promotion, may not be the same regarding the decision to leave the job (Porter & Steers, 1973). Unmet expectations; however, may lead to dissatisfaction, which in turn may lead to quitting, thus, satisfaction mediates the relationship between unmet expectations and quitting (Wanous, Poland, Premack, & Davis, 1992). The purpose of this phenomenological study was to explore the expectations of individuals prior to their

entering the EMS profession and whether these preconceived notions were aligned with subsequent perceptions after entering the field. In the cases where there was a misalignment in the preconceived notions of EMS personnel and subsequent experiences, I ascertained the degree to which this contributed to job dissatisfaction and intent to leave the profession.

Research Questions

The following research questions (RQs) guided this study:

RQ1: What are the preconceived notions of EMTs and paramedics prior to entering the vocation and their notions of the vocation after facing the realities of the job?

RQ2: How does alignment or misalignment between preemployment and postemployment perceptions of the vocation affect EMTs and paramedics?

RQ3: How does alignment or misalignment between the notions of the vocation prior to and following entry into the profession contribute to job satisfaction or dissatisfaction?

RQ4: How does job satisfaction or dissatisfaction contribute to the intent to stay in or leave the profession?

Theoretical Framework for the Study

The theoretical framework for this study was the interdomain model of career assessment and counseling (Lowman, 1991). This model holds that career behavior is influenced by three domains: vocational interests, abilities, and personality characteristics, and the greater the degree of fit between individual and occupational

characteristics, the greater the likelihood the career will be satisfying (Lowman, 1991). The interdomain model provided a context to enhance the understanding of the factors influencing job satisfaction and intention to leave the EMS profession. By viewing these factors within these contexts of interests, abilities, and personality, the interdomain model contributed to providing a richer understanding of the mechanisms linking expectations to career satisfaction and intention to leave the profession. My examination through the lens of the participants' situations and life experiences yielded knowledge of how these steps were linked. I will further explain the theoretical propositions of the interdomain model in Chapter 2.

The interdomain model fit the current study as it provided insight into the important characteristics upon which individuals and occupational groups should be matched to afford the greatest likelihood of a satisfying career. The model supported the current study by offering three domains that strongly influence career behavior. The three domains: vocational interests, abilities, and personality characteristics provided specific contexts, or platforms, upon which I examined the alignment of expectations and experiences. These domains also guided the development of the questions to be asked of the research participants. Table 1 illustrates the relationship between the theoretical framework and key RQs. How the constructs associated with the theoretical framework are captured in the RQs will be discussed further in Chapter 2. The development of the interview questions will be discussed in Chapter 3.

Table 1

Relationship Between Theoretical Framework, Key Concepts, and Research Questions

Domain	Key Concepts	Research Questions
Vocational Interests	Meaningful work (altruism, helping others)	RQs 1 and 2
		Career choice, perception of self and career
	Career advancement	RQs 3 and 4
	Professional growth opportunities	Satisfaction/Intent to Leave
Abilities	Challenges of practice	RQs 3 and 4
	Working conditions	Satisfaction/Intent to Leave
	Realistic workload	
Personality	Diversity of practice	RQs 3 and 4
	Relationships with supervision	Satisfaction/Intent to Leave
	Relationship with colleagues	
	Recognition of abilities and accomplishments	

Nature of the Study

This study was best served by employing a qualitative research methodology. The specific method of inquiry was the phenomenological approach. The phenomenological approach seeks to understand lived experiences as described by the research participants (Creswell, 2009). This approach permitted me to explore subjects' preconceived notions of the profession and how these perceptions changed once they entered the vocation. Furthermore, this methodology permitted the subjects to express in what ways the interaction between their preconceived job expectations and the realities of the field influenced their satisfaction with the job or their intentions to leave the profession. According to Creswell, the qualitative research design is appropriate when researchers intend to investigate numerous factors and various perspectives and is typically used in research with a social constructivist vision. Creswell explained that the social

constructivist vision is where researchers seek complexity of views, gather information personally, and bring their own experiences and background to shape the interpretation of findings. As someone who has served as an EMT, paramedic, educator, and director of a hospital-based EMS department, the qualitative design leveraged the value that my experiences could bring to this research.

In situations when research is in its early stages, it may not be clear exactly what variables need to be studied (Creswell, 2009). A major advantage of the qualitative approach is the ability to understand a phenomenon in its early stages to a degree where initial suspicions and theories may be developed (Trochim & Donnelly, 2008). Therefore, the semistructured interview was advantageous as it allowed me to not only ask each participant for the same information, as would be the case in a quantitative design, but to go further and ask probing questions that allowed each participant to fully express their responses and provide as much detail as they desired (Turner, 2010). It is my opinion that this study design was the most appropriate approach in that it uncovered reasons why EMTs and paramedics considered departing the profession that are currently not well understood. Furthermore, the findings will facilitate the healthcare industry's general understanding of this phenomenon and perhaps alter its future trajectory.

The key phenomenon I investigated in this study was whether preconceived notions that individuals had before entering the EMS profession ultimately influenced their satisfaction or intention to leave the profession. The key concepts investigated included the alignment/misalignment between preconceived notions and experiences, degree of job satisfaction, and intention to leave the profession. Data were collected from

semistructured interviews. It was expected that a typical phenomenological sample size of approximately eight to 12 participants would be employed (Laureate Education, Inc., 2013). Interviews were audio taped and transcribed. The information in the transcripts was then coded into themes.

Definitions

Advanced life support: Advanced life support techniques include all basic life support therapies in addition to invasive skills such as endotracheal intubation, intravenous access, administration of medications, and fluid therapy (Aubuchon, Hemmes, Poeze, Jansen, & Brink, 2013; Liberman, Mulder, & Sampalis, 2000).

Basic life support: Basic life support techniques include recognition of life-threatening emergencies, external hemorrhage control, extrication, protection of the spine, artificial respiration and circulation, relief of choking, use of automatic emergency defibrillators, as well as supplemental oxygen therapy (Aubuchon et al., 2013; Colwell & Soriya, 2012; Liberman et al., 2000).

Prehospital care: Prehospital care means those emergency medical services rendered to emergency patients for analytic, resuscitative, stabilizing, or preventive purposes, precedent to and during transportation of such patients to and between hospitals (Loyala Emergency Medical Services System, 2013).

Assumptions

To establish trust and confidence in the findings of this research, rigor was necessary to establish the consistency of the study methods in addition to an accurate description of the study population (Thomas & Magilvy, 2011). Therefore, it is important

that future researchers understand the underlying assumptions used in the development and execution of this study. The decision to use a research methodology encompasses assumptions pertaining to the nature and structure of knowledge and reality (ontology), perceptions and how one understands reality and knowledge (epistemology), and the process of acquiring knowledge (methodology), which includes the role of the researcher (Hathaway, 1995).

An assumption of this study was that the reasons why EMTs and paramedics decide to leave the profession do not exist as objective realities, but rather as a result of the subjective meanings individuals develop from their experiences. This assumption is consistent with a social constructivist worldview typically employed in qualitative research (Creswell, 2009). The assumption was necessary, as it was imperative to understand the context, culture, earlier events, and future expectations of individuals in order to better understand the particular phenomenon under study. A second assumption of this study was that the object under study was not separate or detached from me as the researcher. This assumption is consistent with the interpretive paradigm that maintains knowledge to be acquired is best obtained through the process of immersion into the phenomenon, becoming part of it, and documenting the understanding of those engaged (Hathaway, 1995).

Scope and Delimitations

The problem under study was the existing crisis regarding the retention of EMS professionals (Freeman, Slifkin, & Patterson, 2009; Patterson et al., 2010). The specific aspects of the research problem I addressed in this study focused on whether

preconceived notions of individuals entering the profession differed with perceptions after facing the realities of the job. How alignment or misalignment of notions and realities affected EMTs and paramedics was further explored. Whether misalignment contributed to job dissatisfaction and the intention to leave the profession was also examined.

This subject was chosen as a result of my 12 years of experience in the EMS profession, serving as an EMT, paramedic, educator, and department director. During the training of new employees, many did not seem to be prepared to deal with the number of nonemergent calls to the New York City 9-1-1 system. This was a notable source of frustration for new staff. In addition, numerous individuals seemed to be just passing through. Many EMTs and paramedics had plans to move on to become physicians, physician assistants, nurses, police officers, and firefighters. In addition, a review of the research literature further revealed projections for increasing demand for EMTs and paramedics (U.S. Department of Labor, Bureau of Labor Statistics, 2014) and a limited body of research pertaining to EMS workforce concerns (Perkins, DeTienne, Fitzgerald, Hill, & Harwell, 2009).These experiences led to the development of this study subject.

The study population consisted of currently active EMTs and paramedics and those working in other capacities, such as supervisors and educators, in addition to individuals who had left the profession. There were no exclusion criteria based on age, gender, ethnicity, or length of service. Only individuals who signed the Institutional Review Board (IRB) approved consent document were allowed to participate in the study. These detailed descriptions of the study population and rationale for choosing the

topic of study may provide readers with adequate information to determine if the findings of this research are relevant to other circumstances.

In order to make this determination of transferability, the readers of this research must assume the responsibility to make connections between elements of this study and their own circumstances (Barnes et al., 1994–2012). For the readers to make this assessment, they must know as much as possible about the original research context (Barnes et al., 1994–2012). To facilitate this decision, in this study, I provided rich and thick descriptions with regard to the context of the research, the methods, the selection and characteristics of participants, and the findings (Graneheim & Lundman, 2004; Merriam, 2002). The scope of this research, therefore, encompassed an exploration of preemployment expectations and postemployment experiences as they related to notions of EMS, job satisfaction, and intention to leave the profession. Because the inclusion and exclusion criteria were designed to draw a diverse sample, the study was designed so as not to limit the transferability of findings to other populations, geographic areas, or to specific types of EMS systems.

In addition to the choices made for including certain populations and adopting a particular methodology, it is equally important to provide readers with the rationale for excluding particular elements of the research. Herzberg, Mausner, and Snyderman's (as cited in Wernimont, 1966) theory of intrinsic and extrinsic factors in job satisfaction was originally considered as a theoretical framework to guide this study. This theory provides a framework to classify aspects of employment that contribute to satisfaction and

dissatisfaction; however, this theory was not chosen as it did not encompass preconceived notions prior to entering a profession, an important aspect of this research.

The theory of planned behavior (Boston University School of Public Health, 2013) was also considered as the influence of intentions and motivation on subsequent behaviors seemed to be relevant to the influence of preconceived notions on subsequent job behaviors. This theory was not chosen; however, as the theory holds that behavioral achievement depends on additional factors such as behavioral control (i.e., whether or not the behavior performed can be decided at will). It was difficult to assess how this would apply to EMTs and paramedics performance of job tasks.

Limitations

Conduct of the Study

The phenomenological study design may result in limitations of research specific to the conduct of studies and the validity and interpretation of results. As opposed to quantitative surveys, where respondents may simply check a box with anonymity, the qualitative interview design presents greater opportunities for interviewers to affect participants' responses. Since the interviewer is present for the collection of the data, respondents may say what they think the investigator wants to hear or give answers they perceive to be more socially appropriate or more consistent with societal norms and beliefs (Friis & Sellers, 2004). Through this mechanism, referred to as the social desirability effect, participants may introduce bias into the study (Friis & Sellers, 2004). It was therefore incumbent upon me to review the data and monitor information that could be systematically biased towards socially acceptable responses (King & Bruner,

2000). In addition, I continually reviewed the interview transcripts and remained cognizant to pose questions in a neutral manner.

An additional limitation of the phenomenological design is that interviewees may not be articulate and able to express themselves to fully convey rich descriptions of phenomena. These situations may present researchers with opportunities to probe deeper into participants' responses for more detailed answers (Trochim & Donnelly, 2008). This could present opportunities for interviewers to further introduce bias by the types of questions asked or the ways the questions are posed, perhaps by giving emphasis or steering participants towards particular views. The ability of the interviewer to affect participants' responses was addressed by using accepted methods of probing such as silent probing (use of silence to encourage elaboration), overt encouragement (simply saying "okay"), or simply asking if respondents had anything else they wanted to add (Trochim & Donnelly, 2008). This was also addressed to the extent that the standardized interview had a core set of questions that were asked of all participants.

While the focus of this study was to examine participants' preconceived notions, it should be noted that investigators also have preconceived notions that they may bring to their research. Investigators may have opinions about the outcome under study as a result of beliefs based on previous personal and professional experiences, and these preconceptions may influence the exploration of a particular subject (Malterud, 2001). The qualitative design includes tools; however, to limit the effects of preconceptions and personal bias.

One of these tools is reflexivity. Reflexivity is a process of self-criticism to reflect on one's previous experiences and knowledge and examine how these previous experiences may be impacting the research (LaBanca, 2011). Reflexivity begins with the investigator identifying and stating preconceptions brought to the research (Malterud, 2001). When the investigator fully discloses why a topic was chosen, the motivations for the focus of exploration (Malterud, 2001), and how findings reflect their own personal background, the trustworthiness of the research can be fortified (Smith & Noble, 2014). The reasons for the choice of topic and my personal background have been stated herein. In addition, through the use of bracketing throughout the course of the study, I also made every effort to bring motivations and preconceptions to the level of reflective awareness in order to set aside these biases, allowing participants to express their own experiences without being influenced by me as the researcher (Hein & Austin, 2001; Laureate Education, Inc., 2013).

Interpretation of Results

External validity. A limitation of this study also lay in the fact that the results were based on findings associated with a small sample. Therefore, these results are not generalizable to all EMTs and paramedics. In phenomenological research; however, samples are typically small, often between eight and 12 (Laureate Education, Inc., 2013). The focus is on depth and not breath, with the goal being to obtain enough information appropriate to the research (Laureate Education, Inc., 2013). In addition, since participants are chosen with a purpose and not at random, they are not expected to be representative of entire populations (Beery, 2010). Rather than determining

generalizability of findings, the qualitative tradition has used concepts such as dependability and transferability to describe aspects of research trustworthiness (Graneheim & Lundman, 2004). Therefore, the results of this research were described in sufficient detail to provide readers with a quality of knowledge so that the transferability of these results to other contexts may be determined (Hellström, 2008).

Internal validity. Within a rationalistic paradigm, the ability of the study to truly measure that which it was intended to measure could be put forward as a limitation of this research (Golafshani, 2003). As internal validity requires control of the study environment to rule out all plausible alternative explanations, adherents of the rationalistic paradigm would certainly prefer the laboratory, as it serves as the epitome of control (Guba, 1981). In the naturalistic paradigm; however, alternative methods of control may be implemented to establish the truth value or credibility of findings (Dooley, 2007). While dialogue between the two camps has focused on the difficulty in establishing qualitative research validity, useful methods have been proven to demonstrate rigor and legitimacy (Whittemore, Chase, & Mandle, 2001).

Methods I used in this study to enhance credibility included prolonged engagement and spending sufficient time with respondents to identify pervasive issues and eliminate the irrelevant (Guba, 1981), while developing a rapport and building trust with participants to facilitate the collection of a wide scope of data (Dooley, 2007). Referential materials such as tapes of interviews and transcripts were also checked against subsequent interpretations (Guba, 1981). Disconfirming cases were identified to evaluate rival explanations and explore complexity and contradictions (Booth, Carrol,

Llott, Low, & Cooper, 2013). Finally, I sought peer debriefing to obtain feedback on developing insights (Guba, 1981).

Significance

This study addressed an underresearched area in healthcare; the impact of preconceived notions of the EMS occupation on EMTs' and paramedics' job satisfaction and intent to leave the profession. In addition, in this study, I explored these preconceived notions of the prehospital service field and how these notions changed as individuals became immersed in the vocation. The information gathered in this study could be practically applied by EMT educators and employers who will be in positions to ensure that new entrants into these positions have realistic expectations of the realities associated with this career choice. Through the use of realistic recruitment strategies and the integration of realistic scenarios in training, employers and educators may reduce the potential for short tenures of disenchanted employees and reduce the intent to leave the profession.

The issues of dissatisfaction and the intent to leave the EMS workforce are a professional concern. If not recognized and addressed, understaffed EMS agencies will not be able to meet the projected rise in call volumes and future needs of communities. The inability to effectively respond to medical emergencies also has broader social implications. The methods by which we provide care to the sick and injured are an indication of the values of our society. As a society, collectively assuring conditions for people to be healthy is understood to be a defining characteristic of public health (Turnock, 2004). The public health code of ethics encompasses the principle of ensuring

the professional competence of institutional workforces (Public Health Leadership Society, 2002).

With this research, I sought to understand factors that affect the makeup of part of that workforce through examination of the impact of preconceived notions on perceptions of the profession once the realities of working in the field were experienced. If EMS professionals do not have realistic expectations and are not aware of the physical demands and the nonemergent, routine, monotonous, and unremarkable aspects of the job, this could be a source of dissatisfaction leading to an increased intent to leave the discipline. If EMS is a transient profession, the public loses the value of skilled clinicians experienced in emergency care in lieu of a constant flow of inexperienced novices. By isolating those intrinsic and extrinsic factors that influenced job satisfaction, the results of this study will likely aid organizations in developing tactical strategies to recruit and retain prehospital service workers. Optimum EMS staffing levels would likely result in more rapid responses to the medical emergencies of communities, while improved retention rates resulting in a more stable, experienced clinical workforce would result in improvements in the care provided to society's sick and injured.

Summary

In this chapter, I introduced the problem of concern and provided the background of contributory factors. The purpose of the study and specific research questions were stated. I also presented the significance of the problem and the rationale for why this study needed to be conducted. Possible limitations of the research and the potential for bias were candidly discussed.

Key points were noted in the areas of rising projections for medical emergencies fueled by the aging of the U.S. population (U.S. Census Bureau, 2014), and increases in future demand for EMTs and paramedics as a result of rising call volumes (U.S. Department of Labor, Bureau of Labor Statistics, 2014). I also discussed the current staffing problems encountered by EMS agencies (Freeman et al., 2009; Patterson et al., 2010). Finally, the lack of a coherent EMS workforce plan (U.S. Department of Transportation, National Highway Traffic Safety Administration, 2011) and the limitations of current research were revealed by the literature review (Alexander, Weiss, Braude, Ernst, & Fullerton-Gleason, 2009; Freeman et al., 2009; Perkins et al., 2009).

In Chapter 2, I will provide a synthesis of the literature pertaining to the issues of recruitment and retention of EMTs and paramedics. Through this thorough review of how the issues of job satisfaction and the intention to leave the profession have been studied in the past, it will become clear why this study is distinctive from previous work. I will also elaborate on the theoretical framework of the study.

Chapter 2: Literature Review

Introduction

The EMS system in the United States is currently experiencing a staffing crisis. Numerous agencies have reported high turnover rates (Patterson et al., 2010) and difficulties with maintaining adequate staffing levels (Freeman et al., 2009). Due to an increasing demand for EMTs and paramedics, the recruitment and retention of EMS professionals has become a critical issue for the industry. The failure to address these staffing issues has led to a state of under preparedness in EMS agencies (U.S. Department of Transportation, National Highway Traffic Safety Administration, 2011) during a crucial time in the history of this profession, as it has become the fastest growing allied health and public safety occupation in the country (U.S. Department of Transportation, National Highway Traffic Safety Administration, 2008). The continued absence of a workforce plan will leave this vital national service ill-equipped to deal with the increasing workforce demands projected for the future (U.S. Department of Labor, Bureau of Labor Statistics, 2014). Without adequate staffing, EMS agencies will not be able to provide optimal emergency responses to communities, given the projections for rising call volumes (U.S. Department of Labor, Bureau of Labor Statistics, 2014) due to the aging of the U.S. population (U.S. Census Bureau, 2014).

However, little is known as to why individuals who go through extensive didactic instruction, demanding practical training, and rigorous testing elect to leave the profession (Alexander et al., 2009; Freeman et al., 2009; Perkins et al., 2009). The purpose of this study, therefore, was to explore the preconceived notions that EMTs and

paramedics brought to the EMS profession and whether these preconceived notions were aligned with subsequent perceptions after entering the field. In cases where there was a misalignment between preconceived notions and subsequent experiences, I ascertained the degree to which this contributed to job dissatisfaction and intent to leave the profession.

In this chapter, I will present a synthesis of the research literature relevant to EMS retention issues. The specific search strategies, search terms, and databases searched will be put forward to enhance the reproducibility of this research. Previously published applications of the theory will be reviewed and the ways in which the constructs supported the current research will be discussed. In addition, I will review the existing literature on the factors relevant to the scope of the present study. Finally, the major themes in the literature will be summarized along with an explanation of how I addressed perceived gaps in the existing body of literature.

Literature Search Strategy

I began the preliminary literature review using themes such as turnover, intent to leave, burnout, and satisfaction. These preliminary searches yielded articles relevant to many professions such as the military, emergency room physicians, nurses, and social workers. In order to focus the literature review on the topic at hand, I structured the overall search strategy to combine these overarching themes with terms that were specific to the EMS profession. Articles were included in this study if they were full text; research studies in peer-reviewed publications and yielded some type of analysis pertaining to turnover, satisfaction, employment expectations, or intent to leave the EMS profession.

Articles that studied the aforementioned themes but focused on other health professions, such as emergency physicians or nurses, were excluded. This was done to maintain the focus of the literature review on research pertaining to EMS professionals. Narratives and opinion pieces in newspapers and magazines that merely discussed issues of the job were also excluded if they did not provide any data obtained systematically. Statements in nonpeer-reviewed publications could sometimes provide leads to other sources, and when these leads were presented, I followed the trail. If the trail ultimately led to a peer-reviewed article containing a systematic investigation and collection of data with statistical analysis, only then were these statistics used.

Given these parameters, I performed a search of all 37 Walden University library Health Sciences Research databases (see Appendix A). These databases included, but were not limited to, MEDLINE, Education Research Complete, PsycINFO, Military & Government Collection, Regional Business News, and SocINDEX with Full Text. A broad net was cast in this preliminary search, therefore, no time limiters for publication or other limiters were employed. All searches were conducted using the keywords in the title. Three searches combining the term *turnover* with *EMS, EMT,* and *paramedic* revealed no articles. Similarly, no articles were found combining these same three terms with *intent to leave.* Six articles were retrieved when the term *burnout* was combined with *EMS* and three articles were retrieved when the term *satisfaction* was combined with *EMS*. Of these nine articles yielded from this first search, none were found to be useful for the current study.

As the topic under study was evolving, the importance of *expectations* prior to employment began to emerge. Therefore, this term was added to subsequent literature reviews in lieu of the term *burnout*, which mostly yielded articles relevant to physicians and nurses, especially when paired with the term *emergency.* A second search was conducted, again using all 37 health sciences research databases in the Walden library. The small number of articles found in the preliminary searches led to the decision to continue to not place limiters on dates of publication. Using three search terms: *EMS, satisfaction,* and *expectations* yielded no articles. Similarly, using the three terms: *emergency medical service, satisfaction,* and *expectations* yielded no articles.

The strategy was changed at this point to using two keywords for each search. The following searches focused on four overarching themes: *expectations, satisfaction, turnover,* and *intent to leave.* All four themes were investigated using the same method. Each theme was combined with the following five search terms: *EMS, emergency medical service, EMT, emergency medical technician,* and *paramedic* as illustrated in Table 2. Once again, no time limiters for publication or other limiters were employed.

Table 2

Literature Search Themes & Search Terms

Themes	Search Terms
Expectations	EMS, emergency medical service, EMT, emergency medical technician, paramedic
Satisfaction	EMS, emergency medical service, EMT, emergency medical technician, paramedic
Turnover	EMS, emergency medical service, EMT, emergency medical technician, paramedic
Intent to Leave	EMS, emergency medical service, EMT, emergency medical technician, paramedic

Summary of Literature Review Using Academic Databases

Of the 47 articles retrieved in this second review of the academic databases, nine were found to be relevant to the current study. Of the nine articles found, four pertained to satisfaction, three pertained to expectations, one article pertained to turnover, and one pertained to intention to leave. The small number of articles retrieved was an early indication that the subject of EMS job satisfaction and turnover had not been well studied. In addition, throughout the study, I used a snowball method by reviewing the references in each article retrieved. This method proved to be fruitful as more articles were found using this approach throughout the course of the study.

Additional Strategies

I conducted a third search using a nonacademic database. I also began a log on this date documenting the literature review methods, including the databases searched, dates of search, terms used, number of articles yielded, and number of articles found to be relevant for the current study (see Appendices B and C). However, using the Google search engine yielded unmanageable results, in some cases yielding hundreds of thousands of articles (see Appendix B). This may have been partly due to the fact that the Google search engine did not allow limiters such as searching for terms in the title or using limiters on the dates of publication, as was the case in the academic databases.

For this reason, I made the decision to conduct a fourth search using the Google Scholar search engine. Overall, the Google Scholar search engine yielded approximately 179,612 articles. Of these articles, six additional articles were found to be relevant to the current study; three were published and three were graduate research studies. The three

published articles pertained to how sleep deprivation and work exhaustion were associated with retention and satisfaction and the development of a model of occupational commitment as it related to intent to leave the EMS occupation. The master's thesis I found explored the necessary components of an ideal support program for new paramedics. The qualitative dissertation explored the paramedic professional socialization process, while the autoethnographical dissertation sought to find meaning in the chaos of the EMS career experienced by the author in order to better prepare those who would follow.

Theoretical Foundation

The Lowman Theory of Career Assessment

Choosing a career or changing a career is a profoundly important decision. Individuals in the midst of making these important life decisions often seek the advice of career counselors and become the subjects of batteries of ability tests. Individuals mismatched with careers and dealing with unhappiness due to job dissatisfaction may turn to psychologists for guidance. Improving the tools available to these counselors and psychologists provided the impetus for the development of the theoretical foundation for the current study. Helping the assessors was Lowman's (1991) motivation for developing the interdomain career assessment model. The model was a response to what was believed to be the overly simplistic prevailing approach that sought to reduce the prediction of work performance to a small number of primarily intellectual factors (Lowman, 1991). It was Lowman's belief that a solid foundation in psychology and personality theory was a necessary prerequisite for the task of career assessment. The

theory, therefore, is directed mostly toward clinical and counseling psychologists so that these clinicians may become competent career assessors (Lowman, 1991). The model's aim was to improve the quality of career counseling through the integration of three areas considered by Lowman to be most important: abilities, interests, and personality characteristics.

Various tests of abilities, such as general intelligence, physical abilities, and mathematical skills, are typically used by career counselors. For example, the Armed Services use aptitude tests designed to measure verbal, mechanical, and electronic abilities to better classify enlistees into military occupations (Held, Carretta, & Rumsey, 2014). Scores on these tests may influence an individual's placement into the military police over the infantry, or being assigned as an automotive mechanic rather than a helicopter mechanic (Held et al., 2014). The aim of these ability assessments is to accurately assign individuals to occupations where they show the greatest potential to succeed, thereby reducing the costs of labor inefficiencies to the organization and the personal costs of failure to individuals (Held et al., 2014).

Propositions of the Theory

A major proposition of the Lowman (1993) theory is the notion that individual abilities, interests, and personalities interact with occupational environmental characteristics to determine a degree of fit. Individuals who are well matched to their occupations will be more likely to be satisfied, and the theory maintains that this leads to employees who will be more likely to be productive and remain in their jobs (Lowman, 1991). The likelihood of a good match will also be increased when the process of career

choice is based on an accurate perception of self and career environment (Lowman, 1993). When this process is disrupted by misperceptions, the likelihood for mismatches is increased (Lowman, 1993). Distortions of the process can occur when individuals become overly influenced by a particular characteristic, such as salary expectations (Lowman, 1993). In addition, when people fail to make the distinction between career characteristics and the job environment, job dissatisfaction may be experienced as career dissatisfaction and vice versa (Lowman, 1993). Finally, when unhappiness or depression that is unrelated to the career is projected to an individual's career, the individual may feel career unhappiness (Lowman, 1993). Likewise, career unhappiness may also lead to generalized psychological distress (Lowman, 1993).

The process of career choice and constructs of perception of self and career are aligned with RQ1, which sought to ascertain why individuals entered the profession and if they experienced what they expected. The concept of process disruption is aligned with RQ2, which explored the effects of alignment and misalignment of preemployment expectations and postemployment experiences. The constructs of satisfaction and career longevity are aligned with RQ3, which sought to investigate how alignment and misalignment affected satisfaction, and RQ4, which examined how matches and mismatches affected the intention to leave the profession.

The Holland Theory of Interests and Personality Types

To classify interests and personality, the Lowman model incorporates the Holland model of vocational personalities and work environments (Lowman, 1991). The Holland model integrates the two domains of vocational interests and personality characteristics

by attempting to infer the structure of personality from vocational interests (Costa, McCrae, & Holland, 1984). Vocational interests are seen as expressions of personality (Hogan & Blake, 1999). The model, therefore, defines characteristics of work environments in terms of the types of people that work in them (Hogan & Blake, 1999). The aim of the model is to understand and predict vocational choices made by individuals (Gottfredson & Johnstun, 2009). Each personality type possesses characteristic competencies and preferences, while each environment expresses challenges and opportunities characteristic of its typology (Gottfredson & Johnstun, 2009). The theory postulates that some environments are better matched to some people and that individuals will seek congruent environments and leave incongruent environments (Gottfredson & Johnstun, 2009). Both environments and people are typed into six categories: realistic, investigative, artistic, social, enterprising, and conventional (Costa et al., 1984). The acronym, RIASEC, is often used to refer to the Holland types. Lowman (1991) provided a synopsis of the Holland types as follows.

Realistic. Individuals with realistic vocational interests are prone to like working outdoors and manual activities. Military careers typify many aspects of the realistic environment. Characteristics of this type include predictability, obedience to rank, the wearing of uniforms, and similarities in the construction of military bases.

Investigative. People with investigative interests emphasize ideas rather than people. These individuals are often indifferent to social relationships, can be perceived as being cold, and are characterized by high and abstract intelligence. Hospitals are the

typical environment where investigative types such as physicians, researchers, and scientists can be found.

Artistic. Artistic types are creative and typically work with ideas and materials to express themselves. They tend to deviate from convention and customs and are generally regarded as sensitive, emotional, and can be more prone to experience affective disorders. Working alone is characteristic of the artistic occupational environment of writers, painters, and to some extent musicians during the extensive periods of practice that is required.

Social. Social types usually have excellent interpersonal skills and are oriented towards helping. These individuals enjoy nurturing and developing others, especially those who are less advantaged. Schools, hospitals, and in some respects, prisons typify occupational environments where developing and nurturing is valued.

Enterprising. Enterprising individuals seek power and control. These people are proficient at coordinating the work of others and are somewhat interpersonally distant. They are generally comfortable in well-structured environments where there are hierarchies of power and authority.

Conventional. Conventional types work well in established structures. These individuals prefer working with numbers and performing clerical tasks. The typical environments for these types are accounting and bookkeeper positions.

Additional Concepts in the Holland Theory

The Self Directed Search (SDS) form was also developed by Holland to measure interests and environments (Gottfredson & Johnstun, 2009). A Holland score is

calculated by adding “like” or “yes” responses for activities, competencies, and occupations (Swanson, 2012). A difference of 8 points between a first and second score indicates differentiation, meaning an individual more resembles a single personality rather than multiple types (Swanson, 2012). In addition to differentiation, consistency and congruence are notions to be considered in the Holland theory. A hexagonal figure is used to demonstrate the relationship among the types, indicating opposing types for opposite points on the hexagon and similar types for adjacent points.

An individual having their two highest scores on the SDS in adjacent categories indicates stability, meaning the degree of relatedness is more consistent; therefore, an individual’s vocational preference will be more predictable (Swanson, 2012). Congruence refers to the match between a personality type’s preferences and the opportunities and rewards provided by an environment. Thus, a Holland score that is differentiated and displays consistency, and is congruent with the work environment exhibits a stable profile, thereby predicting a greater likelihood of vocational success (Swanson, 2012).

Limitations of Theory

While the SDS has been tested since its inception in 1985 and has been found to be consistent with its theoretical predictions (Swanson, 2012), some studies have suggested that other factors may influence the selection of an item on the SDS scale. Gender has been implicated as a cause of this phenomenon called differential item functioning (DIF); a different probability of choosing the same item though individuals have the same traits (Wetzel & Hell, 2013). For example, men have been found to report

higher levels of interest on realistic and investigative types whereas women have been found to report higher levels of interest on social and artistic types (Wetzel & Hell, 2013). In a study of secondary education students, lower business ethics scores were associated with a vocational preference for enterprising occupations (Berings & Adriaenssens, 2012). Physical limitations brought on by disabling injuries have also been studied as a source of DIF. While vocational interests have been found to be relatively stable past the college years (Low, Yoon, Roberts, & Rounds, 2005), interests were found to change when measured during hospitalization after spinal cord injuries (Krause & Clark, 2014). Intelligence has also been explored as gifted students have been found to report stronger preferences for realistic and investigative types and lower social preferences than less intelligent students (Vock, Köller, & Nagy, 2013).

Some career influences may be beyond the scope of the Holland model. Gottfredson and Johnstun (2009) have pointed to additional factors affecting career choice and career change, such as available occupational alternatives, family responsibilities, geographical constraints, and interpersonal problems with coworkers and supervisors. For example, these factors might be helpful to explain why a participant who is in a congruent environment may be dissatisfied. In contrast, a participant in a seemingly incongruent environment might remain satisfied and not intend to leave the profession (i.e., Someone who is not a good fit for a particular job may remain satisfied in that position if they have family responsibilities and the job is geographically close to their home, their supervisor is supportive, and there are not any alternatives available). These additional factors were monitored in the current investigation. Notwithstanding

findings that indicate limitations of the theory, the Holland model remains the most widely researched and most influential theoretical framework pertaining to vocational interest's research (Iliescu, Ispas, Sulea, & Ilie, 2015; Van Iddekinge, Putka, & Campbell, 2011).

Applications of Theory

While measurements of abilities such as general intelligence, and measurements of interests and personality characteristics have been well validated and widely used to predict career and work issues, there is little literature devoted to the relationships across these three domains. Most interdomain research has focused on two domains at a time, such as interests and abilities or interests and personality, with a smaller body of research devoted to abilities and personality, with the least research directed towards the relationship between all three simultaneously (Lowman & Ng, 2010). A literature search of the interdomain constructs found application of the principles to adults in the workplace setting and student populations.

In the workplace setting, the model was used to examine whether one particular Holland interest pattern (realistic) was associated with predictable patterns of abilities and personality (Lowman & Ng, 2010). The hypotheses of this study focused on predicting abilities associated with Holland's realistic interest type, such as high ability in mechanical activities and lower ability on measures of general intelligence and verbal skills as compared to the general population. With regard to predicting personality characteristics, it was hypothesized that the realistic groups would be characterized by greater introversion, masculinity, and inflexibility. The overall aim of the study was to

enhance the ability of the managers in the workplace to relate to employees through better understanding of the psychological characteristics that influenced the career choices and job performance of their staff. The results of the study indicated that the study population scored high on the realistic scales and as hypothesized, scored high on mechanical reasoning ability and non-verbal intelligence measures. On measures of personality, the sample population presented as highly masculine and inflexible; however, was more socially oriented and extraverted than predicted.

In the student setting, the model was used to explore how career compromise choices were influenced by different Holland types (Joeng, Turner, & Lee, 2013). In this study of undergraduate students at two universities in Seoul, South Korea, it was hypothesized that there would be significant differences in the relative importance of career compromise variables such as interests, the importance of prestige, and the perceived gender appropriateness of an occupation as a function of Holland type, gender, and college major. The results of this study indicated that the students were more prone to compromise career choices based on prestige over gender appropriateness and interests. These results were consistent across four of the six Holland types: realistic, investigative, social, and enterprising. Artistic Holland types preferred interests over prestige while conventional types showed no preferences.

In light of the theories on adolescent development, the stability of the Lowman and Holland constructs over time has also been studied (Low, Yoon, Roberts, & Rounds, 2005). A meta-analysis was conducted to study the stability of vocational interests from early adolescence to middle adulthood. The results of this study indicated that vocational

interests remained stable from ages 12 to 40 and remained relatively unchanged through middle school and high school (Low et al., 2005).

In addition to the stability of the theoretical constructs, difficulties with the practical application of the models have also been studied. While interest inventories can provide clients with direction in the career decision making process, there may be individuals for whom the processing of the results of these tests remains clouded. In these cases, screening tools such as the Career Thoughts Inventory (CTI) may be used to identify dysfunctional aspects of decision-making that could impede effective use of test results. A case study of an individual who was able to clearly identify her interests and abilities, yet unable to make a career decision, illustrated the use of these additional tools (Vernick, 2002). In this case, the CTI revealed commitment anxiety and reliance on external sources as barriers to the decision making process. After recognizing and addressing the problematic career thoughts, the subject of the study was able to objectively utilize the results of the interest and abilities inventories.

Choice of Theory for the Current Study

While a review of the literature did not yield applications of the Lowman and Holland theories in studies pertaining to the EMS profession, the Lowman and Holland theories were chosen for the current study as they provided theoretical constructs to understand the phenomenon under study. The models further supported the current study by providing a context for the development of the research questions and the semistructured interview questions. The Lowman and Holland theories focus on the fit between accurate perceptions of self and career, which was the foundation for the current

study's RQs. The misalignment of preconceived notions with postemployment experiences also guided the interviews through the use of probing questions to ascertain how the matching process may have been aligned or distorted. Finally, while some research provided empirical data on EMS retention, these models provided insight into the development of a theoretical model to better understand, and possibly go further, to predict retention of EMTs and paramedics.

Literature Review Related to Key Concepts

In the provision of emergency medical care for the sick and injured, EMTs and paramedics operate as medical professionals, while their role as emergency first responders alongside police and firefighters places them squarely in the arena of public safety (American College of Emergency Physicians, 2014). Working in the community and responding to all types of disasters also puts them in the position to identify and manage issues of public health (American College of Emergency Physicians, 2014). As a group of relatively new professionals; however, EMS personnel are the newcomers on the blocks in all three of these neighborhoods. Compared to the disciplines of public health, medicine, and public safety, EMS is in its infancy (National Academy of Sciences, National Research Council, 1966). So while EMTs and paramedics maintain a foothold in each neighborhood, they seem to have a home in none or seem to be relegated in each to play the proverbial role of stepchild to their older siblings. Indicative of its newcomer status, there is a dearth in EMS literature in general and particularly in areas that have been well studied in the more established professions (Huot, 2013). For example, issues of job satisfaction, stress, and burnout have been well documented in

professionals such as physicians, nurses, firefighters, and police (Keswani, Taft, Coté, & Keefer, 2011; Komarovskaya et al., 2014; Toh, Ang, & Devi, 2012). The newcomer status of EMS professionals among healthcare and public safety professionals; however, is evident in the literature as research on issues concerning EMS professionals also appears to be in its infancy (Patterson, Moore, Sanddal, Wingrove, & Lacroix, 2009). There is a lack of published research pertaining to the EMS profession in general. In addition, weaknesses in the methodologies of the existing research further supported the rationale for the current study.

The literature establishes the problems of recruitment and retention with quantitative surveys that identify turnover rates and associated inefficiencies. Interestingly, the literature seems to parallel the life course of an individual entering the profession by examining the study of expectations and experiences of EMT and paramedic students and the assimilation experiences of new graduates. Surveys of tenured prehospital service workers then focus on satisfaction and dissatisfaction with various job and professional characteristics. Finally, the course of the literature can be followed to the identification of issues leading to the intention to leave the profession.

Recruitment and Retention

Numerous studies cite the dearth of literature examining the issues related to employment longevity in EMS (Alexander et al., 2009; Blau, 2011; Brown, Dawson, & Levine, 2003; Deluhery, Worlds, Stake, & Cichon, 2008; Freeman et al., 2009; Huot, 2013; Patterson, Moore, Sanddal, Wingrove, & LaCroix, 2009; Perkins et al., 2009; U.S. Department of Transportation, National Highway Traffic Safety Administration, 2008,

2011). One area in the research that does exist pertaining to factors related to workforce concerns has focused on identifying the existence of retention problems and the reasons for these problems. This information has been obtained through quantitative surveys of EMS agencies and EMS directors (Freeman et al., 2009; Patterson et al., 2010). Other studies have attempted to predict employment longevity through the use of factors such as initial certification exam scores (Fernandez & Bentley, 2009) or by attempting to measure individuals' organizational and professional commitment (Alexander et al., 2009).

A single study was found that attempted to quantify rates and cost of turnover in EMS (Patterson et al., 2010). The results of this 6-month longitudinal survey of 40 EMS agencies indicated an overall weighted mean annual turnover rate of 10.7%. This study also quantified the weighted median cost of turnover to be $71,613.75, with a weighted median cost per termination of $6,871.51. Due to a limitation of resources the study's sample size was originally limited to a maximum of 50 agencies; however, a low response rate (40/700 = 5.7%) resulted in a final sample of 40.

A national survey of EMS directors identified recruitment and retention problems and revealed some differences between agencies that operated in rural verses urban areas (Freeman et al., 2009). In this larger sample of 1,425 EMS directors, one half of all respondents reported vacancies while rural directors were more likely to report that their agency was not currently fully staffed. While 37% of all respondents reported that recruitment was always a problem, rural directors were more likely to report always having recruitment difficulty and more likely to report that they relied on volunteers

(Freeman et al., 2009). A major causal factor for recruitment difficulties, regardless of location, was a lack of persons willing to volunteer as community members had neither the time nor the interest to volunteer (Freeman et al., 2009). In addition to recruitment difficulties, these authors also cited retention as a significant problem contributing to staffing shortages. Study data indicated that regardless of location, retention was reported to be sometimes a problem by 55% of respondents; however, rural directors were more likely to report always having retention difficulties. A major causal factor for retention difficulties was time and scheduling conflicts with 65% of all agencies reporting this as a factor contributing to the loss of personnel, while rural agencies were more likely to lose staff because of burnout, and less likely to lose staff due to job dissatisfaction (Freeman et al,, 2009). While this finding may appear to be somewhat paradoxical, it is possible for employees to be dissatisfied with various job conditions such as salary and benefits without experiencing the very specific characteristics of burnout which include emotional exhaustion, cynicism about one's clients, and feeling unhappy with one's accomplishments on the job (Maslach & Jackson, 1981).

Given the high reliance of communities on EMS volunteer squads and the importance of this group, factors affecting recruitment and retention have been examined specifically in the volunteer population. Motivations to volunteer were examined in a study of two volunteer rescue squads in Virginia; one operating in an urban area and one located in a rural area (Haug & Gaskins, 2012). The most important motivating factors to volunteer were the desire to help others and the desire to begin a career in health care and public safety. This finding in the volunteer population may reveal a characteristic of the

general population entering the field. Focus groups have indicated that EMS was a professional afterthought and was an option secondary to a more desirable career that was not attainable (Patterson, Probst, Leith, Corwin, & Powell, 2005) while the use of EMS as a gateway to a career in healthcare or public health is consistent with research conducted in EMT and paramedic student populations, that may indicate EMS is widely viewed as a stepping stone to other careers (Beechler, Worlds, Deluhery, Stake, & Cichon, 2010; Deluhery et al, 2008).

Student Expectations and Early Experiences

In the effort to understand the reasons for recruitment and retention difficulties, one approach taken by researchers has been to study the population of EMT (Deluhery et al., 2008) and paramedic students (Beechler et al**.,** 2010), with the aim of gaining a perspective on why people enter the field. In these quantitative surveys, 18% of EMT students indicated they planned to pursue careers in nursing and 5% planned to attend medical school (Deluhery et al., 2008). Paramedic students indicated that they planned to pursue careers as physicians (7%), physician assistants (11%), nurses (34%), and careers in other (8%) healthcare professions (Beechler et al., 2010). In addition, many EMT students (65%) and paramedic students (82%) indicated that they hoped to work in fire services. While these studies did shed some light on what students planned to do after their training, the results revealed the intentions of the groups who seemed to have already been looking past EMS as a career. While this may be a valuable finding, this research did not gain insight into the population who may have actually been looking to EMS as a career and what their expectations were of the EMS profession.

Additional research on paramedic students was found to be conducted in Australia (Devenish, 2014; Lord, McCall, & Wray, 2009; O'Meara, Tourle, Madigan, & Lighton, 2012; Williams, Brown, & Winship, 2012; Williams & Waxman, 2006). This was not unexpected as Australia is a country that has been transitioning from an education system that relies on in-house, industry-based training to a preemployment university model (Devenish, 2014; O'Meara et al., 2012). It is logical, therefore, that a readily available supply of students in academic settings has led to an atmosphere that encourages research. In addition, paramedic was voted the most trusted profession for nine years in a row in Australia (Calcino, 2012; *The Sydney Morning Herald*, 2011); therefore, the study of Australian students offers an additional perspective from a country where the EMS profession has high visibility and may be viewed differently than in the United States, the location of the population for the current study.

While some of these studies seemed to be relevant to the current study, as they listed questions about career intentions and how intentions may have changed since beginning the degree program in their methods sections, results and conclusions focused on expectations of clinical practicum's (Lord et al., 2009; Williams et al., 2012) and the type and location of employer most highly desired (O'Meara et al., 2012; Williams & Waxman, 2006). The factors affecting employer choice included location near family and friends, organizational culture, salary, working conditions, and further professional and educational opportunities (O'Meara et al., 2012; Williams & Waxman, 2006). While this information may provide some insight into what factors paramedic students think are important when choosing an employer, these studies did not focus specifically on what

job or career expectations were. An additional limitation of one study (O'Meara et al., 2012) was that the university offered a combined paramedic and nursing program; therefore, it was not possible to know in which field students were considering employment or long-term careers. Finally, all of these studies on students were limited in that these populations were not yet employed; therefore, it was not possible to assess how career expectations were aligned with or were affected by postemployment experiences, the focus of the current study.

Postemployment experiences were assessed in new graduates in a study of paramedics in Canada (Huot, 2013). The aim of the study was to identify experiences of new graduates and identify components of a successful transition support program that could lower staff turnover; however, this study did not focus on expectations prior to employment. Postemployment experiences as they related to a lack of preparation for the physiological and psychological demands of the job were explored in an autoethnography of a U.S. paramedic (De La Garza, 2011). The aim of this study was to establish a foundation for the design of training programs, as the author discussed how he was not prepared for the realities of the job. This could be interpreted as not having expected the psychological and physiological realities; however, misalignment between expectations and realities as they related to job satisfaction or intent to leave the profession, the focus of the current study, were not the aim of this autoethnography. The documentation of this case of misalignment between expectations and experiences; however, does establish the occurrence of the phenomenon and; therefore, lends support for the need to conduct further research into this phenomenon.

Postemployment experiences of new graduates were also explored in a study of Australian and British paramedics (Devenish, 2014). In this study, the socialization process of new graduates was linked to preconceptions of the field. The aims of this study were to determine the extent to which two professional socialization models explained the socialization of paramedics: Kramer's (1974) reality shock model and Cant & Higgs (as cited in Devenish, 2014) anticipatory, formal, and post formal phases of professional socialization, and to develop a theoretical model specific to the paramedic discipline.

The results of this study indicated that the development of preconceptions was multifactorial and resulted from interactions with paramedics due to personal or family emergencies, the portrayal of paramedics in the media, family or friend role models, and observing ambulances at emergency scenes. The data also indicated that most preconceptions were that the job consisted mostly of urgent, high acuity calls and that the desire to help people was a predominant factor in the decision to become a paramedic, a finding that is consistent with the earlier research in the volunteer population (Haug & Gaskins, 2012). Finally, expectations formed during the anticipatory and formal phases were largely found not to reflect the reality of paramedic practice during the postformal and postinternship phases. While the focus of this study was different from the current research, once again, the documentation of misalignment between preconceptions and experiences established the occurrence of a phenomenon that could explain some percentage of job dissatisfaction, further substantiating the need for the current study.

Research on students presents an opportunity to view motivations for entering the field of EMS. Many of the studies in the student population seem to approach the concept

of reasons for entering the field; however, the focus shifts to expectations of learning experiences (Lord et al., 2009; Williams et al., 2012) or reasons for choosing a particular employer or locale of employment (O'Meara et al., 2012; Williams & Waxman, 2006). An additional limitation of the current literature is the quantitative designs used in some cases were limited to obtaining information about intentions after graduation; however, they could not explore more deeply into what students expected from the EMS profession (Beechler et al., 2010; Deluhery et al., 2008). The focus of the qualitative studies that were designed to explore more deeply into preconceptions and experiences had different aims than the current study (De La Garza, 2011; Devenish, 2014). It would; therefore, be more accurate to say that these studies were designed to investigate their specific RQs which were different than those of the current study, rather than to say these studies had limitations per se. Nevertheless, the gap in the current research literature pertaining to EMS students' expectations of the profession supported the need for the current study. Finally, there is an international base of the current research that enriches the sample. While the possibility that national idiosyncrasies could influence decisions to enter the field differently must be considered, none of the studies found offered any specific evidence of this.

Satisfaction

The studies on satisfaction have typically sought to determine the level of satisfaction and links to various factors such as salary, benefits, job conditions, opportunities for advancement, and well-being. One of the most often cited studies of EMS professionals in the literature is the Longitudinal Emergency Medical Technician

Demographic Study (LEADS) Project (National Registry of Emergency Medical Technicians, 2001–2015a). Beginning in 1999, a core survey was mailed annually to 9,241 nationally registered EMS professionals (Blau & Gibson, 2011). This 10-year study was designed to describe various attributes and demographic characteristics of EMTs and paramedics, and to identify factors that influenced their career decisions, satisfaction with the job, and why they reported leaving the profession. Many additional studies have been conducted utilizing data obtained from the LEADS project and this study population (Blau, 2011; Blau & Chapman, 2011; Blau, Chapman, Gibson, & Bentley, 2011; Blau, Chapman, Pred, & Lopez, 2009; Blau & Gibson, 2011; Brown, Dawson, & Levine, 2003; U.S. Department of Transportation, National Highway Traffic Safety Administration, 2008; Patterson, Moore, Sanddal, Wingrove, & LaCroix, 2009). One of the largest studies (1,718 respondents) using the LEADS population focused on satisfaction with compensation and benefits (Brown et al., 2003). A strong attribute of this study was that the data was collected in a way that was possible to distinguish between attributes and characteristics of EMTs and paramedics. The results of this study confirmed that retirement plans (EMT-62%, EMT-P-57%), health insurance (EMT-43%, EMT-P-33%), and employer recognition (EMT-36%, EMT-P-46%) were sources of dissatisfaction.

The finding that job conditions such as employer interactions are a factor influencing job satisfaction has been supported in other studies conducted in Norway (Sterud, Hem, Lau, & Ekeberg, 2011) and Iran (Ghorbanian, Bahadori, & Nejati, 2012). The transformational leadership style, whereby leaders and followers promote each other to higher levels of ethics and motivation, has been positively correlated to satisfaction, as

opposed to a laissez-faire style of management (Ghorbanian et al., 2012). In addition to a lack of leadership support, the lack of challenging job tasks has also been shown to be a predictor of low satisfaction (Sterud et al., 2011). Other job conditions such as the lack of opportunity for advancement was found to be linked to low levels of job satisfaction in a sample of South African paramedics (Iwu, 2013).

The final group of studies examining satisfaction focus on linking satisfaction to different aspects of wellbeing, such as stress, burnout, physical health, and occupational safety. When compared to other professions, ambulance personnel have been ranked among the highest in terms of stress on physical health and psychological well-being, and correspondingly, ranked among the lowest in terms of job satisfaction (Johnson et al., 2005). High scores on burnout scales such as the Maslach Burnout Inventory have also been linked to lower levels of job satisfaction (Alexander & Klein, 2001). High rates of exposure to critical incidents such as road traffic accidents and child victims; however, seem to more adversely affect organizational satisfaction rather than internal job satisfaction (Alexander & Klein, 2001). In addition, the exposure to critical incidents also presents situations where workers attempt to display socially desirable emotions such as empathy. This emotional labor in the form of surface acting, the display of emotions that are actually not felt, has also been linked to higher levels of work exhaustion and lower levels of satisfaction in EMS workers (Blau, Bentley, & Eggerichs-Purcell, 2012).

The final study found in the literature examining the association between satisfaction and well-being focused on occupational safety. EMS injury rates were higher than any other industry reported by the Department of Labor for the year 2000 (Maguire,

Hunting, Guidotti, & Smith, 2005). When fatality rates were examined, EMS rates (12.7/100,000) were greater than the national average (5.0/100,000) and comparable to other emergency service workers such as police (14.2/100,000) and fire (16.5/100,000) (Maguire, Hunting, Smith, & Levick, 2002). Reports in the news media also indicate that EMS workers are attacked when dealing with emotionally disturbed or intoxicated patients (Ross, 2013), and by despondent family members who perceive a delayed response to the emergency of a loved one (Freund, 2012). Due to its greater frequency, verbal violence has been found to be more serious than physical violence in terms of psychological strain (Brough, 2005). Verbal violence has also been found to be a predictor of job satisfaction; however, its significance has been found to be reduced when the influence of moderators such as supervisory and colleague support were taken into account (Brough, 2005).

The research that pertains to job satisfaction did not assess how dissatisfaction may have influenced an employee's intention to leave the profession. The satisfaction literature also did not offer any insight into what preconceptions were brought to the profession and how these may have affected satisfaction. Similar to the research in the student population, while each study may have limitations to examine its own research questions, these studies were not designed to examine the questions of the current investigation. Therefore, the study of satisfaction in the EMS population also revealed a gap in the literature which further supported the conduct of the current study.

Intention to Leave

Due to the difficulty in following individuals who have already left a job, the research literature has focused on factors considered to be antecedents and strong markers for actually quitting (Chapman, Blau, Pred, & Lopez, 2009). This was confirmed by the finding of few studies in the post EMS workforce (Blau & Chapman, 2011; Blau, Chapman, Gibson, & Bentley, 2011). The existing literature examining the population that actually left the EMS profession revealed reasons for leaving such as the desire for better pay and benefits, and the lack of opportunities for advancement (Blau et al., 2011). This study also used the LEADS population and mailed surveys to individuals who had indicated that they were not currently working during the period of 1999–2008. The generalizability of this study was limited; however, by the small sample size (n = 244) and the inability to distinguish between certain sub-groups. For example, the study examined individuals who worked in fully compensated, partially compensated, and volunteer positions and did not differentiate between EMTs and paramedics. The findings of the study did reveal differences in these groups as the desire for better pay and benefits was a more important reason for leaving for the partially compensated group versus the fully compensated group. The lack of opportunity for advancement was also a more important reason for leaving for partially compensated personnel and volunteers versus fully compensated employees. Interpretation is also more difficult due to the linking of pay and benefits into one category. In their study of different types of benefits, Brown, Dawson, and Levine (2003) did find differing responses for satisfaction with benefits such as health insurance and retirement plans between EMTs and paramedics. A similar

study using the LEADS population including only fully compensated individuals (*n* = 127) found that stress, burnout, and the lack of job challenges were the most important reasons for leaving while the desire for better pay and benefits had the lowest importance (Blau & Chapman, 2011). The retrospective nature of both of these studies; however, is a limitation as respondents who have already left a job may remember their reasons for leaving differently than individuals who are thinking about leaving but are still currently employed.

The research that has examined those who are still currently employed and their intention to leave the profession, revealed constructs that were similar to the research pertaining to satisfaction (Blau, 2011; Blau, Chapman, Pred, & Lopez, 2009; Govender, Grainger, Naidoo, & MacDonald, 2012). Measures of occupational commitment such as emotional attachment (affective commitment) and limited alternatives (continuance commitment) were found to be significant negative correlates to the intention to leave (Blau et al., 2009). The association between the intent to leave and factors such as salary, working conditions, and well-being were also explored. The intention to leave was measured using a 6-point response scale to answer the question: “I intend to leave the EMS profession as soon as possible.” Sleep impairment was found to be significantly associated with the intention to leave the profession and a perception of decreased health (Blau, 2011).

Health and well-being, in terms of physical security, along with remuneration and working conditions were found to be important reasons for leaving in a study of South African paramedics (Govender et al., 2012). The population in this study; however,

intended to leave the job in South Africa and did not necessarily intend to leave the profession. This study is illustrative of a case where the national situation may not be similar to the conditions in the United States; therefore, although incidents of physical security have been documented in the United States. (Freund, 2012; Ross, 2013), physical security may not be a factor of similar importance to U.S. EMTs and paramedics.

Association between Satisfaction and Intention to Leave

Remuneration and lack of control to change unsatisfactory working conditions were supported as reasons for leaving in another study of South African paramedics (Hackland & Stein, 2011). This study was designed to link issues of job satisfaction with the intent to leave the profession. This study was uniquely designed in that it used a hybrid population of paramedics who had already left the prehospital field and paramedics who intended to leave within three months. These authors also found the lack of opportunity for promotion to be a factor influencing the intention to leave. Paramedics who had already left the profession were also asked to compare their levels of satisfaction between their new careers and EMS careers on issues such as remuneration and opportunities for career development. The authors did not distinguish the reasons for leaving between the two groups; however, missing the opportunity to take advantage of the unique study sample by looking for differences between those who reported the intent to leave and those who had actually left.

Investigators have sought to quantify the association between levels of satisfaction with the intention to leave. The job characteristics used to measure satisfaction have been the recurring issues found in other areas of the literature such as

salary, benefits, and opportunities for advancement. Through the use of odds ratios and regression models, these studies represent some of the most complex statistical analyses in the literature. In a study utilizing the national sample from the LEADS project, Patterson, Moore, Sanddal, Wingrove, and Lacroix (2009) found that the odds of being satisfied were lower for respondents making less than $19,999 as compared to those in the highest category (>$60,000). Respondents who reported being dissatisfied with pay and benefits (10%) were more likely to report intent to leave than those who reported being satisfied (2.5%), OR = 4.28, 95% CI ⌈2.24, 8.18⌋ (Patterson et al., 2009). Respondents who reported being dissatisfied with opportunities for advancement (11.5%) were more likely to report the intent to leave as compared to those who reported being satisfied (3.1%), OR = 4.11, 95% CI ⌈2.29, 7.38⌋ (Patterson et al., 2009).

In a study of EMS workers in Montana, 9% of EMTs were considering leaving the profession in the next year, and 24% were considering leaving in the next five years (Perkins et al., 2009). The reasons given for leaving were retirement (47%), career change (16%), organizational issues (13%), work hours (12%), job stress (11%), and salary or benefits (9%). Three factors were independently associated with leaving the profession in five years; age 50 years or greater, OR = 1.78, p = < 0.001, 95% CI ⌈1.58, 2.01⌋, working 10 years or more as an EMT, OR = 1.71, p = 0.01, 95% CI ⌈1.12, 2.63⌋, and dissatisfaction with the profession, OR = 2.94, p = <0.001, 95% CI ⌈1.84, 4.72⌋. A limitation of this study is that the geographic area of Montana may not be generalizable to other regions. A frontier region, defined as a county without a city of 10,000 or more,

made up 58% of this sample. Bias may have also influenced the high rate of satisfaction with the EMS profession (91%) as 50% of the respondents were volunteers.

In an additional study utilizing the LEADS population, differences among EMTs and paramedics were explored (Chapman, Blau, Pred, & Lopez, 2009). While paramedics were found to be paid more, more likely to also be trained as firefighters, and respond to a higher proportion of emergency calls, no significant difference was found in intrinsic satisfaction between the groups, while paramedics had lower extrinsic satisfaction. The intent to leave was negatively related to extrinsic satisfaction for both groups and negatively related to intrinsic satisfaction for paramedics only.

A limitation of the studies examining the association between satisfaction and intent to leave is that they were sometimes limited in the number of factors examined as reasons for leaving the profession (Perkins et al., 2009). In some cases, composite measures were constructed for intrinsic and extrinsic job satisfaction. Since multiple factors such as salary, benefits, and advancement opportunities made up a category, it was not possible after the analysis to determine how much each of the individual components contributed (Blau et al., 2009; Chapman et al., 2009). An additional limitation was that the reasons for leaving were not asked of both groups in a study, for example, those intending to leave within 12 months versus those intending to leave within five years. Factors in those feeling the need for a more urgent decision were not identified; therefore, comparison to those considering a less urgent decision and identification of possible differences between the groups was not possible (Perkins et al., 2009).

Summary and Conclusions

The current research literature can be categorized conveniently in parallel with the path of an individual entering, tenured, and leaving the EMS profession. The literature examines the EMT and paramedic student populations in an effort to gain insight into what draws students to the profession and what students are planning to do after they graduate. While this research indicates that students have intentions to migrate to other health and public safety professions, it does not access the portion of that population who actually are seeking careers in EMS nor does it explain exactly what students expect from a career in EMS (Beechler et al., 2010; Deluhery et al., 2008; Haug & Gaskins, 2012; Patterson et al., 2005).

Little research has focused on preemployment preconceptions of students (De La Garza, 2011; Devenish, 2014) and their transitions into the workplace (Huot, 2013). Much of the literature focuses on levels of satisfaction with various aspects of the job and profession. Typical characteristics assessed for satisfaction are extrinsic organizational issues such as compensation and benefits (Brown et al., 2003), interactions with management (Ghorbanian et al., 2012; Sterud et al., 2011), and working conditions as they are associated with health and well-being (Alexander & Klein, 2001: Blau, Bentley, & Eggerichs-Purcell, 2012; Brough, 2005; Johnson et al., 2005). A typical intrinsic content issue studied is self-efficacy in the form of the challenge of the practice (Sterud et al., 2011). Typical intrinsic context factors include recognition of accomplishments (Brown et al., 2003) and opportunities for career advancement (Iwu, 2013). While this body of research indicates levels of dissatisfaction with certain job characteristics, it does

not assess how preemployment preconceptions may have influenced dissatisfaction nor does it assess how dissatisfaction may be related to the intention to leave the profession.

Few studies have examined the population that has actually left the EMS profession (Blau & Chapman, 2011; Blau et al., 2011). These studies do not show clear trends in reasons for leaving; however, as fully-compensated, partially-compensated, and noncompensated groups rated issues such as salary, benefits, and opportunities for advancement at different levels of importance (Blau et al., 2011). In addition, these studies were not able to distinguish between the responses of EMTs and paramedics (Blau & Chapman, 2011; Blau et al., 2011).

Few studies have been designed to link characteristics of the profession related to dissatisfaction to the intention to leave the profession (Patterson et al., 2009). Of the existing studies, some had limitations in their ability to ascertain specific job issues connected to the intention to leave (Chapman et al., 2009), the ability to generalize results (Perkins et al., 2009), and the ability to distinguish responses of those who intended to leave and those who had already left the profession (Hackland & Stein, 2011).

Finally, the RQs in the current literature have not focused on how misalignment of preemployment expectations and postemployment experiences may lead to dissatisfaction or the intention to leave the profession. The current study was designed to address this gap in the literature. Guided by the RQs, the focus of the current research was to explore the links between expectations and experiences. Through the use of the qualitative semistructured interview, participants were able to provide rich descriptions of

their preconceived notions of the profession and their postemployment experiences, thereby contributing new knowledge to the discipline.

In Chapter 3 I will explain the methodology of the study. I will describe the study population and methods of recruitment. I will also discuss the methods of data collection and data analysis.

Chapter 3: Research Method

Introduction

The purpose of this phenomenological study was to explore the expectations of individuals before beginning a career in EMS and whether preconceived notions formed prior to entering the profession were aligned with subsequent perceptions after entering the field. In the cases where there was a misalignment between preconceived notions and subsequent experiences, I examined whether this contributed to job dissatisfaction and/or an intention to leave the profession. In cases where preemployment expectations were aligned with postemployment experiences, perceptions of the vocation and job satisfaction were also examined.

In this chapter, I will describe the research design and methodology, including the study population and procedures for the recruitment of research participants. Measures to protect human research subjects and conduct the study in accordance with ethical standards and U.S. federal regulations will also be described. Processes to safeguard subjects' information and maintain anonymity will be explained. I will also provide the steps I took to ensure that the information collected would be linked to the RQs. Data collection tools will be identified and the processes for their development and validation are explained. Analysis of data will also be discussed, including the use of software and procedures for coding.

Research Design and Rationale

The following RQs guided this study:

RQ1: What are the preconceived notions of EMTs and paramedics prior to entering the vocation and their notions of the vocation after facing the realities of the job?

RQ2: How does alignment or misalignment between preemployment and postemployment perceptions of the vocation affect EMTs and paramedics?

RQ3: How does alignment or misalignment between the notions of the vocation prior to and following entry into the profession contribute to job satisfaction or dissatisfaction?

RQ4: How does job satisfaction or dissatisfaction contribute to the intent to stay in or leave the profession?

I determined that these questions could be most efficiently investigated through the use of a qualitative research design. The central phenomenon examined in this study was the employment longevity of EMS professionals. The aim of the investigation was to explore the experiences of EMTs and paramedics to ascertain the factors that might contribute to high turnover and difficulty in retention of EMS professionals. Since little is known about issues affecting EMS employment longevity (Alexander et al., 2009; Blau, 2011; Brown et al., 2003; Deluhery et al., 2008; Freeman et al., 2009; Huot, 2013; Patterson et al., 2009; Perkins et al., 2009; U.S. Department of Transportation, National Highway Traffic Safety Administration, 2008, 2011), the interpretive tradition was an appropriate choice as it is effective when examining a phenomenon such as this in its early stages (Creswell, 2009). As it was not yet clear exactly what variables were relevant, the qualitative design was advantageous to investigate numerous factors and

various perspectives (Creswell, 2009). The phenomenological approach was suitable to understand the lived experiences and perspectives of EMTs and paramedics, while the semistructured interview allowed participants to offer comprehensive responses, with detail that would not have been possible using a quantitative type survey design (Creswell, 2009; Turner, 2010). Ultimately, the qualitative method permitted a deeper understanding of experiences and behaviors, thereby aiding in the confirmation and modification of initial suspicions and facilitating understanding of the phenomenon under study (Trochim & Donnelly, 2008).

Role of the Researcher

I sought participants from three institutions, including EMS personnel working at the North Shore Long Island Jewish (NSLIJ) Health System. At the time of the study, I was employed as an IRB reviewer for a company (Biomedical Research Alliance of New York) that is partly owned by four academic medical centers in New York, including the NSLIJ Health System. Prospective research participants may be considered to be vulnerable when their willingness to volunteer may be unduly influenced by an expectation of a retaliatory response for refusal to participate (International Conference on Harmonisation of Technical Requirements for Registration of Pharmaceuticals for Human Use, 1996). This may occur when a researcher is in a senior position in some type of hierarchical relationship such as teacher-student or employer-employee (International Conference on Harmonisation of Technical Requirements for Registration of Pharmaceuticals for Human Use, 1996). As I served in the EMS field for 12 years and as it can sometimes be a small community, it was expected that a participant may have had

some past relationship with me. However, since I left the field of EMS in 1996 and is not employed by the NSLIJ Health System, there was no possibility of any supervisory relationship with any study participants. Subjects 03 and 05 did work as paramedics at an institution working in the New York City 9-1-1 system during my tenure as director, while subject 07 worked briefly at the institution as a per diem employee. Since there are no personal or professional relationships with these individuals, there was no mechanism to influence participation in the study. In addition, in keeping with the general requirements for informed consent, I only sought consent in circumstances that provided all prospective participants with a sufficient opportunity to consider participation and minimized undue influence (U.S. Department of Health and Human Services, 2009).

To achieve the purpose of this study, I explored and developed the topic of study, investigated the research literature to further support the need for the study, and developed the most appropriate methodology to adequately assess the RQs. In the role of observer, I documented the experiences of participants by establishing a rapport, reducing apprehension, and encouraging participation whereby interviewees could guide and teach the interviewer (DiCicco-Bloom & Crabtree, 2006).

Methodology

Population

The EMS in the United States is a mosaic of over 21,000 organizations that include fully paid, partially paid, and volunteer personnel, encompassing more than 800,000 EMS professionals (Federal Interagency Committee on EMS, 2012). The sample of participants in the current study was partly obtained from two of those organizations

operating ambulance services in New York State: Stony Brook University Hospital and the NSLIJ Health System. In addition, St. John's University was a research site providing me with access to paramedic students, while social media websites such as Facebook and LinkedIn were also included in the plan to recruit participants.

The NSLIJ Center for Emergency Medical Services (CEMS) is one of the largest hospital based ambulance services in the United States and the largest in the New York Metropolitan area (NSLIJ, 2015). The CEMS operates ambulances in the New York City 9-1-1 system, in addition to providing helicopter transportation services and inter-facility transports (NSLIJ, 2015). The service employs over 500 EMTs and paramedics, responds to more than 120,000 calls annually, and operates in a service area encompassing 1,700 square miles in New York City and the Nassau and Suffolk counties of Long Island (NSLIJ, 2015). The Stony Brook University School of Medicine encompasses the Emergency Medical Services Department, which includes approximately 80 EMTs and paramedics who provide critical care transport from community hospitals to the medical center, located in Suffolk County, Long Island (Stony Brook School of Medicine, Department of Emergency Medicine, n.d.). In addition to transporting approximately 9,000 patients per year, paramedics also staff the county MEDEVAC helicopters, completing approximately 450 flights each year (Stony Brook School of Medicine, Department of Emergency Medicine, n.d.). Stony Brook also offers EMT and paramedic training courses (Stony Brook School of Health Technology and Management, 2014).

Within the College of Pharmacy and Health Sciences, St. John's University operates the Emergency Medical Services Institute which offers original and refresher

EMT and paramedic courses (St. John's University, College of Pharmacy and Health Sciences, 2015). In addition to offering access to paramedic students, access to the institute's faculty, which includes approximately 20 EMT and paramedic instructors, added to the potential recruitment pool (St. John's University, College of Pharmacy and Health Sciences, 2015).

LinkedIn (2015) is the world's largest internet professional networking organization. This web site includes an EMS network interest group that contains over 14,000 individuals (LinkedIn, 2015). LinkedIn was included in the recruitment plan as it allowed for access to current and former EMS professionals. Similarly, Facebook (2015), the social media networking web site, was included as a recruitment contingency.

Inclusion/Exclusion Criteria

Certified EMTs and paramedics who were currently working in the field in fully paid, partially paid, or volunteer positions were eligible to participate. Certified EMTs and paramedics who were not practicing in the field and working in supervisory, administrative, educational, or other EMS capacities (e.g., dispatchers) were also eligible, as it was determined that these groups could provide additional insights with regard to career ladder choices. For the same reason, former EMS professionals who had moved to other careers were also included. Only individuals who were 18 years of age or older and signed the IRB-approved consent document, which included consent to have interviews recorded, were allowed to participate in the study (Inclusion Criteria 1 and 2). In addition, individuals were required to meet at least one of the working status inclusion criteria groups (Inclusion Criteria 3a, 3b, 3c, 4a, 4b, 4c, 5, or 6).

Individuals were not allowed to participate if they met the exclusion criterion. Since the focus of the current study was the alignment of preemployment perceptions and postemployment experiences, individuals who had never practiced in the field were excluded from the study. This population would not have met one of the working status inclusion criteria groups. This category encompassed EMT students and individuals who might have obtained an EMT certification and never practiced in the field.

While the literature review did reveal the value of continued study in the EMT student population (Beechler et al., 2010; Deluhery et al., 2008); this group would not have been able to provide relevant information pertaining to postemployment experiences. Provided that paramedic students met one of the working status inclusion criteria groups, they were not excluded as they were able to provide data relevant to all of this study's RQs. There were no exclusion criteria based on gender, ethnicity, or race. While there were no exclusion criteria based on age or length of service at the outset, since these factors had been associated with the intention to leave (Perkins et al., 2009), it was possible that a diverse sample with regard to age and tenure could have become advantageous. As sampling was to continue as an iterative process until data saturation was reached, it was anticipated that inclusion criteria could possibly continue to evolve as the data collection and analysis processes proceeded. The inclusion criteria; however, remained constant for the duration of the study.

Sampling Method, Size, and Contingencies

I used a purposive sampling method for this study. The phenomenon under study was in the early stages of research; therefore, participants were continuously added as

long as new data continued to be ascertained. This method is well suited to the iterative process of selecting in-depth interview participants that is employed in qualitative research, thereby maximizing the depth and richness of data (DiCicco-Bloom & Crabtree, 2006).

While sample sizes of eight to 12 are typically anticipated in phenomenological studies (Laureate Education, Inc., 2013), it was possible that a larger sample could have been required in the current study. As the recruitment plan included various groups such as EMTs, paramedics, males, and females, it was possible that different views could emerge and a larger sample might be required. It was decided, therefore, that the exact sample size would be determined by the point at which data saturation was reached (Beery, 2010).

While the required sample size was not relatively large, insufficient subject enrollment in the research was still considered. It was prudent; therefore, to have a contingency plan to ensure an adequate sample size. The original research protocol planned to obtain all of the study participants from one organization (NSLIJ). After additional consideration, in June and July of 2015, I pursued and obtained the support and agreement of additional organizations to participate in the study. In addition, the plan to use social media was developed as an additional recruitment contingency.

Recruitment

To facilitate achievement of an adequate sample size, an electronic and hard copy recruitment flyer (see Appendix D) was composed to enhance subject enrollment. The flyer was limited to basic study information such as the purpose of the study, basic

eligibility criteria, and my contact information, in keeping with U.S. federal guidance (U.S. Department of Health and Human Services, 2005). The hard copy flyer was posted at two of the participating study sites (NSLIJ and St. John's University). The original plan included the contingency that at Stony Brook University Hospital and St. John's University, the directors could also e-mail the flyer to their staff, current students, and graduated students. Recruitment proceeded successfully; however, prior to requiring this measure.

In the event that an enrollment lag occurred at the three participating study sites, additional recruitment contingencies included use of two social media options: LinkedIn and Facebook. Recruitment advertisements were approved by the IRB for LinkedIn (see Appendix E) and my Facebook page (see Appendix F). While one subject was recruited through the LinkedIn site, enrollment in the study proceeded without the need to use the Facebook contingency.

Screening

Each respondent that was screened for participation was assigned a unique study identifier. Study identifiers had no personal identifying link to the subject. For example, subject initials were not part of identifiers. The study identifiers consisted solely of numbers that were assigned sequentially as respondents were screened and enrolled. These numerical identifiers were recorded on the subject screening form contained in the study protocol (see Appendix G). A master subject log was also maintained (see Appendix H). The master log is a complete listing of all respondents who were screened

for the study and indicates the status of all subjects (e.g., screen failure, signed consent, completed the study, or signed consent but terminated prior to completion of the study).

The protocol anticipated potential participants contacting the researcher via e-mail. In these cases, phone call appointments were to be scheduled to review inclusion criteria. Respondents who did not meet eligibility requirements would be advised of the importance of this prerequisite and how this supported the accuracy of the study. The respondents would be asked if they had any further questions, thanked for their interest, and asked to encourage colleagues and others to participate in the research. No subjects; however, contacted me via e-mail.

When respondents contacted me by phone expressing interest in the study, I completed the subject screening form. The inclusion and exclusion criteria checklist is contained in the screening form. In addition to demographic information, professional status information is also contained in this form, including the level of professional certification, activity status, and years of practice. This information was obtained via the participant's self-report.

Respondents who were determined to be eligible were scheduled for interviews. All interviews were conducted by me. When participants wished to be interviewed in the privacy of their own homes, I accommodated these requests. Depending on the geographical convenience, interviews were also conducted at my home and work office. The protocol allowed participants from St. John's University and Stony Brook University Hospital to be interviewed on site at the EMS departments at those institutions, according

to convenience to the participants. While telephone interviews were allowed, only in-person interviews were conducted.

Appointments were booked as candidates' and my schedules could be coordinated. Eligible respondents were sent the consent form and the core interview questions within the interview guide, also contained in the study protocol, prior to their scheduled appointments. Providing these documents in advance enhanced the informed consent process and better prepared the respondents for the interview. The protocol allowed for advanced copies of the consent and core interview questions to be sent via e-mail or U.S. postal service, according to individual preference; however, postal service was not used. Respondents were advised that they could call me if, after receiving the consent and core questions, they had any issues they wanted to discuss prior to the interview. Subjects 09 and 10 were recruited on site at St. John's University; therefore, I spent additional time with the students to provide an overview of the questions prior to the interview. One subject (08) actually preferred to not see the questions ahead of time.

Informed Consent

The consent form contained all of the required elements of consent such as the nature and purpose of the research, and included the risks, benefits, and duration of subjects' participation (U.S. Department of Health and Human Services, 2009). Also included in the consent was information regarding the voluntary nature of research and the subject's right to end participation at any time during the conduct of the research (U.S. Department of Health and Human Services, 2009). The consent document also contained a separate check box indicating the agreement to be recorded. Due to the

importance of capturing all information discussed in the interview, agreement to be recorded was a necessary requirement of study participation.

All consent discussions were conducted by me. During the discussion, all of the components in the consent form were explained, including all of the required procedures of the study. The voluntary nature of participation and the research subject's right to decline to answer any questions or end their participation at any time was emphasized. Prospective participants were advised that while every effort would be made to ensure the confidentiality of study records, the potential risk of a confidentiality breach was possible. It was possible that an employee might feel compromised for example, if an employer became aware of their dissatisfaction with their position or their intention to leave the job. Individuals might also have preferred to keep personal accountings of life decisions and personal experiences confidential. While the information collected during the interview was not expected to be of a sensitive nature, there was also the possibility that recounting events in one's life could be upsetting to an individual for various reasons. The responsibility of an investigator to terminate a subject's participation without their consent when there is a potential for harm to the subject is steeped in ethical guidelines (World Medical Association, 2013) and is an element of informed consent (U.S. Department of Health and Human Services, 2009). In the event I felt continued participation was not in the best interests of a subject, I was prepared to discontinue the interview and make every effort to comfort the individual. Although unlikely, the risk that questions might be upsetting and my responsibility to end a subject's participation without their consent was also included in the consent form and consent discussion.

Finally, prospective subjects were given the opportunity to ask questions. I ensured that all participants were given a copy of the consent form.

Consent signatures were obtained prior to the commencement of the study interview. All signed consents are maintained in the research records. In addition to documentation of consent by virtue of a signed consent form, the process of consent was also documented by me in the form of a research enrollment note (see Appendix I). The enrollment note documented the consent discussion, including any questions asked; subjects' indication that they understood what was explained in the document, that consent was obtained prior to the performance of any study procedures, and that subjects were given a copy of the consent form. These descriptions of the consent process are maintained with the subjects' corresponding consent form.

Data Collection

After the signing and dating of the consent form, interviews commenced. All interviews were recorded using a Zoom H4N digital recording device. The primary technique used to collect data for this study was a semistructured in-depth interview with open-ended questions. An interview guide was organized around a predetermined set of core questions; however, flexibility was maintained to pursue other questions that emerged from the dialogue (DiCicco-Bloom & Crabtree, 2006). While the semistructured interview was designed to allow the participant to lead me to the important issues relevant to the topic under study, the core questions were developed to ensure that I obtained sufficient information to answer the RQs.

I developed a first draft of the core questions by considering how to best elicit information to gain insight into the RQs of the study. The core questions evolved as feedback on the initial draft was sought from a clinical research colleague with experience conducting pain studies with patients treated for HIV/AIDS. This individual's suggestions were considered and incorporated as deemed appropriate. I rehearsed the interview during a practice session on 7/16/15 with a friend who is a former EMT. After receiving feedback from the former EMT and reviewing the transcript of that interview, no further changes were made to the core questions. The questions were then further examined through the testing of their content validity.

To establish the content validity of the core questions of the interview guide, I assembled a content validity panel. A list of 13 prospective panelists was assembled consisting of colleagues that I worked with in the fields of clinical research and EMS. The list was comprised of professionals with expertise in a variety of areas such as qualitative research, study design, research ethics, clinical research trials, medicine, human resources and career choices, and experience in the field of EMS. These individuals were initially contacted to inquire about their willingness to participate. All 13 of the individuals contacted agreed to serve on the panel. While Lynn (1986) recommended a minimum of three experts and indicated more than 10 are not necessary, I proceeded with 13 members as a contingency for changes in commitments by panelists. Indeed, two panelists subsequently indicated they did not have time to participate. The final decision on the number of panelists (11) was predicated on the range of expertise represented by the panel (Grant & Davis, 1997).

Each member of the panel was then sent an individual e-mail (see Appendix J) with a link to a web site (surveymonkey.com) where a relevance questionnaire was supplied. This electronic survey contained the 33 core interview questions (one question per page). At the top of each page, the RQ that the interview question was designed to gain insight into was supplied. The panelists were provided with a Likert scale at the bottom of each page and instructed to rate the relevance of each interview question as follows: no relevance (1), low relevance (2), moderate relevance (3), and strong relevance (4). The 4-point scale was used rather than an odd number of choices (3-point or 5-point scale) in keeping with the method of Lynn (1986), to avoid having a neutral or ambivalent midpoint. Thus, the panelists rated the degree to which the core questions adequately addressed the RQs. Using the Survey Monkey software, the percentages of panelists who rated each question as 1, 2, 3, or 4 on the scale was calculated.

The degree of content validity for each question was then calculated in an Excel (Microsoft 2007) spreadsheet (Appendix K) using the content validity ratio (CVR) described by Lawshe (1975) as follows:

$$\text{CVR} = \frac{n - N/2}{N/2}$$

In this formula, *n* represents the number of panelists that rated a question as relevant (rating of 3 or 4) while *N* is the total number of panelists (Grant & Davis, 1997; Lawshe, 1975). For a panel of 11, a question would not have been eliminated if a CVR of at least .59 was attained (Lawshe, 1975). A CVR equal to or greater than .59 represents the degree at which concurrence of the panel would not be considered to have occurred

by chance at an alpha level of .05 (Lawshe, 1975). The CVR exceeded the .59 threshold for all of the 33 questions submitted to the panel, except for question 10, which was subsequently eliminated. The mean of the content validity ratios for each question was then calculated to determine the content validity index (CVI) of the entire core interview instrument (Appendix K). The calculated CVI was originally 0.928. After eliminating question 10, the CVI increased to 0.943.

To ensure that the number of interview questions would not impede the ability of participants to provide in-depth responses, I initiated a further review. Questions that had lower content validity scores were scrutinized. This was not simply a mathematical process to eliminate questions. My reasoning ultimately dictated whether questions were culled. Indeed, in some cases, I determined that queries with lower content validity were crucial to answer the RQs (e.g., question 14, CVR = 3.64). Correspondingly, there were cases where queries with higher content validity were found to be somewhat duplicative, or at least overlapping: therefore, I determined that assessment of the RQs would not be compromised by their elimination (e.g., questions 26 & 27, CVR = 4). After elimination of 16 additional questions, the final calculated CVI increased to 0.968.

Based on the practice interview conducted, I expected that the majority of the data could be collected in one interview lasting for approximately 30 to 45 minutes, with an additional follow up interview for clarifications if necessary. At the end of the interviews, I gave participants an opportunity to make additional comments and ask any remaining questions. Participants were advised that the initial interview phase of the study had ended and reminded that an additional conversation might be necessary to clarify any

remaining questions. The protocol permitted follow up discussions to occur in person or via phone call. Follow up discussions were also required to be recorded and transcribed.

Recordings of interviews were transcribed within 72 hours. Interview transcripts only contained subjects' assigned deidentified study numbers. While documents such as consent forms required subject identification, no identifiers will be used in any publications of this research. In addition, only I will have access to participants' study records and source documents linking the study numbers to personal identifying information. All study records are stored in a locked cabinet at my work office and will be kept for five years after completion of the research, at which time they will be destroyed.

Data Analysis

The process of data analysis was well documented to enhance the ability of subsequent investigators to follow my decisions and to verify the findings (Shenton, 2004). The analytic strategy consisted of the concepts of content analysis such as latent content, meaning units, labels, codes, themes, and units of analysis (Graneheim & Lundman, 2004). Using these tools, the path of analysis proceeded through the review of the transcripts and recognition of important themes, creation of a coding system to identify those themes, identification of key themes, distinguishing between central and secondary themes, and finally, interpretation of the data (Ulin, Robinson, & Tolley, 2005).

The process began by immersion into the data, reading and rereading the transcripts, and becoming familiar with the content (Ulin et al., 2005). The analysis began

when the first interview was transcribed and was continuous. During this phase, I reviewed both the content and quality of the data, including whether the data gathered was ambiguous, contradictory, contained gaps in information, and whether the RQs had been addressed (Ulin et al., 2005). The possibility of investigator bias was examined with confirmation that questions were asked in a neutral manner (Ulin et al., 2005). The audit trail began during this phase as I bracketed notes into the text, evaluating personal bias, participant responses, and unexpected findings (Ulin et al., 2005). All of these assessments were important in the decision making pertaining to adjustments to the interview process.

After reviewing content and quality, I began to identify meaning units, the words, sentences, and paragraphs that were related to each other while conveying similar meanings (Graneheim & Lundman, 2004). Meaning units were labeled with codes that allowed for the interpretation of large bits of information in new ways (Graneheim & Lundman, 2004). Identifying how these meaning units were linked led to the creation of themes. Through the interpretive process, the themes expressed the underlying meanings of the text, or the latent content, serving as the threads joining the underlying meanings of codes (Downe-Wamboldt, 1992). Once themes had been identified, a coding sort was used to collect similarly coded text (Ulin et al., 2005). It was anticipated that a qualitative software package (NVivo 10 for Windows) would be used to generate these new files in addition to providing reports; however, learning the software proved to be too difficult and the transcripts were coded manually (Ulin et al., 2005). When making determinations pertaining to the frequency of themes, whole interviews served as the unit of analysis

(Graneheim & Lundman, 2004). Once all of the data had been collected and these processes had been completed, the data reduction process began, identifying the key themes and distinguishing between essential and secondary themes (Graneheim & Lundman, 2004). The final step of the overall interpretation of the data then began, seeking to synthesize the data. The goal in this last step was to explain how all the different themes and subthemes fit together and the overall meaning of the participants' responses (Ulin et al., 2005).

Issues of Trustworthiness

Rigor is necessary to establish trust and confidence in the findings of research (Thomas & Magilvy, 2011). While there has been a divergence between positivistic based and naturalistic research philosophies, the same processes have been found to be necessary to establish standards of quality (Whittemore, Chase, & Mandle, 2001). Applying positivistic research standards to the interpretive method; however, has required flexibility to capture qualitative nuances to arrive at guidelines that cross methodological and philosophical perspectives (Whittemore et al., 2001). Guba (1981) provided an interpretation of four of these characteristics of trustworthiness that are more reflective of the qualitative research approach, along with their positivistic counterparts (Table 3).

Table 3

Scientific and Naturalistic Terms Appropriate to the Four Aspects of Trustworthiness

Aspect	Scientific Term	Naturalistic
Truth Value	Internal Validity	Credibility
Applicability	External Validity Generalizability	Transferability
Consistency	Reliability	Dependability
Neutrality	Objectivity	Confirmability

Credibility (Internal Validity)

Various methods within the naturalistic paradigm may be used to establish credibility, or truth value, of the research findings (Guba, 1981). To increase the confidence in the accuracy of the data in this study, I used methods such as saturation; whereby, participants were added until it appeared unlikely that new insights would continue to be provided (Beery, 2010). In addition, I reviewed disconfirming cases to explore alternative explanations to original hypotheses, thereby developing richer understandings of phenomena and lending credibility to the research accounts (Booth et al., 2013). Towards the end of building trust with participants, I spent sufficient time to develop a rapport with participants, in part by sharing an overview of my own EMS career (Dooley, 2007).

To enhance intra-rater reliability, I personally reviewed referential materials such as recordings of interviews and transcripts after a period of time to verify subsequent interpretations, while detailed participant quotes were used to further substantiate

interpretations (Griffin, 2004). To establish interrater reliability, triangulation was used as I sought peer debriefing from other researchers to obtain feedback on interpretations (Denzin, as cited in Guba, 1981). Two members of the content validity panel who have experience in qualitative research agreed to assist with the triangulation process. These individuals were provided with interview transcripts and their interpretations were sought. These individuals assisted with the first round of coding, but could not commit additional time to the project. Therefore, an additional researcher was recruited to assist with subsequent coding. While triangulation may not necessarily provide superior explanations, as qualitative research does acknowledge multiple equally valid perspectives, different views may offer complementary rather than competing interpretations, thereby furthering the scope and refinement of the theories of the researcher (Barbour, 2001).

Dependability (Reliability)

While reliability in the positivistic paradigm is concerned with replicating research, reproducing a social phenomenon may be difficult, and even identical participants may not provide the same responses at a later date (Carcary, 2009). Therefore, in keeping with the interpretative philosophy, I reported the processes of this research in detail, allowing for the reproduction of the study, but not necessarily the exact reproduction of the results (Shenton, 2004). To establish trust and confidence in the findings of this research, rigor was necessary to establish the consistency of the study methods (Thomas & Magilvy, 2011). To enhance dependability, I developed a study protocol containing an interview guide and core questions, to consistently obtain the data

required to address the RQs (Contee-Borders as cited in Griffin, 2004). The study protocol may facilitate other investigators who wish to reproduce the procedures. The application of rigor also requires an accurate description of the study population (Thomas & Magilvy, 2011). A detailed description of the study population has been provided herein. A description of the demographic profile of the study participants was also provided in the results of this study. To enhance the dependability of this research, I described the plan and all of the operational details pertaining to the execution of the study (Shenton, 2004). To this end, an audit trail was maintained to log all research activities including the procedures of data collection and data analysis (Creswell & Miller, 2000).

Transferability (External Validity)

The focus of the interpretivist research paradigm is not to the frequency of events, but rather, towards a deeper understanding of complex phenomena (Carcary, 2009). Therefore, the focus of this qualitative study was on depth and not breath (Laureate Education, Inc., 2013) as the generalizability of the results to other populations was not a primary goal of this research (Shenton, 2004). I did; however, provide readers of the research with adequate information to effectively compare the original research situation with the environments with which they may be familiar (Barnes et al., 1994–2012). The detailed descriptions of the study procedures; therefore, provides readers with adequate information to determine if the findings of this research are relevant to other circumstances (Hellström, 2008). To facilitate determinations of transferability, rich and thick descriptions pertaining to the context of the research, the selection and

characteristics of participants, the methods, and findings have been provided (Graneheim & Lundman, 2004; Merriam, 2002).

Ultimately, in keeping with the naturalistic paradigm, the results of this study must be understood within the context of its particular characteristics (Shenton, 2004). To assess the extent to which these findings may be relevant in other circumstances, additional research using similar methods in different environments will be necessary (Shenton, 2004). Understanding of a phenomenon is not gained simply through the conduct of one study (Shenton, 2004); however, it is only as issues are directly addressed in multiple subsequent studies that there can be increasing certainty that observed results are applicable to other circumstances (Hennekens & Buring, 1987). Even when findings are inconsistent, this may merely be a reflection of multiple realities and not a reflection of a greater degree of trustworthiness of one study over another (Shenton, 2004). As the phenomena related to EMS retention occur in numerous geographical areas, environments, and circumstances, the aim of the current study was to provide a baseline understanding to which the results of subsequent studies may be compared (Gross as cited in Shenton, 2004).

Confirmability (Objectivity)

While distance between a researcher and participants may be seen as an indication of objectivity, qualitative researchers seek a decrease in this distance to ensure the findings reflect the ideas of the participants, and not the biases or preferences of the researcher (Shenton, 2004). Towards this end, I prolonged contact with participants to establish trust and through the investigator's lens; I made the decision to remain in the

field until the point of data saturation in order to articulate meaningful themes (Creswell & Miller, 2000). Ultimately, the aim of the current study was to establish the objectivity of the data and not necessarily my impartiality (Lincoln & Guba as cited in Krefting, 1991). To establish confirmability, I used the tool of reflexivity; whereby, I sought to follow, rather than lead the interview dialogue (Thomas & Magilvy, 2011). In addition, I self-disclosed the preconceived notions and personal beliefs that led to the design of the current study. The aforementioned method of triangulation also served to enhance the objectivity of findings. As indicated, a variety of perspectives were sought to test my interpretations. In addition to the documentation of all research decisions and procedures in the aforementioned audit trail, I also documented how changes in my preconceived notions, personal opinions and orientations occurred during the course of the research (Reinharz as cited in Guba, 1981).

Ethical Procedures

No research activity was conducted prior to obtaining the required ethical approvals. Approval of the research and all research materials was granted (approval #03-25-16-0049616) by the Walden University Institutional Review Board (IRB). The research materials supplied to the IRB included the research plan (Chapters 1, 2 and 3 comprising the dissertation proposal), all recruitment advertisements, consent form, and all data collection source documents (i.e., subject screening form with inclusion/exclusion criteria, interview guide with core questions, and master subject log). Approvals from institutional officials at the sites where the research was conducted were also supplied (see Appendix L). I also submitted to the IRB proof of recent human

subjects' protections training (see Appendix M). I considered that the research could possibly extend beyond the initial IRB approval period and planned for submission of the continuing review application to prevent any lapses in IRB approval. This was not necessary; however, as the study proceeded to completion without any delays.

Summary

In this chapter, I provided a detailed description of the research design, methodology, study population, and research procedures. The development of the tools and the processes of data collection were also discussed. I also presented the process of developing and validating specific core questions in the semistructured interview to ensure the RQs were addressed. The analytical plan was also explained with sufficient detail for future researchers to understand the methods and decisions that were made during the research, enhancing the reproducibility of this research. The following chapter will describe the results of the study.

Chapter 4: Results

Introduction

The lack of research focused on examining turnover and staff retention in EMS has been affirmed by numerous authors (Alexander et al., 2009; Blau, 2011; Freeman et al., 2009; Huot, 2013; Patterson et al., 2009; Perkins et al., 2009; U.S. Department of Transportation, National Highway Traffic Safety Administration, 2011). Given this gap in the literature pertaining to important issues affecting career choice and longevity in EMS, this exploratory study was appropriate (Creswell, 2009). The purpose of this qualitative phenomenological study was to explore the preconceived notions of individuals prior to their entering the EMS profession and whether preemployment expectations were aligned with postemployment experiences. In cases where there was a misalignment between preemployment and postemployment notions of the profession, I examined whether this contributed to job dissatisfaction or the intention to leave the profession.

In keeping with the guidelines of Creswell (2009) and Simon (2011), this study was guided by a central RQ followed by a series of closely connected questions that served to focus the study. The RQs were as follows:

RQ1: What are the preconceived notions of EMTs and paramedics prior to entering the vocation and their notions of the vocation after facing the realities of the job?

RQ2: How does alignment or misalignment between preemployment and postemployment perceptions of the vocation affect EMTs and paramedics?

RQ3: How does alignment or misalignment between the notions of the vocation prior to and following entry into the profession contribute to job satisfaction or dissatisfaction?

RQ4: How does job satisfaction or dissatisfaction contribute to the intent to stay in or leave the profession?

In this chapter, I will describe the conduct of the study, detailing how elements of the proposed plan were performed and the findings that were produced. The challenges of research subject recruitment and how these obstacles were overcome will also be discussed. I will describe the resultant study population, derived from the purposive sampling method, and all processes of data collection will be detailed, including where subjects were enrolled and interviewed and how data were recorded and transcribed. In this chapter, I will also explain the data analysis process, illustrating the development and evolution of the coding procedure, in addition to the synthesis of codes into categories and themes. Measures to establish the trustworthiness of the findings will also be presented. Finally, I will offer the actual rich and candid descriptions of how these professionals deal with life and death experiences daily to demonstrate thematic patterns in relationship to the RQs.

Setting

There were no personal or organizational conditions influencing participants that may have affected the interpretation of these study results. I recruited all subjects using the methods approved by the IRB. Participants were enrolled into the study from the IRB-approved research sites (NSLIJ Health System, Stony Brook University Hospital,

and St. John's University); the IRB-approved methods, such as social media (LinkedIn); and word of mouth referrals. The research topic was of particular interest to the study population, and therefore, subjects willingly and enthusiastically offered their participation.

Data Collection

The duration of the data collection phase of the study was exactly 14 weeks. Final IRB approval was received on March 25, 2016. Five days after IRB approval, the first subject was enrolled on March 30, 2016. The last two subjects were enrolled into the study on July 6, 2016. Subjects were continually recruited into the study until it became apparent that data saturation had been reached (Beery, 2010). This occurred after 10 subjects were enrolled. This was expected as it is within the range that is typical of the phenomenological research design sample size of approximately eight to 12 participants (Laureate Education, Inc., 2013).

Overall, recruitment proceeded well. Planning contingencies to support enrollment proved to be worthwhile as Stony Brook University Hospital turned out not to be a viable source for paramedic student participants, as the class was not scheduled to begin until August of 2016. Indeed, recruiting paramedic students proved to be more difficult than expected, extending the data collection phase of the study by 3 weeks. Initially, my posting of the approved recruitment flyer (see Appendix D) and speaking to classes at the NSLIJ Health System and St. John's University did not yield any potential participants. In addition to the pressure of the academic challenges, the students had hectic schedules as a result of accommodating practical rotation requirements and the

demands of working and going to school. After returning to St. John's University and remaining on campus to speak to students throughout the day, two students were successfully enrolled.

No variations of the data collection plan were required in any of the 10 interviews. Data collection proceeded in accordance with the study protocol without deviation. I obtained and documented informed consent using the IRB approved consent form and a research enrollment note describing the process of consent (see Appendix I). The source documents were used to verify subject inclusion and exclusion criteria, demographics, and work history (see Appendix G). I will maintain signed consents and completed screening forms on file with the study records in the approved secure location.

As planned, the locations of data collection were scheduled according to the convenience of the participants. This resulted in surveys being conducted at the approved research sites (Subjects 08, 09, and 10); my home (Subjects 1, 4, and 6); my office (Subjects 5 and 7); one subject's work office (Subject 03); and one subject's home (Subject 02). All 10 participants who signed consent completed the interview. There were no screen failures or early discontinuations of participation. All interviews proceeded without interruption or adverse event. The most unusual circumstance was encountered in the home interview of Subject 02. Upon arrival, a television service worker was found to be carrying out extensive repairs, along with an excited dog running throughout the apartment and continuously barking. This situation required waiting for the repairs to be completed. The subject's pet eventually became calm and sat quietly for the duration of the interview.

One participant (Subject 05) required follow up to clarify a response. I also recorded and transcribed the follow-up conversation as per protocol. All interviews were recorded as planned, using the Zoom digital recording device (Model# H4N). This device was capable of modification of voice recordings from “wav” to “mp3” format, thereby decreasing difficulties e-mailing the documents to the transcription service. All transcriptions were performed by “GMR Transcription.” This company offered various packages, from returning completed transcriptions in 3 to 5 business days to 1-day turnaround (GMR Transcription, n.d.). The cost of the transcription service was $1.50 per minute, using the 3 to 5 day package (GMR Transcription, n.d.). Therefore, transcribing an average 45 minute interview resulted in a cost of $67.50.

The duration of the interviews ranged from 24 minutes (Subject 01) to 82 minutes (Subject 04). The longer interviews occurred with subjects who had not only lengthy, but diverse careers. For example, the interview with Subject 06 lasted for 52 minutes. This individual had a 49-year career in EMS and many experiences to describe. Subject 04 had the longest interview (82 minutes). This subject routinely provided detailed background information before addressing the interview questions. I decided that the principles of qualitative research and open-ended questioning should be respected, and therefore, I did not interrupt or attempt to cut off the subject. This decision was rewarded as the subject did ultimately address the questions and offered deeply introspective and transparent descriptions of his experiences, particularly in dealing with patient deaths.

Demographics

In keeping with the interpretive tradition, I used the purposive sampling method in this study to focus on characteristics of the population of interest that would best enable insights into the research questions (Barbour, 2001). The resultant sample was comprised of individuals who were still working in the profession and persons who had left the profession. Of those who left clinical fieldwork and the profession, the reasons for leaving included preconceived notions of EMS as a transient profession and increasing physical challenges with advancing age. Of those still working in the profession, the variety of EMS capacities included individuals who were still actively providing clinical care, ranging from working as an EMT on the ambulance performing routine transports to working on the ambulance as a paramedic responding to calls in the New York City 9-1-1 system, to serving as a flight paramedic performing critical care transports. Of those still in the profession but not working full time providing clinical care, the experiences included working as a field supervisor and working as an educator, directing a medical center's training facilities. One individual provided a truly unique career experience as he was trained in the first paramedic class in New York City in 1974. This individual has worked as an EMT, paramedic, field supervisor, and educator. In addition, he is considered to be a thought leader in the field as he has published approximately 30 research articles on resuscitation, coauthored prehospital care textbooks, and lectures internationally. A summary of participant demographics relevant to the research is provided in Table 4.

Table 4

Participant Demographics

Subject	Gender	Age	EMT	Paramedic	Work Capacity	Left EMS	Interview Location	Interview Duration (minutes)
1	F	67		X		X	Researcher Home	24
2	F	71		X		X	Participant Home	33
3	M	53		X	Field Paramedic		Participant Office	52
4	M	30	X			X	Researcher Home	82
5	M	48		X	Flight Medic		Researcher Office	44
6	M	67		X	Author, Researcher, Thought Leader		Researcher Home	52
7	M	52		X	Field Supervisor		Researcher Office	29
8	M	50		X	Education Director		NSLIJ	63
9	M	24	X		Paramedic Student		St. John's University	34
10	M	25	X		Paramedic Student		St. John's University	35

Data Analysis

Data analysis was a continuous process beginning immediately after I received the first subject's transcript. The process began by immersion into the data, reading the transcripts, and becoming familiar with the content (Ulin et al., 2005). After the first subject's transcript was reviewed, I made adjustments to the interview process. The order of certain questions was changed to enhance the logical flow of the discussion. These assessments and changes were documented in analytical memos. A preliminary reading of all transcripts was done to ensure sufficient data were obtained to address the RQs, prior to the start of the coding process (Ulin et al., 2005).

The coding of the transcripts began with the identification of the meaning units (Graneheim & Lundman, 2004). In keeping with the techniques espoused by Saldana (2009), I developed a coding method using the technique of structural coding, whereby segments of data were coded using words related to the RQs. For example, codes were developed with preliminary tags such as "expectations," "experiences," and "intent to leave," thereby creating a context for the codes and facilitating the creation of categories. Descriptive codes were then added to the preliminary tags to assist readers to hear what I was hearing. For example, Subject 05, who had the expectation that dealing with illness and dying would not be problematic, described this experience:

> There were a few experiences that I didn't expect. I didn't expect to have such an aversion to the smell of burnt flesh. After a number of years down in the city, I had a period of 7 years where every Christmas, 2 weeks before or 2 weeks after Christmas, I had a child die. That happened for 7 years straight. I never realized – I can work on the kids. To this day, I can't be in the same room with a grieving parent because the sound that they emit when they're crying and grieving for their child is like nails on a chalkboard. It goes right through me. I never expected that.

This response was coded as "misaligned experience-psychological challenges-ability to cope." The participant's description was coded with the structural code of "experience." Since the experience was not in keeping with the participant's expectations, it was further clarified as "misaligned experience." The second tag refers to the category of challenges, specifically psychological challenges, while the third tag

contains the descriptive code that further captures the essence of the experience (Saldana, 2009).

In accordance with the precautions explained by Saldana (2009), I decided to forego the use of computer assisted qualitative data analysis software (CAQDAS). As this author cautioned, trying to learn the fundamental principles of coding and qualitative data analysis while simultaneously becoming proficient with the complex instructions and numerous functions of CAQDAS proved to be extremely time consuming and overwhelming. Therefore, I coded all of the transcripts manually, using the highlight function in Microsoft Word. The highlighted sections were then tagged using the "new comment" function. As each comment was automatically enumerated, the numbers were then entered into the corresponding coding categories in each subject's code book. A content analysis coding sheet was then developed to identify which codes were used for each participant, leading to the identification of the emerging themes.

Results

Table 5 summarizes the categories and themes that emerged from the data analysis.

Table 5

Emerging Categories and Themes

Categories	Primary Themes	Secondary Themes
Vocational Influence	Altruism	
Career Longevity Perception	Transient Profession	
EMT to Paramedic	Professional Growth Self-Efficacy & Excitement	
Challenges of the Profession	Physical Challenges	Physical Injury Increased Physical Challenges with Advancing Age Alternative Occupational Opportunities
	Psychological Challenges - Illness and Death of Patients	Grief of Family Members
Importance of Relationships	Negative Relationships with Partners / Colleagues - Dissatisfaction	Acceptance of Negative Relationships Camaraderie

The emerging themes are discussed herein as they relate to the four RQs.

Research Question 1

RQ1 stated, what are the preconceived notions of EMTs and paramedics prior to entering the vocation and their notions of the vocation after facing the realities of the job?

Vocational influence: Altruism. A primary theme that emerged was that individuals enter the EMS profession with the preconceived notion that they will be in a position to help people. Study participants indicated that feelings of altruism were a vocational influence as follows: (a) “I like the feeling of helping people” (Subject 01); (b) “What did I expect? Just to do as much as I could do for people” (Subject 02). One

subject explained how he never envisioned being involved in anything else but a profession where he could have some positive effect on people's lives:

> I always wanted to do something where I felt I was helping people. Whatever capacity that I was in, I never had any fantasies or notions that I was going to do just some desk job somewhere that doesn't in some way, shape, or form improve people's lives. Now I suppose you could say every, any career out there you could say in some way, shape, or form improves somebody's life, but I always wanted to be doing something active. (Subject 04)

Another participant described a personal experience at an early age that engendered the aspiration to help people. This participant explained the influence of the terrorist attacks on the World Trade Center in New York City:

> One of the big things for me joining the Navy was 9/11. My father was in the city at the time. He was uptown of the towers though. But at the time I was nine years old, we didn't hear from him until midnight of that day, so nine year-old me didn't really know where my dad was and all this terrible stuff was happening. So I think as I grew up I realized that manifested into me wanting to help people, and if a situation like that were to happen, I would be there. (Subject 09)

Finally, one subject expressed the importance of making just a small difference, even when caring for patients who were not suffering from life threatening emergencies. Here he describes how performing his job tasks went beyond just mere employment:

> I was doing it to make a difference you know. EMS is more than a job, it's like a calling. You want to, you don't go to work thinking, oh, yeah, you know I'm

> gonna get paid this amount of money, or I'm gonna be on TV today, or something like that. For me, if I can make someone happy, even if someone has a stubbed toe for God sakes, and I can make them feel just a little bit better going to the hospital, regardless of how dumb the job might be, it's a real emergency to them. So if I can make them feel better, then that's a job well done for me. I sleep well at night. (Subject 10)

Career longevity perception: Transient profession. An additional primary theme that emerged was that individuals enter the EMS profession with the preconceived notion that it is a transient career. When asked if prior to entering the profession, if he expected to work on the ambulance until he retired, one subject stated:

> Not at all. I thought that I'd do it for a couple of years, be back in school, and be in medical school in a short time. I didn't expect it to be a career. In fact, I thought it was odd that anybody would want this to be a career. (Subject 03)

Participants also indicated that upon entering the profession, they already had plans to either go further into other aspects of the career beyond providing clinical care in the field, or go back to jobs for which they already had qualifications. When asked about career longevity expectations, participants shared the following preconceived notions, using the word transient: (a) "I have a master's in teaching, so I knew I would go back to teach at some point, but I think I looked at it as a transient job from the start" (Subject 01);

> (b) I didn't want to treat it as a transient job, but truthfully I kind of thought of it that way for myself. I never envisioned being on an ambulance until I retired. So

> even if I stayed on the ambulance for 10 years or even longer, I always wanted at some point to move on to a higher, maybe supervisory or administrative position. That was just always in the back of my head. (Subject 04)

In addition, participants who didn't originally look at the profession as transient for themselves, were still aware that this view was held by others and actually agreed that this was the perception of the profession for most people. In addition to the word transient, these participants also used the term stepping stone:

> (a) Actually, I think EMS is a transient profession for most of the people who go into it. They're looking for a steppingstone to police, fire, even sanitation, nursing, doctor, PA, nurse practitioner, whatever. I worked as an HR supervisor in EMS, and just experientially just before that. Many of my partners I've seen go on to become doctors, nurses, and cops and firemen. (Subject 05)
>
> (b) I knew about going in that there were a lot of people that use it as a stepping stone to become a police officer or a firefighter. The pure and simple fact is it is a transient profession. Because the moment you ask somebody, are you planning to make EMS your career? Their answer is no. (Subject 08)

One participant with 49 years in the profession with extensive experience as an educator, offered his view resulting from encounters with students entering EMT and paramedic courses. This subject felt that while EMS is not a lifelong career, in particular, the EMT is becoming a transitional position by nature. This is due to the fact that other health careers are requiring some basic clinical training. The EMT course is seen as a relatively short educational commitment that allows individuals to get hands-on

experience treating patients and dealing with people who are ill and injured. This individual was particularly qualified to provide this in-depth response:

> Well, I've interviewed thousands of people going into EMS careers so I can tell you objectively; we also ask them this question; what is your goal? And some people have been honest enough to say; eventually, I'd like to become a doctor but this is important. Right now, you know this; EMT certification is almost becoming a requirement for allied health professions, nursing and allied health professions. Have that EMT certification working because it's sort of a way to, with brief education, to get them in a clinical environment where they know whether they really wanna do this. I'd say paramedic and EMT would be the top of the list for the most transient professions. Nursing, you're a nurse for the rest of your life. Respiratory therapist, you're a respiratory therapist for the rest of your life. All of these careers, they're lifelong careers. Not EMS, I don't think. (Subject 06)

This view that the EMT position may be becoming transient in nature was supported by the experience of one of the study participants. In this example, the transition was not due to preparation for a different allied health profession. Rather, the EMT position was seen as limited for individuals planning to make a long term commitment to the EMS career. This subject was advised by a family member who moved on to become a paramedic. He described his experience to move on herein:

> I expected obviously to advance in it. In fact, my brother was the one who said to me that if you're going to stay with this, don't stay as an EMT. Become a medic

> because you'll get frustrated after a while, which he's probably right. At that point I was in for about maybe three years, and then I decided to go to medic school after that through New York City EMS. (Subject 07)

EMT to paramedic: Professional growth. Paramedic participants were also asked about their preconceived notions pertaining to the significant clinical career ladder in the profession; proceeding from the level of EMT to paramedic. The thought process involved some of the specific aspects of the paramedic qualifications. The preconceived notion expressed was that taking this step would allow individuals to provide additional, more advanced interventions. While the ability to do more was cited as important, responses did not focus on helping others as they did regarding the influence to enter the profession. Rather, subjects indicated a sense of wanting to do more in terms of contributing to their professional growth. These participants' comments did not include phrases pertaining to helping others. When asked what influenced them to take this career step, preconceived notions of aspiring to grow professionally were expressed as a primary theme: (a) "I wanted to expand myself as well" (Subject 10); (b) "Because I could do more things. I could give medications. I could do IVs. I could do a whole lot more than I could as an EMT" (Subject 02);

> (c) I got a job as an EMT for a private ambulance in Kingston. I found I really, really liked it, and that's when I just realized I don't wanna be an EMT for the rest of my life. I wanna do more because I was always like that. That's what made me go from advanced first aider to EMT, EMT to paramedic; (Subject 05)

> (d) As an EMT basically you put on oxygen, bandage up wounds, and take them to the hospital. Medics are actually basically doing what they do in the hospital; they're doing it right there in someone's house or on the street and affecting a real change. (Subject 07)

One participant indicated that while enlisted in the armed forces, he was already doing more advanced procedures that were not allowed with his current EMT certification. This paramedic student specifically stated how taking this career step was good for him:

> I'm here and I'm going to be a paramedic sooner than I expected. But I think it's good for me in a way, because as a Navy Corpsman I was doing a lot more advanced procedures. Like I could do airway procedures and IVs and things like that. And as an EMT basic I couldn't do any of that. So I figured I could get a little bit of experience as an EMT basic and then make the jump back to that advanced level of care. (Subject 09)

Physical challenges. Two additional themes emerged whereby participants described notions of the career after having experienced the realities of the job. Interestingly, in both of these areas, the participants indicated that they hadn't given these issues much thought prior to entering the profession. In the category of challenges of the profession, a primary theme that emerged was that the job entailed dealing with significant physical challenges. Given their experiences, participants reflected on the fact that attention to the physical nature of the job would have been prudent. When asked if they had considered the physical challenges of the job prior to employment, participants

answered: (a) “No, I should have, but I didn't” (Subject 01); (b) “Not nearly as much as I should have” (Subject 04); and (c) “Not at all. I didn’t really think that there was going to be that much of a beating” (Subject 07).

Physical injury concern. Pertaining to notions after experiencing the realities of the job, a secondary theme that emerged in the category of challenges, was that the effects of physical injuries became something that was a concern and thought about. Participants offered these responses suggesting how thoughts about the future effect of injuries weighed on them: (a) “But also concern that our physical being, like the men had the concern, about hurting ourselves, hurting our back” (Subject 01); and (b) “I herniated a disc in my back for the first time in 26 years. And at that point, I thought; now I’ve got to reinvent myself” (Subject 03). One participant poignantly relayed how terrifying the thought of the long term effects of injuries were. Herein he describes how he thought about the effect of injuries on his future:

> I ended up actually herniating my L4 and L5 and I had a lot of back braces and heat wraps and painkillers for about a year afterwards, and chiropractic adjustments. It didn’t hit home for me until I experienced that level of pain, and back pain to that degree feels debilitating. It feels crippling. It was scary. I was afraid that it was never going to get fixed properly and I was never like, I’m walking with a limp and I’m 23. What am I going to be like when I’m 40 or 50? I’m going to be crippled. It was just a terrifying thought process so I spent the next year being extremely careful of every single thing that I did. (Subject 04)

Psychological challenges. Another primary theme that emerged pertaining to postemployment notions was also in the category of challenges of the profession. Similar to the physical nature of the career, participants indicated that prior to entering the profession, the psychological challenges of the job were not given consideration. In addition, the challenges of dealing with the sick and injured populations were not deemed to be significant concerns. The postemployment notions were characterized by indicating an ability to handle psychological trauma. The mechanism to deal with these issues was described as divorcing oneself, not internalizing, or not becoming attached. The emerging theme indicated an ability to not let the trauma of illness and death affect them. These participants all used the terms divorce, not internalize, or not attach: (a) “No, it never bothered me either, no. I could divorce myself from it 100 percent” (Subject 01);

> (b) Honestly, I don’t recall ever going through any emotional, psychological changes because of what I was seeing. I’m not stressed. I’ve seen people die, I’ve seen live, I’ve seen people born and I just, emotionally I don’t think I’ve ever responded. Maybe I just never internalized any, I don’t know. I don’t know what it was. (Subject 03)
>
> (c) I knew people were gonna die, I knew it. Sometimes I never really processed it, sometimes, patients are patients. If I got attached to every single patient I would not, I would be in Creedmoor or in some other psychiatric facility. The way, I mean I think of all my patients as if they're my own family members. But I think what I've come to terms with is the fact that people are, in fact, going to die, and I can't save every single one of them. (Subject 10)

Grief of family members. A secondary theme in this area that emerged was that while participants indicated that the fact they could not save every patient was accepted, feelings of sadness were experienced for the family members who were in the immediate moments of experiencing the loss of their loved ones. These responses express feelings of sadness for the family members who were in the midst of trying to cope at the moment of their loved ones passing:

> (a) Again, it sounds callous but put it this way; it's like a patient who has died is the most stable patient you're ever going to have. They're not going to change. There's nothing to worry about, so just at this point you do what you have to do and you move on. There's nothing, in other words a way of saying it is that I guess there are certain people who get overwhelmed at the idea of someone dying and they get worried, so maybe it was like a dark humor way of taking a layer off of that. But to me, I never felt sadness for the patient who had died because there's nothing you can really do. They've passed on and whatever their problems were are now ended. What I always felt a lot of sadness for were the people who were left behind, the people who were not able to cope with this yet. (Subject 04)
>
> (b) They came in and said their goodbyes to their deceased, and they were very stoic about it. I asked the family members, you know, very emotional and very, they break down, and that's definitely harder. It's hard seeing a family member of a deceased, especially when the deceased is still in the room, because that was their loved one. (Subject 09)

Research Question 2

RQ2 stated, how does alignment or misalignment between preemployment and postemployment perceptions of the vocation affect EMTs and paramedics? One primary theme emerged pertaining to this question. The prevailing preconceived notion was the expectation of being in a position to help, do meaningful work, and make a difference in peoples' lives. Participants reported that their experiences were aligned with this expectation and indicated that this was a source of job satisfaction. Since altruism was found to be a primary theme associated with job satisfaction, it is discussed in the next section under RQ3.

No other clear theme emerged pertaining to the effect of alignment per se on postemployment perceptions in general. This was due to the fact that the remaining issues that emerged were reported as being important specifically in relation to job satisfaction and/or intention to leave the profession. They are therefore, discussed under RQ3 and RQ4. In addition, with regard to these important issues, participants reported that they had not given consideration to these aspects of the job prior to entering the field. Thus, with regard to the remaining important themes identified, no preconceived notions existed. Therefore, neither alignment nor misalignment could have been present.

Research Question 3

RQ3 stated, how does alignment or misalignment between the notions of the vocation prior to and following entry into the profession contribute to job satisfaction or dissatisfaction?

Vocational influence: Altruism. As indicated in RQ1, a primary theme that emerged was the expectation of being able to help people and make a difference in people's lives. This theme also emerged as a source of satisfaction. When asked about the most important thing that made them feel satisfied about the job, participants cited the ability to help and make a difference as follows: (a) "I guess probably more so bringing the sick people into the ER and having them thank us, speaking to them respectfully, not calling them mom, but speaking to them respectfully and just being a comfort to them" (Subject 01); (b) "Taking care of those people who really needed me and whose lives I either saved or made a difference in" (Subject 02); (c) "I think the most satisfying thing is helping people and being there when someone needs medical attention" (Subject 09); and (d) "Making a difference in someone's life" (Subject 10).

Rather than speaking about the positive aspect of experiencing satisfaction, this subject focused on how dissatisfying it was when he felt he wasn't doing anything meaningful to help people:

> I would say the only dissatisfaction, and this is overall, I think my only dissatisfaction with the job is when it actually starts to feel like a grind, the days where you don't feel like you're doing any good whatsoever, which those come too. That's the only dissatisfaction I ever really had. I never felt dissatisfied with what I do when you see the horribly stressful things, when you see the death, the sadness. That always sort of reinforced the need to do it for me. (Subject 04)

All of these participants had the expectation of being able to help people and their aligned experiences were associated with satisfaction, while the misaligned experience of

not being able to help was associated with dissatisfaction. Two participants did not have preconceived notions of altruism. The possibility that these subjects represented disconfirming cases was considered. Upon closer examination, it was found that these individuals had serendipitous entries into the profession and; therefore, really had no preconceived notions of the profession. One subject joined a friend who was applying for the job and the other was working in a delicatessen in the 1960s when he was recruited into the field. After a weekend of training, he was answering calls in the New York City 9-1-1 system. It was determined that these were not discrepant cases as both subjects explained that shortly after working in the field, they acquired the notion that the ability to help people was meaningful to them. The described experiences of both subjects were similar to participants who had altruistic expectations prior to entering the profession. In addition, both participants offered descriptions of altruistic experiences that were associated with satisfaction:

> (a) There was a tremendous feeling of doing something meaningful, that you were helping people, and you were taking them to the, even if you were just taking them to the hospital and interacting on a social level, it was always that sense of meaning at the beginning. (Subject 06)
>
> (b) But the whole thing revolves around you do a job that's fulfilling also. The partners made it easy to do the job, but the job itself, as long as you're able to do a job and help people and at the end of the day you can say, I made a difference. (Subject 08)

Negative relationships with colleagues/partners: Dissatisfaction. While altruism was cited as the most important aspect of the job associated with satisfaction, negative relationships with partners were cited as the most important aspect of the job associated with dissatisfaction. This aspect of the job was representative of a characteristic that did not neatly fit into one category. For example, participants could not simply put their relationships into a category of positive or negative. Over the course of careers, the myriad of experiences were diverse. Relationships with colleagues were reported as mostly positive; however, there were also negative encounters. Importantly, although the negative relationships were reported as less frequent, difficulties with partners had a significant impact. When asked about the most important aspect of the job associated with dissatisfaction, subjects responded as follows:

> (a) Working with some of the partners I worked with. They were either macho or they did things that they shouldn't have been done at work, or whatever. That was the most dissatisfying, I would think, but that was also rare. All in all, I had very good partners. There were a handful that, maybe, I didn't really appreciate. (Subject 02)
>
> (b) Yep, because then you feel like not only do you have to manage the emergencies that you're being assigned, you've got to manage the person who's sitting next to you on the truck, and you never know if they feel the same way about you, and that can make for a very bad experience. (Subject 04)
>
> (c) Well, the most challenging thing in the beginning were the colleagues at that, I use the word loosely, were really rough and tumble guys. Really, I wouldn't

> wanna put some of the stories on tape of these guys. So it was a challenge trying to be effective in that environment initially; but the truth in ambulance work, as you know it, it really only amounts to one other guy, and you just gotta influence him and let's work as a team. (Subject 06)
>
> (d) I would like to say it wouldn't affect me, but at the same time, it has to in some way. Because if you're with a person who you don't get along with or you don't like or you don't respect, that's going to affect your satisfaction with your job. And when I did have this bad partner, I definitely was less satisfied than I was with having a good partner. (Subject 09)

Acceptance of negative working relationships. This issue elicited some of the most passionate responses in the survey. Although associated with dissatisfaction, a secondary theme that emerged was the notion that this was an issue that was seen as part of the job and could be addressed by taking actions geared towards getting different partners. The mechanisms to achieve this that were mentioned included getting assigned to other shifts or units. The duality of this job characteristic was exemplified by these comments:

> (a) You want to strangle them sometimes; or else get to another unit, get different partners. But again, it's part of the job. You have your good partners and your bad partners. They do make the job, really. A good partner makes the job a lot easier to deal with. (Subject 07)

(b) It can be the greatest experience ever if you're with a tight group of people, but it can be the worst experience you've ever had if you're with somebody that you don't feel like you can trust. (Subject 04)

(c) Well, you wanna depend on them. That's another 50/50 good-bad ratio. When you had a good partner that you could trust and you understood and understood you, it was a very, very easy shift. If you had a partner who did not want to do the job, was racist or had a very poor filter, or just hated life in general, that was a very dissatisfying part of the job, because to spend 12 hours with somebody who is evil or is unhappy, or just doesn't care or are incompetent, that's hard. (Subject 05)

(d) But my two partners made it. The relationship you develop with these guys, it was interesting. Because at times, you didn't have to say anything. You'd be doing what you're doing, they're doing what they're doing. All of a sudden, and everything was working and meshing together. And you build that relationship with somebody. That's what made it interesting. Because you could use it to help people. It was sort of like you build a social relationship to help people in a professional setting. And I think that's what made it enjoyable to me. The people I was working with have always made it worthwhile, wherever I was. Granted, you're going to get people that you're not going to like. That happens. But you find ways to make it work. And if it doesn't work, you find new partners. (Subject 08)

Camaraderie. Another secondary theme that emerged in this category was that in addition to the focus on the working relationship with a partner, there was a sense of camaraderie with colleagues. This was cited as a relationship associated with satisfaction. The emergence of this aspect of the relationship was linked to working with individuals in stressful situations by this participant:

> The more stressful things got, the tighter the camaraderie happened between people which is something that a lot of people don't understand. Like you see TV shows and the more stressful it gets, the more people are at each other's throats and it's dramatic. And I'm like; I could never stand those shows because that's not how it is, at least not in my experience. When you are more stressed, that's when you rely on each other more. That's when you really build a close friendship and a close working relationship, and you don't get that outside of areas where that's necessary. And so to me those were my absolute favorite tours. (Subject 04)

A focus on the social aspect of camaraderie was described more by this subject:

> There's an occasional blip when we get that real good job and then that trumps everything else, but on a day-to-day basis I enjoy going to work because of that interaction that I have in the garage, with my partners, with other EMS crews that we see in the streets. We stop, we chat, we talk, we get coffee, we talk about the weekend, we talk about the job that they did. That's gratifying, that fills my day. (Subject 03)

EMT to paramedic: Satisfaction, self-efficacy, and excitement. When asked about their experiences, participants indicated that they were aligned with their expectations and this was associated with job satisfaction. The primary theme that emerged was that paramedics felt a sense of satisfaction, self-efficacy, and excitement in both their abilities to successfully diagnose and perform advanced life support skills. These paramedics explained:

> (a) Well, I was on the same kind of calls; it was just that I could do more. I was able to, of course, after paramedic classes, you knew a whole lot more, and I was able to diagnose. I considered myself a pretty good diagnostician, and it seemed to prove me right most of the time. Starting IVs, if we had drug overdoses, what I could do with a drug overdose was start an IV and give them Narcan, which I couldn't do as an EMT. (Subject 02)
>
> (b) When I make the right diagnosis and the patient gets better from it, when I find out the problem and I can fix it and that person does better because of directly what I did, it's the most satisfying. I don't care whether they say thank you or don't say thank you, I walk away knowing I got this, and that, for me, is a feeling like I've never known. It's great. (Subject 05)

When further probed as to whether this was a feeling of altruism, this subject was very clear that this was not the same as feelings of wanting to help others. He clarified his remarks as follows:

> I wouldn't call it that. It's really about me. I was right. I had 50 million different diagnoses that I could have made, but asking the right questions, doing the right

> physical exams, having the right information in my brain to be able to be able to decipher what was going on, I was able to come to a conclusion of what was wrong, and I was able to pick from the drugs and therapies that I had to correct the situation, and I made them better. (Subject 05)

One respondent was quite enthusiastic in his description of his confidence in his paramedic skills. After working as an EMT for many years, he retold of his euphoria after his first successful resuscitation:

> I really felt, yeah, self-efficacy; a feeling of self-efficacy. But I really felt all the time, even in spite of that, we did the best we could. But when I became a paramedic, because I had such good mentorship, I always felt like we were top tier, really doing as best we could. We always got the tube in. We always got the IV. We were that kinda team between the two of us. I remember like I said before, in 1975 when we started as paramedics, that's the first time I resuscitated a cardiac arrest victim. I was a veteran. I was 8 years, yeah, 8 years I was an EMT or whatever you wanna call it. And so that was like wow. (Subject 06)

Later in the interview, when this subject was asked about what was the most satisfying aspect of the job, he returned to this theme. Here he described how performing advanced life support was a different kind of satisfaction than performing basic life support skills:

> I would say the most satisfying thing was seeing the result, particularly when I became a paramedic. On the EMT side, I guess you were more satisfied with the social interaction and helping people and that's the feeling of that and the feeling

> of helping and getting them to the hospital. When you became a paramedic, you really feel you made a difference. I don't have to tell you. To get a cardiac arrest, you bring them back to life, and you go up to critical care unit the next day and you talk to them and you say, wow, look what happened here. That was extremely satisfying. (Subject 06)

One subject's response was reviewed as a potential discrepant case as his motivation to become a paramedic was more directed towards disillusion with some of the less emergent calls assigned to basic life support crews. This participant offered this view which envisioned that becoming a paramedic would ensure being assigned to more calls that were true emergencies:

> I thought that as a paramedic I would be taking care of people with more serious problems, whose problem may not necessarily have been the result of their lifestyle. Like, as an EMT it was the alcoholic. It was constantly the alcoholic. It was the person who had the infection on his legs that were, was constantly calling because it was weeping again, because they weren't taking care of it. So I thought, well certainly as a paramedic I'll be taking care of cardiac patients. People were having heart attacks, and certainly, it's not their fault. And so I thought, okay, I won't go through the same repeat customer problem. (Subject 03)

It was determined that this response did not represent a discrepant case. Although he did not direct his comments on becoming a paramedic towards professional growth, his description of his experiences revealed a concordance with other participants' views. While he focused more on the negative aspect of doing less meaningful work as an EMT

when he explained his motivation to become a paramedic, he later spoke about the more positive aspects of providing advanced life support and really making a difference. Here he revealed the similar experiences of satisfaction and excitement with being able to handle the more emergent cases and effect real change. This emerged later in the interview when the subject was asked about the most satisfying aspect of the job. He explained as follows:

> It's gotta be those, oh boy the most; see having those real patients that I take care of, those are the very high points. That's one of the big thrills, that's the big payoff. On a day-to-day basis if I do one real call every two weeks, that's the moment where I feel, that's the moment that I'm looking for. That is the absolute thrill. Yes. (Subject 03)

Psychological challenges. Psychological challenges also emerged as a theme related to satisfaction. Participants reported that being able to successfully deal with the significant psychological challenges of the job was a source of satisfaction. These responses revealed a confidence in the ability to manage any psychological challenges experienced: (a) "I feel satisfied. If I can get through it, and I do, I find a way to muddle through it, I can get through any patient experience, good or bad" (Subject 05);

> (b) I enjoy the idea of going to work feeling that I'm not gonna get rattled. It's getting up on stage giving a speech, even if its two minutes, the stomach starts churning, and starts pacing. But the thought of doing anything in this field doesn't faze me at all, just, I don't have any trepidations about just jumping into the mix. (Subject 03)

While responses indicated that divorcing oneself or not becoming attached was a way of dealing with psychological challenges, one subject revealed that he still does feel sorrow. This was examined as a potential discrepant case. However, the essence of his response was consistent with other participants as he expressed the ability to manage the psychological challenges, be able to do his job, and proceed to the next call. It was determined therefore, that this did not represent a discrepant case. In addition, this participant also felt that being able to manage these challenges was a source of satisfaction:

> I feel it very deeply and I feel bad that I couldn't save this person, this family member's loved one. But then I move past it. I deal with the grief and I deal with the sorrow situation for a few hours, maybe a day, and then I tell myself like, okay, now I have to go help other people. (Subject 09)

Insight into the mechanism of handling these challenges was also revealed. One subject indicated that being grounded in the belief that what he was doing was meaningful was at the heart of being able to cope. This subject also indicated that the ability to deal with these challenges was a source of satisfaction. When asked about coping with the psychological challenges, this subject replied:

> Well, see, that's interesting. Because I honestly feel that if I didn't like the job, and that I didn't find some value in it in every day that I came to work, I think it would've had, yeah, you have a definite connection there, because I think I would've gotten the hell out a long time ago. I think that any sort of psychological stability that I have would not be there, because I think that feeds upon it. Because

> the people that are not happy with their jobs and they're exposed to more and more bad things, it just makes it even worse for them. If they can't find any value in what they do, that makes it a lot worse for them. (Subject 08)

Physical challenges. As discussed in RQ1, an emerging theme was the significant physical challenges experienced on the job. This theme also emerged in two different aspects related to satisfaction. Dealing with the physical hardships of the job were identified as a source of dissatisfaction, while participants reported that successfully overcoming the physical adversities and being able to rescue heavy patients was a source of satisfaction. These two participants typified the different views: (a) "The other dissatisfaction I had was carrying all the heavy equipment up four, five, six flights of stairs when the elevators weren't working" (Subject 02); and (b) "Yeah, it was kinda cool when we could lift up to maybe 200 pounds, but yes, there was satisfaction" (Subject 01).

As discussed previously, some job characteristics associated with satisfaction were not given consideration prior to entering the occupation. Unlike the theme of altruism, where participants indicated this was an expectation prior to entering the vocation, participants indicated that colleague relationships, and physical and psychological challenges were not given consideration prior to entering the field. Thus, for these themes, there were no preconceived notions. Therefore, while colleague relationships and psychological and physical challenges emerged as important job characteristics associated with satisfaction and dissatisfaction, they could not be associated with alignment or misalignment between expectations and experiences per se, since no expectations existed.

Research Question 4

Physical challenges. RQ4 stated, how does job satisfaction or dissatisfaction contribute to the intent to stay in or leave the profession? The primary theme that emerged in response to RQ4 was the significance of the physical nature of the job and its association with the intention to either leave the profession or leave clinical fieldwork on the ambulance. Participants provided rich descriptions of the injuries that they, their colleagues, and family members had incurred. A secondary theme also emerged in this area as participants also described how they perceived the effect of advancing age on the physical challenges of the job, and how this contributed to the intention to leave the profession. Subjects were asked about the most important aspect of the profession with which they were dissatisfied. The responses indicated that the physical challenges affected their intentions to either leave the profession or end their careers in clinical fieldwork on the ambulance. These participants who actually left the profession indicated how the physical challenges and advancing age affected their decisions to leave the profession as follows: (a) “I think at that point it was my health, physical health” (Subject 01);

> (b) Well, what changed was I was getting older. I was an older paramedic to begin with, and carrying and lifting 200 pound people and carrying them down stairs, and carrying my 17 pounds of equipment made it harder for me. Eventually, I figured that was enough. (Subject 02)

Respondents also indicated how their perceptions of the future affected decisions to leave clinical fieldwork. Seeking other capacities in EMS was seen as a way to avoid

the burdens of the ambulance and still stay in the profession. The avenues of change included becoming a field supervisor or moving to either administrative or teaching positions. Participants who left fieldwork for other capacities in the profession provided these descriptions of their decisions to leave:

> (a) Obviously the scourge of ambulance work is spinal injuries and I know how a lot of my friends have had it. My son has had it. So that is a big issue. It becomes a source of dissatisfaction because literally you're in pain. So in that respect, but it isn't so much the lifting that's the source of dissatisfaction, it's the pain of spinal injury that became the source that was very pragmatic and ultimately led to me saying, when I got my spinal surgery, I said, no more. I'm not gonna be lifting people. It just can't. It's not gonna work. (Subject 06)
>
> (b) It was just the injuries, and the constant carrying patients, carrying equipment up and down the stairs was probably eventually going to cripple me. So I thought it was probably a good idea to get off the ambulance. I wanted to stay in the field. I didn't want to go inside somewhere fulltime. So that seemed like the logical choice. (Subject 07)
>
> (c) That I think is a painful realization that everybody comes to. When you're under 30, even up to probably 35 or 40. Yeah, you can actually work the field and you can probably get away with it. But then it gets to a point where you're sitting there; I can't haul 300 pound people down three flights of stairs in the brownstones anymore. And you realize that your body is going to fail much sooner than your will. And I knew right off, I've seen what it did to people. And I

> was like okay, I'm either going to make sort of a chain for me to become an officer, when I was with the City, or maybe here as an administrator, but there was no way in hell I could have done that, no. (Subject 08)

While the theme of concern for the physical challenges with advancing age was seen for individuals who left fieldwork and for those who left the occupation altogether, it also emerged among individuals still working as clinical field professionals. For these individuals also, the options were either to remain in the profession in some other capacity or completely leave the vocation. This participant indicated how the effects of advancing age were influencing his intentions to ultimately leave fieldwork while still remaining in the profession as follows:

> I only recently started thinking about teaching because I realized I won't be able to do this as long as I want to do this. I'm not going to be the 71 year-old paramedic. It just, I don't think it's going to work. So I, for the first time, just several months ago, somebody offered me the opportunity to start getting teaching credentials to start teaching. And even when they presented it to me I thought, we'll see. And then I herniated a disc in my back for the first time in 26 years. And at that point, I thought; now I've got to reinvent myself. So now, in the next couple of months I'll be pursuing the teaching aspect of paramedic work. (Subject 03)

Alternative career opportunities. Job dissatisfaction may serve as an initiator of a cascade of events, leading from thoughts about quitting to evaluations of alternatives, and the ultimate decision to leave (Mobley, 1977). The availability of alternative

occupational opportunities may also affect career change (Gottfredson & Johnstun, 2009). A secondary theme that emerged related to concern for advancing age and physical challenges was the consideration of alternative occupations. This was seen in individuals still working in the profession and among those who left. Evaluation of career alternatives was described by these participants:

> (a) There was also a job open in my former profession as teacher. It was the time. I don't know if there would've been another spot open in a good neighborhood if I had waited, so I think it was take the opportunity. (Subject 01)
>
> (b) I was getting older and it was getting more tiring, and my body wasn't as good as it was ten years prior. At that point, I guess I decided I wanted to go into nursing, and I think that was probably the key thing that made me go on. (Subject 02)
>
> (c) I'd like to, but I'm planning on also the fact that it requires me to be physically intact, and if I get injured or I wanna move to a nicer climate or something like that, I may not be able to do that, so I'm also planning on nursing. (Subject 05)

Two participants did report concern for physical injuries with advancing age; however, these individuals did not report this as being associated with dissatisfaction or the intention to leave the profession. Therefore, the responses of these subjects were further examined to determine if they represented discrepant cases. Both were paramedic students and represented the youngest demographic in the study. These individuals were asked if they had given any thought to the physical challenges prior to entering the field:

> (a) Not before, but shortly after I got introduced to it I started following a bunch of different magazine and online blogs and things like that, and I noticed what a lot of people talk about are injuries, back injuries from lifting and moving patients and stuff. So I had to start considering that, and whenever I move patients I always make sure, you know, that my back was straight and I was lifting with my legs. And it's always been in the back of my mind, because I do have some pre-existing injuries from my time in the Navy. I have bad knees and a bad shoulder, and I don't want to aggravate those injuries. So I was thinking about injuries before, but I didn't know, like back injuries were so specific. Yeah, I was thinking about my personal injuries and how I could not aggravate those, but then as soon as I got into the field I realized there were new injuries I needed to worry about. (Subject 09)
>
> (b) I didn't really get how physical it would be until I went to orientation, and I had to carry this 125 pound guy up and down the steps when I got my job. I was, well, I better start going to the gym. So I started going. The way I see it is this job is very physically demanding. So while you can be in this job for 30 some odd years, there's only so much a body can take. (Subject 10)

It was determined that what was described was in keeping with the primary theme that emerged. The primary theme indicated that the physical challenges were not given consideration prior to entering the field, but they eventually became a source of dissatisfaction associated with the intention to leave. These students did not yet have the years and diversity of experience that led others to the final step of leaving or the

intention to leave. The subjects' responses; however, were considered to be consistent with what others described at similar points in their careers. Therefore, the essence of their responses was deemed to be comparable to others at the only career time points that could be compared. It was determined; therefore, that these subjects did not represent discrepant cases.

Evidence of Trustworthiness

Credibility

Various methods within the naturalistic paradigm were used to establish the truth value of the current research findings (Guba, 1981). Building trust with participants proved to be an important aspect of both the recruitment and interview processes. This was achieved by spending sufficient time with participants and potential participants to establish a rapport (Dooley, 2007). For example, the first recruitment effort and presentation of the research to paramedic students at St. John's University did not yield any responses; therefore, I returned to spend an entire day at the facility, speaking with instructors and students during breaks and lunch time about their course experiences, and the importance of hearing their voice. Once seen as one of them and actually referred to as "one of our brothers" by the director of the program, potential subjects came forward. The rich descriptions of experiences that were subsequently offered also revealed a comfort level and frankness that yielded thoughtful insights.

To increase the confidence in the accuracy of the data, an a priori sample size was not established. Rather, the recruitment process continued until it appeared unlikely that new insights would be provided (Beery, 2010). In addition, when particular experiences

initially appeared to be contrary to emerging themes, these accounts were further scrutinized to ascertain whether they represented disconfirming cases (Booth et al., 2013). The examinations of these cases have been presented in the results of the study.

To enhance intra-rater reliability, I returned to examine materials after a period of time to verify interpretations. For primary and secondary themes that emerged, relevant samples of all subjects' transcripts were reviewed again. This resulted in closer attention to coding segments of text when respondents backtracked or discussed various themes during lengthy responses (Kurasaki, 2000). The detailed quotes of multiple participants were also used to further substantiate interpretations (Griffin, 2004).

To establish interrater reliability, triangulation was used to seek peer debriefing and feedback on interpretations (Denzin, as cited in Guba, 1981). As noted by Campbell, Quincy, Osserman, and Pederson (2013), there is not one best way to accomplish this task and the most efficient ways will depend on the study, the researcher, and the time and resources available to complete the research. Due to the substantial amount of data generated in qualitative studies, researchers have recommended analyzing a sample of the texts (Barbour, 2001; Campbell et al., 2013; Hallgren, 2012; Kurasaki, 2000; Marques & McCall, 2005). In addition, one or more independent coders may be used to carry out this process (Barbour, 2001; Campbell et al., 2013; Creswell, 2009).

Therefore, in keeping with the methods of Hruschka et al., (2004), I conducted three rounds of reliability checks. After review of the first two subjects' transcripts, I generated 126 codes. The transcripts were then given to two independent researchers. A meeting was held whereupon the feedback indicated that the code book was too

cumbersome and not practical. We decided that we could not proceed with the current codebook due to the sheer volume of codes. At that point, I revised the codebook in keeping with the aforementioned methods proposed by Saldana (2009). Upon additional review, overlapping codes were combined. The number of codes was reduced by half while categorizing the codes in accordance to the RQs was also considered to facilitate the coding process. Due to time limitations of one the coders; however, the second round of reliability checking was conducted with the one remaining individual.

For the second round, the independent researcher provided her coded transcript for Subject 01 and the codes were compared using the methods of Campbell et al., (2013). Of the 100 codes compared, 72 were in concordance, yielding an initial discriminant capability of 72%. To reconcile the differences, I reviewed the transcript together with the independent researcher using the negotiated agreement method (Campbell et al., 2013). We reached agreement on the remaining 28 codes and maintained documentation as to how reconciliation was achieved (i.e., whether the independent coder deferred to me or vice versa).

Coding disagreements were largely due to the problem of unitization. This was expected as unlike structured questionnaires where short responses may only require a single code, open-ended questioning elicited longer and complex responses. Subjects often provided background, digressed, or spoke about many overlapping themes, resulting in one section of text where several codes could be applied (Campbell et al., 2013). While this often resulted in different segments of background being included in some codes, there was no disagreement pertaining to the meaning units and the essence

of what was being described. Other disagreements were due to the fact that more than one code was found to represent the same meaning. For example, the code book contained a code for confidence in clinical skills and self-efficacy. These types of coding disagreements were addressed by some minor revisions to the code book through elimination of the redundant codes. The level of discriminant capability obtained was considered to be acceptable as in exploratory research such as the current study, where there are no existing coding schemes to emulate, somewhat lower levels of reliability are expected (Krippendorf, as cited in Campbell et al., 2013). In addition, the method of negotiated agreement was advantageous in this exploratory research, as the primary concern was not to generate a statistic, but rather, to promote alternative views and generate new insights through the debriefing process (Morrissey, 1974).

A third round of reliability checking was conducted on the transcript of subject 07 to ensure continual reliability (Hruschka et al., 2004). The concordance on coding was similar to the previous round (73%). Similarly, the majority of discrepancies were due to unitization. Through the negotiated agreement process, an intercoder agreement level of 98% was achieved. The overall results of the reliability checks are displayed in Table 6.

Table 6

Inter Coder Agreement

	# of Codes Agreed	Total Codes	Discriminant Capability	Intercoder Agreement	Defer to PI	Defer to Independent Coder
Subject 01	72	100	72%	100%	12	16
Subject 02	74	101	73%	98%	19	6

Dependability

To establish trust in these research findings, the proposed methods were rigorously adhered to as planned (Thomas & Magilvy, 2011). To enhance dependability, I consistently followed the study protocol and interview guide for each subject to address the RQs (Contee-Borders as cited in Griffin, 2004). There were no deviations from the protocol in the conduct of the study. In addition, I have reported the processes of this research in detail. The demographic profile of the study participants has also been presented to supply an accurate description of the research population (Thomas & Magilvy, 2011). All participants met all of the specified inclusion criteria. I also maintained an audit trail to log research activities such as the progress of recruitment and data collection, and the consent process (Creswell & Miller, 2000).

Transferability

The aims of the current study were to provide a baseline awareness of the issues related to career longevity in EMS (Gross as cited in Shenton, 2004) and a deeper understanding of these complex phenomena (Carcary, 2009). In keeping with the naturalistic paradigm, the focus of the research was on depth and not breath (Laureate Education, Inc., 2013), and generalizability of the results to other populations was not a primary goal (Shenton, 2004). To facilitate determinations of transferability, I provided information to effectively compare the original research situation with other circumstances (Barnes et al., 1994–2012). In addition to enhancing dependability, the detailed description of the study procedures has also provided information so that readers may determine if the findings presented herein will be relevant to other circumstances

(Hellström, 2008). I have also provided comprehensive descriptions of the context of the study (Graneheim & Lundman, 2004; Merriam, 2002). The geographic areas where the research sites are located were described and the characteristics of participants provided may also facilitate the process of transferability. Ultimately, to assess the extent to which the findings presented herein may be applicable to other environments, additional research in different circumstances will be required (Shenton, 2004) as only through multiple subsequent studies can there be increasing certainty of relevance to other settings (Hennekens & Buring, 1987).

Confirmability

While an additional aim of the current research was to establish the objectivity of the data, it was not an aim to confirm the neutrality of the investigator (Lincoln & Guba as cited in Krefting, 1991). The detachment between researcher and participant that is often seen as a sign of objectivity in the positivist paradigm was not relevant in the current interpretive approach. Rather, in addition to contributing to the credibility of these results, the aforementioned mechanisms of saturation and prolonged contact also contributed to the confirmability of the findings. Towards the end of confirmability, prolonging time in the field for an additional three weeks led to the enrollment of two additional participants and saturation, enhancing the articulation of meaningful themes (Creswell & Miller, 2000). The establishment of a rapport with participants also facilitated the openness and genuine nature of responses, thereby ensuring the data did not reflect my biases, but rather the true experiences of the research subjects (Shenton, 2004).

Summary

Research Question 1

Two primary themes emerged in the area of expectations prior to entering the profession. First, participants had the preconceived notion that they would be in a position to help people (altruism). An additional theme that emerged was that the EMS career was seen as a transient vocation. With regard to the career step from EMT to paramedic, a primary theme was that individuals took this step with an expectation to advance their professional growth.

Two primary themes emerged in the area of postemployment experiences. First, participants reported encountering significant physical challenges that were not given consideration prior to entering the profession. A secondary theme that emerged in this area was that physical injuries became a concern that was often thought about. An additional primary theme was that the psychological challenges of the job were not deemed to be a significant concern and were also not given consideration prior to entering the field. A secondary theme in this area was that although patient deaths were accepted, participants felt sadness for family members who were dealing with the losses of loved ones.

Research Question 2

The prevailing preconceived notion was the expectation of being in a position to help people. The primary theme that emerged was that experiences were aligned with this expectation and a source of job satisfaction. Other issues where no preconceived notions

were reported could not be reconciled with alignment or misalignment per se and postemployment perceptions in general.

Research Question 3

A primary theme that emerged was that experiences of altruism were aligned with expectations and this was associated with job satisfaction. An additional primary theme was that experiences providing advanced life support were aligned with expectations and this was associated with satisfaction and feelings of self-efficacy and excitement. While dealing with the physical hardships were identified as a source of dissatisfaction, being able to successfully overcome the physical adversities and psychological challenges of the job were associated with satisfaction.

Research Question 4

The primary theme that emerged was the significance of the physical nature of the occupation. In addition, the physical adversities were also associated with the intention to either leave the profession or leave clinical fieldwork on the ambulance. Secondary themes were the perceived effect of advancing age on the physical challenges of the job and the opportunity for alternative careers.

Conclusion

In this chapter, I described the conduct and results of the study. In the following chapter, an interpretation of the findings will be discussed, including how the results compare to the literature and how the study extends the current knowledge of the subject. The limitations of the study will also be assessed, while recommendations for further

research and future practices will be offered. Finally, I will present the potential for positive social change that resulted from the study.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

I conducted this study to examine the staffing crisis experienced by EMS agencies in the United States. While many organizations have reported high turnover rates (Patterson et al., 2010) and not operating at full staffing levels (Freeman et al., 2009), little is known about issues affecting staff retention in this vital public health workforce (Alexander et al., 2009; Blau, 2011; Perkins et al., 2009). This has led to a critical state of under preparedness in workforce planning (U.S. Department of Transportation, National Highway Traffic Safety Administration, 2011) due to projections for the aging of the U.S. population (U.S. Census Bureau, 2014) and the anticipated corresponding increases in medical emergencies and call volumes (U.S. Department of Labor, Bureau of Labor Statistics, 2014). These circumstances have already increased the demand for EMTs and paramedics, propelling EMS into the fastest growing allied health and public safety occupation in the country (U.S. Department of Transportation, National Highway Traffic Safety Administration, 2008).

The purpose of this study was to address the gap in the literature and gain insight into the issues affecting EMS turnover; specifically, how preemployment perceptions and postemployment experiences affected job satisfaction and the intention to leave the profession. Due to the early stage of this research and the lack of knowledge regarding what variables were appropriate for study (Creswell, 2009), the qualitative phenomenological design was most efficient for the investigation of my initial suspicions and further development of theories (Trochim & Donnelly, 2008). The semistructured

interview was also an effective method to enable participants to supply rich descriptions of their lived experiences in detail (Turner, 2010); thereby, providing a complexity of views (Creswell, 2009).

The key findings of this exploratory study revealed two preconceived notions with which individuals came to the EMS career. First, altruism was an important vocational influence for individuals entering this field, and the aligned experience of being able to make a difference in people's lives was a source of job satisfaction. Second, there was a perception that EMS was a transient career. In addition, two characteristics of the occupation, the physical and psychological challenges, were found to have not been given consideration prior to employment. The physical burdens of the job were also found to be associated with dissatisfaction and the intention to both leave clinical field work on the ambulance and the profession. Although the psychological challenges, such as deaths of patients, were accepted, sadness for the grief of family members was acknowledged. Finally, although relationships with colleagues were mostly positive, the few negative encounters were viewed as a source of dissatisfaction. However, this was seen as part of the job and could be handled by changing shifts or units to seek out different partners. The camaraderie within the profession was also cited as a result of working in extremely stressful situations. Findings specific to paramedics indicated that professional growth was an important influence in pursuing advancement from the EMT position, while the enhanced abilities to diagnose and perform advance life support procedures were associated with satisfaction, excitement, and self-efficacy.

Interpretation of the Findings

The current research examining the existence of staff retention issues in EMS is in its infancy (Patterson et al., 2009). In addition, the dearth of studies pertaining to EMS in general has been cited by numerous authors (Alexander et al., 2009; Blau, 2011; Brown et al., 2003; Deluhery et al., 2008; Freeman et al., 2009; Huot, 2013; Perkins et al., 2009; U.S. Department of Transportation, National Highway Traffic Safety Administration, 2008, 2011). By beginning to address some of the gaps in the literature, the results of this study extend the current knowledge in the discipline. I will explain how this study compares to the current literature in the following subsections.

EMS as a Transient Profession

The notion that individuals entering EMS are looking towards other health and public safety careers appeared in the literature in two quantitative surveys of EMT (Deluhery et al., 2008) and paramedic (Beechler et al., 2010) students. The questionnaire distributed to EMT students indicated that individuals were planning to move on to nursing (18%) and medical school (5%), while 65% indicated a desire to work for fire departments. Paramedic students also indicated plans to shift to nursing (34%) and medicine (7%), in addition to physician's assistant (11%) and other healthcare fields (8%), while 82% and 5% indicated aspirations to work for fire and police services respectively. These two surveys produced results indicating the intention of looking beyond EMS as a career.

The results of additional research in rural and urban Virginia rescue squads indicated that beginning a career in healthcare or public safety was a motivating factor for

volunteering (Haug & Gaskins, 2012). However, the authors did not specifically state whether volunteers wished to begin a career in EMS or a different health field. The recommendations by the researchers seemed to suggest the latter, as the authors proposed that recruitment efforts should emphasize free medical training to those that may wish to explore the wider medical field.

This study also yielded findings indicating the notion of EMS as a transient career; however, the exploratory design allowed interviewees to elaborate on their responses. While subjects indicated they entered the profession thinking it would only be a short term job, the view of EMS as a transient profession was also found to be the perception of those who did not originally see the field as temporary for themselves. Even participants who thought EMS could be a long term career for them indicated that they were aware of the perception of the occupation as a stepping stone and mentioned the often cited alternatives of nursing, medicine, physician's assistant, and police and fire, among other careers. In addition, subjects not originally viewing the career as temporary for themselves eventually came to this notion after discovering the challenges of the job to be issues limiting career longevity. Therefore, in addition to supporting the literature, these findings offer a possible extension to that knowledge. The additional insights revealed that the perception of the field as a temporary stop on a path to other professions may be a widely held notion.

A related finding of early qualitative research indicated that EMS was not a career of first choice (Patterson et al., 2005). EMS was considered as an alternative in lieu of more desirable careers, including nursing, that were deemed unattainable (Patterson et al.,

2005). However, these authors indicated that EMS represented a change in career paths that resulted from already failed attempts at the more desirable professions. This was not a finding of this study. While the perception of the vocation as temporary emerged, respondents indicated they were looking forward to other career opportunities in the future. Subjects did not indicate they had already made unsuccessful efforts towards employment in other health and safety professions. Therefore, this study's results supported the finding that EMS may not be a career of first choice; although it did not confirm this sequence of employment in EMS after unsuccessful efforts towards other careers.

EMT to Paramedic: Self-Efficacy and Excitement

Additional findings from earlier qualitative research indicated that being an EMT or paramedic provided individuals with adventure and excitement, and this was a motivational factor for switching from a previous career to EMS (Patterson et al., 2005). Interviews with focus groups also revealed that participants liked being in charge and remained attracted to EMS by the personal challenges (Patterson et al., 2005). Correspondingly, a lack of challenging job tasks was found to be associated with low satisfaction (Sterud et al., 2011). In this study, when asked about influences to advance from the EMT position to paramedic, respondents indicated doing more, through the performance of advanced life support skills, was a motivation for taking this career step. Subjects also reported that successfully executing advanced skills, such as correctly diagnosing and administering medications, made them feel like they were really making a difference, generating feelings of self-efficacy and excitement.

Patterson et al. (2005) also indicated that as EMS professionals, the desire for excitement and thrill seeking behaviors were not just socially acceptable, but actually respected and admired by society. While self-efficacy and excitement were cited in this study by paramedics as important aspects of conducting their advanced life support duties, these themes did not emerge with regard to the occupation in general. It is possible that respondents felt this was not a socially desirable response, and only upon further questioning with regard to moving on to the paramedic position, were they moved to discuss these feelings. It may also be possible that a propensity towards thrill-seeking activities may be a particular personality trait of paramedics and not EMTs. There was support for this view in this study as being satisfied with the social interaction and taking people to the hospital was mentioned as being associated with the EMT position, while really making a difference in a clinical sense and saving lives was discussed as being associated with paramedic skills. This finding may advance the current literature by providing the additional insight that there may be differences between EMT and paramedic personalities.

Challenges of the Profession

The physical burden of the EMS profession has been identified in the literature in the form of injury rates reported by the Department of Labor. For the year 2000, injuries were higher in EMS than any other industry (Maguire, Hunting, Guidotti, & Smith, 2005). Sprains, strains, and tears was the leading category of injury, while the back was the most often injured part of the body (Maguire et al., 2005). Other quantitative research also linked health to job satisfaction. When stress on physical health was assessed,

ambulance personnel ranked among the highest of 26 occupations compared (Johnson et al., 2005). Correspondingly, ambulance workers ranked among the lowest professions in terms of job satisfaction (Johnson et al., 2005).

A primary theme of this study was that significant physical challenges were encountered in the occupation. In addition, experiencing future injuries was a concern that was often contemplated, while spinal injuries were described as the scourge of ambulance work. Meeting the physical hardships of the job was also associated with dissatisfaction and the intention to leave the profession, or move within the profession to other positions not involving ambulance work. An additional theme identified was that the physical burdens of the job were not given consideration prior to employment.

The findings of this study support the literature citing the significance of the physical adversities of the occupation. Importantly, these findings also extend the current knowledge by providing additional insights. Again, the interpretive design allowed interviewees to provide more detail to their responses that were not possible in the quantitative surveys. Few studies in the literature linked injuries to dissatisfaction or the intention to leave the profession (Blau & Chapman, 2011; Blau et al., 2011). Therefore, this study not only supports this important connection but also indicates that an important issue linked to job dissatisfaction and the intention to leave the career is not even given consideration prior to entering the field, thereby, adding to the knowledge on this issue.

Similar to the physical hardships of the occupation, a theme of this study indicated that psychological challenges were also not given consideration prior to employment. Postemployment notions indicated that EMTs and paramedics handled

these adversities by not becoming attached to patients, expecting deaths as a course of the occupation, and moving on to do their best to help the next patient. My search of the extant literature provided a quantitative study that assessed the impact of regular exposure to critical incidents on the mental and emotional wellbeing of Scottish ambulance workers (Alexander & Klein, 2001). Their study found that staff exposed to particularly distressing events had higher levels of psychological symptoms than staff who had not experienced a critical incident within 6 months of the survey. These authors also noted that concerns regarding confidentiality and career prospects were a deterrent to seek help after encountering critical incidents.

The literature also provided a more recent qualitative study of a U.S. paramedic's exploration of the physiological and psychological demands of the job (De La Garza, 2011). This author identified the lack of attention given by educators and program designers to these challenges and the need for training programs. De La Garza (2011) also raised the issue of the effect of misalignment between preemployment expectations and postemployment experiences as this paramedic expressed a total lack of preparation for the psychological burdens associated with the job. The account of this individual's experiences focused on the psychological effects of constantly dealing with acts of violence, trauma, and death. As this paramedic was working in a fire department-based EMS system, the outcome was to transfer from working on the ambulance to a different position in the organization.

This study supports the finding in the qualitative literature indicating a lack of attention to the psychological challenges of the occupation by both staff and employers.

While the participants in this study did not mention employers or trainers, the fact that they indicated they had not considered the psychological challenges seems to imply the issue was not addressed in their educational programs. The intention to leave the profession was not associated with psychological challenges in this study; however, neither was there support for the lack of an association. It is possible that the perception that emergency responders must be immune to the emotional stresses of the job (De La Garza, 2011) or fear of negative effects on their career opportunities (Alexander & Klein, 2001) contributed to nonresponse on this issue.

Vocational Influence: Altruism

The desire to help others was cited in the aforementioned study in Virginia rescue squads as an important influence to volunteer (Haug & Gaskins, 2012). In this study, this finding also emerged as a reason for entering the EMS vocation. It was actually anticipated that this study might reveal altruism to be a characteristic of the general population entering the field for pay. The additional insight that altruism may not just be a notion for volunteers, but that it may also be an influence to realize a career, may provide additional insights to the current knowledge. The expectation of altruism and being in a position to make a difference in people's lives was a primary theme in this study that can also be viewed within the theoretical framework of the research.

Theoretical Framework

The theoretical framework for the present study is the model put forward by Lowman, which incorporates the theory of Holland (Lowman, 1991). The Lowman model sought to improve the counseling of individuals towards professions where they

would have the potential to succeed. This was accomplished by expanding on the prevailing models, which focused on predicting appropriate occupations based on tests of intelligence and aptitude. Lowman's model is predicated on fundamental knowledge of psychology and personality; therefore, in addition to assessing abilities, the Lowman theory also examines the interests and personality characteristics of individuals (Lowman, 1991). The Holland model seeks to understand and predict vocational choices made by individuals (Gottfredson & Johnstun, 2009). Based on congruence between personal preferences and the challenges and opportunities offered by the job, the Holland model aims to predict vocational stability and success (Swanson, 2012).

In this study, while altruism was cited as a vocational influence towards the field of EMS, participants also reported that their experiences were in alignment with this expectation, and this was a source of satisfaction. This scenario is consistent with the theories guiding this study. The alignment between the expectations and experiences of study participants indicated congruence between their personal preferences and the opportunity that the work environment provided to really make a difference in people's lives. This congruence was a source of satisfaction and a rationale for seeking this particular work environment, and not a reason for leaving the field; thereby indicating vocational stability.

In addition to offering the rationale to help others as an important influence to enter the profession, subjects also revealed that this was a characteristic of their personality. When asked if the career was a good fit for them, subjects responded as

follows: (a) “I think I’ve always been a compassionate person. I’ve always liked helping people” (Subject 07);

> (b) Well, I'm very caring for people. I fight for people. And I try and give everyone the same respect that I'm given. And I care about my patients, I care about what bothers them, what can I do to make it better. Even if it's just the smallest thing about moving their foot two inches to the right, or something. Anything that I could possibly do I'll do it. (Subject 10)

This additional finding is consistent with the aspect of the Holland theory that views vocational interests as expressions of personality (Costa et al., 1984) and seeks to define job environments by the characteristics of the individuals working in them (Hogan & Blake, 1999). The findings pertaining to altruism are in keeping with the goals of the theories guiding the study, in that they provided a better understanding of career assessment and the vocational choices made by these individuals (Gottfredson & Johnstun, 2009; Lowman, 1991). With regard to altruism, the findings indicated that the participants made accurate assessments of both career and self, also a tenet of the Holland model (Gottfredson & Johnstun, 2009).

When individuals fail to make correct distinctions between career characteristics and the job environment; however, job dissatisfaction may be experienced as career dissatisfaction and vice versa (Lowman, 1993). Relevance to this aspect of the theory may be found in this study’s finding of association between the physical hardships of the job and the intention to leave the profession. Respondents indicated that they had not considered this aspect of the job. It is possible that the focus of individuals entering the

EMS career is on the professional attributes and skills that can lead to saving lives, but aspects of the job characteristics, such as carrying equipment and patients are not considered. This may be an example of a failure to be aware of distinctions between the professional skills of emergency medicine and the physical job requirements more associated with patient transport. Both are required to survive in the occupation.

While these findings regarding altruism and the physical adversities of the profession can be adequately explained by the theories of Lowman and Holland, some of the outcomes did not easily fit into the models. For example, a personal relationship and a job offer in another career were also cited as reasons for leaving EMS. While not fitting neatly into the theoretical models, these outcomes were not unanticipated. Indeed, these exact situations were expected, as in addition to available occupational alternatives and interpersonal problems that may affect the decision to leave a job, market conditions, personal responsibilities, and geographical limitations may also affect decisions to leave or stay at a place of employment. As Gottfredson and Johnstun (2009) discussed, some findings may be beyond the scope of these theoretical models.

Limitations of the Study

In preparation for the conduct of this study, potential limitations to the trustworthiness of the results were considered. Chief among the possible shortcomings were the inherent weaknesses of the study design. The qualitative methodology suggested certain limitations of the research, such as the generalizability of the findings (Barnes et al., 1994–2012). However, generalization of study results is an aim of quantitative research methods (Hennekens & Buring, 1987). The methodology chosen for the present

study was appropriate for the current state of EMS research, which is in its early stages (Patterson et al., 2009).

The state of EMS research required an exploratory study (Creswell, 2009). The focus; therefore, was not on breath but on depth and exploration into the issues influencing rapid turnover (Laureate Education, Inc., 2013). The issues first need to be identified before the magnitude of the effects of various problems affecting retention can be addressed. The sample size of the study, an important factor with regard to generalizability (Hennekens & Buring, 1987) was; therefore, not a limitation (Barbour, 2001; Carcary, 2009). This study was not designed to yield statistics to infer trends in a broader population (Shenton, 2004). The purposive method employed sought to enroll subjects whom I believed would offer useful perspectives (Beery, 2010). These decisions were based on the literature and my 12 years of experience in the profession as an EMT, paramedic, director of operations, and educator. The sample produced included a variety of individuals, offering views of those who were working in the field on the ambulance, had moved to working in EMS in some other capacity, or left the job for another profession. The trustworthiness of this study; therefore, lay in the transferability of these findings to other contexts. To that end, the details of the study design and conduct have been provided herein, so that readers will have a quantity and quality of knowledge to make these determinations (Barnes et al., 1994–2012). While it was appropriate to consider generalizability as a limitation of the research, this should not be viewed as a deficiency in the conduct of the study.

Another limitation considered was that participants might not be able to articulate the richness of their experiences to facilitate an understanding of the phenomenon, given the mechanism of the semistructured interview. When further probing might have been required, this could have posed the opportunity for me to introduce bias by the type of questions asked or steering towards a particular view (Trochim & Donnelly, 2008). To address this bias to steer interviewees, I developed a core interview so that queries deemed as required to answer the RQs were asked universally (Contee-Borders as cited in Griffin, 2004). To that end, a content validity panel of 11 experts in various fields validated the interview questions. After additional review by the dissertation committee, the questions were further culled to allow participants adequate time to elaborate as much as they desired. In addition, no deviations to this plan or the study protocol occurred during the conduct of the study.

To further encourage transparency, I spent sufficient time with respondents, sharing my own EMS career experiences, thereby establishing a rapport and trust (Dooley, 2007). I also prolonged engagement with potential participants, remaining in the field until data saturation had been established (Creswell & Miller, 2000). While it was appropriate to consider the limitation of articulation by respondents and steering bias of the investigator prior to the investigation, the measures employed to address these pitfalls were successful. The product was rich, transparent, and often poignant descriptions of feelings about illness, death, frustrations of working with difficult colleagues, and fears regarding painful and debilitating injuries. Quotes have also been provided herein as further proof of the testament of the participants.

To address the potential for bias in the interpretation of those participant responses, peer debriefing was considered (Guba, 1981). Great time and effort was spent during the data collection phase of the research to enlist the aid of independent researchers. Meeting with peer reviewers contributed to the evolution of an efficient coding system. The continued diligence to discuss and reconcile interpretations supported an understanding of the data. Finally, when cases seemed to disconfirm previous accounts, additional examination of the context of the responses added to a greater understanding of the information that was being provided.

As was the case with each of the aforementioned issues, one aspect of this research was not anticipated as a limitation; therefore, a strategy could not be planned prior to the conduct of the study. The lack of experience of the investigator was not considered during the development of this research. The present study was my first experience using the qualitative method. As such, interviewer skills were a work in progress. At times it was difficult to process the amount of information being given while also contemplating the next appropriate question. This undoubtedly resulted in some lost opportunities to probe deeper into responses and uncover new ground. This limitation can be addressed; however, by continued study of the staffing crisis in EMS by future researchers.

Recommendations

Research pertaining to the EMS workforce is in its infancy (Patterson et al., 2009). To further the current knowledge, the shortcomings of the body of research can be addressed by attending to two areas. One approach to advance the current knowledge is

to address the limitations of the extant literature. While investigators explored factors affecting job satisfaction, they could not draw conclusions as to the importance of dissatisfaction. This study underscored the need to design studies to link dissatisfaction with the intention to leave the profession. For example, while poor working relationships with colleagues was cited as a source of dissatisfaction, participants viewed this as part of the job and did not indicate this was a reason to leave the profession. Future studies need to be designed so they go beyond correlating satisfaction levels with a particular job characteristic and link dissatisfaction with the intention to leave the profession. In the absence of these connections, it will not be possible to understand whether job characteristics simply contribute to dissatisfaction or are important enough to cause individuals to leave the profession.

In addition, future studies need to be designed to ascertain who is leaving. The current literature in the EMT and paramedic student populations indicated that there is a preconceived notion that EMS is a stepping stone to other careers (Beechler et al., 2010; Deluhery et al., 2008). The current literature; however, cannot determine what percentage of those who left entered with the preconceived notion of a transient occupation, as opposed to the percentage that left who came to EMS expecting a lifelong career. Future researchers must design studies to identify both scenarios by linking preemployment expectations with either the intention to leave or actually quitting. Establishing these types of links will be crucial in advancing the knowledge pertaining to preemployment expectations with all types of outcomes.

An additional avenue to improve the current state of EMS research is to build upon the strengths of this study. Findings indicated that important aspects of the occupation that were associated with leaving the profession were not given consideration by those entering the field. An implication of these findings is that EMS trainers and stakeholders also do not give these subjects attention. New recruits are left to find out for themselves about the scourge of ambulance work, while the realities of spinal injuries become apparent all too soon. What are the chances of sustaining a career ending back injury in this occupation? This study brought this issue to the forefront; although, it was not designed to generalize the finding. However, what has been known empirically by many who have worked in the field has now been documented through a rigorously designed, conducted, and reported research study. This study; therefore, is now a part of the fledgling EMS literature and may serve to support further research into the factors affecting turnover. One study attempting to quantify turnover rates was found in the literature review (Patterson et al., 2010), while two small studies attempted to quantify leaving the profession due to injuries (Blau & Chapman, 2011; Blau et al., 2011). Before we can begin to address these problems, due diligence dictates that we first determine the magnitudes of these issues. Additional large scale, quantitative studies must investigate the incidence and cost of injuries and turnover, and the association between injuries and leaving the profession. Although privacy and logistical issues may present constraints to research on individuals who have actually quit a job, the present study offered a potential solution to this long standing problem.

Due to the difficulties accessing individuals and collecting data on actual occupation change, researchers have focused on the antecedents of actually leaving, and examined the intention to leave (Blau et al., 2009). A strength of this study was the ability to also access those who had actually left EMS. Future researchers may emulate the methods cited herein and use social media such as Facebook and LinkedIn to access individuals who have actually left the profession.

Implications

Potential Impact for Positive Social Change

In just less than 40 years, the population in the United States 65 and older will almost double from 43 million in 2012 to approximately 84 million in the year 2050 (U.S. Census Bureau, 2014). A parallel forecast for increasing age related medical emergencies is intensifying the demand for EMTs and paramedics (U.S. Department of Labor, Bureau of Labor Statistics, 2014). Unfortunately, high turnover rates are causing staffing shortages in many EMS agencies (Freeman et al., 2009; Patterson et al., 2010). If issues affecting retention can be addressed, appropriate staffing levels in the labor force will ensure rapid emergency response times. Enabling patients to receive care promptly for emergencies such as heart attacks and strokes, where minutes are crucial, can decrease both mortality and morbidity. In addition, by stabilizing the workforce, communities will not experience a loss of skilled emergency clinicians in lieu of a constant wave of inexperienced interns. Rapid responses by skilled clinicians can result in improved care to society's sick and injured. Improvements in retention may also result

in a reduction in the emotional and financial burdens of illness on individuals, families, and society.

Empirical, Theoretical, and Methodological Implications

This study yielded results that have provided evidence to add to the existing body of knowledge pertaining to the issue of career longevity in EMS. The participants' descriptions provided a wealth of information with regard to the expectations and experiences of the occupation. The information pertaining to the perceptions of the career as transient, the lack of consideration of the physical adversities, and the role of injuries to influence the ending of careers, may begin to fill some of the gaps in the literature.

The results of this study were adequately explained by the underlying theoretical models. A primary theme of the study was the link between aligned expectations and experiences of altruism that were associated with satisfaction. This relationship can be explained by Holland's tenets of congruence between personality preferences and work environments leading to vocational stability and success (Swanson, 2012). With regard to this job characteristic, study participants appeared to make accurate perceptions of their own personalities and the work environment. As explained by the Holland model, this congruence led to satisfaction and vocational stability (Swanson, 2012). An additional primary theme of this study was a lack of consideration given to the physical hardships of the occupation, and the association to dissatisfaction and the intention to leave the job. This study finding was also adequately explained by Lowman's (1993) theory that maintains dissatisfaction may result when there is a failure to distinguish between career characteristics and work environment. With regard to this issue, it appears that

individuals gave thought to professional attributes, such as the performance of clinical skills that could make a difference in people's lives; however, they did not consider the more mundane job requirements of carrying heavy equipment and patients. As explained by the Lowman and Holland theories, this incongruence led to dissatisfaction and vocational instability.

The method to obtain these findings was appropriate to the early stage of research on the topic of retention (Creswell, 2009). The interpretive approach allowed for the making of connections between expectations and experiences that linked issues such as altruism to satisfaction and physical challenges to the intention to leave. The qualitative paradigm also made it possible to distinguish between characteristics of the work environment that were associated with dissatisfaction, although not associated with quitting, such as the experience of difficult relationships with colleagues. While the interpretive approach also allowed me to cast a wide net to explore numerous issues (Creswell, 2009), the qualitative interview may be used in the future in more focused studies. This could allow researchers to probe more deeply into particular phenomena of interest. Once sufficient information has been obtained and the important factors influencing career longevity have been identified, additional quantitative studies may be conducted to facilitate generalizations.

Recommendations for Practice

The sheer dearth of research with regard to EMS in general reflects the newness of the occupation in relation to its sister professions in healthcare and public safety (National Academy of Sciences, National Research Council, 1966). Stakeholders such

as EMS agencies and hospital based systems cannot continue to rely on others to investigate issues of importance. Increased research pertaining to the workforce must be generated from within. EMS organizations must engender an environment supportive of research. This could be accomplished by beginning to manage the education of EMTs and paramedics more in keeping with other medical professions. To that end, similar to the education of physicians and physician assistants, EMS training institutions could add fundamental principles of research to the core curriculum. This would have a twofold positive result. Arming students with the tools to conduct research would encourage generation of new ideas in the group most qualified to illuminate important issues, as they are living the experiences. The interest in research could also spark fertile minds to continue their educations; possibly providing a desperately needed career ladder to the limited list of opportunities to grow professionally in EMS. While some geographical areas may have intermediate EMT classifications, the only significant clinical advancement in the profession currently is proceeding from the EMT position to paramedic. Perhaps, similar to the opportunity offered to nurses to work in hospitals as epidemiologists, EMS agencies could create the title of “paramedic-epidemiologist” or “paramedic-research specialist.” These professionals would be qualified to focus on conducting research pertaining to EMS per se as well as emergency medicine, resuscitation, and other areas.

In addition, this study indicated that an important issue linked to job dissatisfaction and the intention to leave the career was not given consideration prior to entering the field. EMS trainers may also consider discussing the physical challenges of

the job and adding proper lifting techniques to student practicums. Scenarios challenging students with unusual or even bizarre circumstances requiring rescue and extrication of trauma victims could also be added to the practical curriculum. While the psychological challenges of the job were not associated with the intention to leave the profession, it may be prudent to also consider addressing stress and services for providers after critical incidents. Transparently dealing with the psychological stresses of the occupation may contribute towards removing this from the realm of the unmentionable amongst emergency workers (De La Garza, 2011). Making this an acceptable topic of discussion may contribute towards maturing the approach towards the emotional pressures of the occupation, notions of immunity to stress, fears of disparagement from colleagues, and negative responses from management affecting careers (Alexander & Klein, 2001).

Conclusion

The values of our society are manifested in how we treat those who are least able to care for themselves. The elderly, the sick, and the injured are seen by some as a burden. It is difficult to deal with the critically ill and dying; however, providing conditions to assure for the well-being of the population is a fundamental principle of public health (Turnock, 2004). As public health professionals, our ethical code requires us to assure a competent workforce (Public Health Leadership Society, 2002). That workforce is currently in a state of crisis that is not being addressed (U.S. Department of Transportation, National Highway Traffic Safety Administration, 2011). This study identified the literature indicating difficulties in recruitment and retention in the EMS profession. The perception of the occupation as transient and a stepping stone to other

health and public safety careers was also discussed. A link between the physical challenges of the job and debilitating injuries, and the intention to leave the career was eloquently described by the study's participants. Going forward, as medical advances improve the capabilities of hospitals to provide life-saving care, we must ensure there is a sufficient and competent workforce to rescue, stabilize, and transfer patients to these institutions in viable conditions. This research study was one small step towards that goal.

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Appendix A: Databases Used for Searches March 17, 2014 and September 6, 2014

1. Academic Search Complete
2. Business Source Complete
3. CINAHL Plus with Full Text
4. Cochrane Central Register of Controlled Trials
5. Cochrane Database of Systematic Reviews
6. Cochrane Methodology Register
7. Communications & Mass Media Complete
8. Computers & Applied Sciences Complete
9. Database of Abstracts of Reviews of Effects
10. eBook Collection (EBSCOhost)
11. Education Research Complete
12. Military & Government Collection
13. Funk & Wagnalls New World Encyclopedia
14. NHS Economic Evaluation Database
15. Health and Psychosocial Instruments
16. Health Technology Assessments
17. Library, Information Science & Technology
18. Abstracts Mental Measurements Yearbook Test Print
19. International Security & Counter Terrorism Reference Center
20. Mas Ultra – School Edition
21. MEDLINE with Full Text
22. ERIC
23. GreenFILE
24. Political Science Complete
25. Primary Search
26. PsycARTICLES
27. PsycBOOKS
28. PsycCRITIQUES
29. PsycEXTRA
30. PsycINFO
31. Regional Business News
32. Research Starters Education
33. SocINDEX with Full Text
34. Teacher Reference Center
35. PsycTESTS
36. Hospitality & Tourism Abstracts Complete
37. LGBT Life with Full Text with

Appendix B: Literature Searches Using Google and Google Scholar

Search performed January 1, 2015.

Google

- Two search terms; satisfaction, intent to leave = 321,000 articles
- Three search terms; satisfaction, intent to leave, expectations = 684,000
- Four search terms; satisfaction, intent to leave, expectations, emergency medical service yielded 14,100
- Four search terms; satisfaction, intent to leave, expectations, emergency medical technician yielded 4,540
- Four search terms; satisfaction, intent to leave, expectations, paramedic = 22,900

Google Scholar

- Two search terms; satisfaction and intent to leave = 8,660
- Three search terms; satisfaction, intent to leave, and expectations = 4,770
- Four search terms; satisfaction, intent to leave, expectations, and emergency medical service yielded seven; one relevant (Blau, Bentley, & Eggerichs-Purcell, 2012)
- Four search terms; satisfaction, intent to leave, expectations, and emergency medical technician yielded seven; two relevant (Blau, Bentley, & Eggerichs-Purcell, 2012; Chapman, Blau, Pred, & Lopez, 2009) both retrieved previously
- Four search terms; satisfaction, intent to leave, expectations, paramedic = 29
- Relevant: three, one new - Blau, Gibson, Bentley, & Chapman, 2011;
- Two previously (Blau, et al., 2012; Chapman, Blau, Pred, Lopez, 2009)

Appendix C: Literature Searches Using Google Scholar

January 3, 2015

Turnover

1. "EMS" and "turnover" = 21,500 – acronyms not reviewed.
2. "Emergency Medical Service" and "turnover" = 1,060 With limiter "since 2011" = about 400; all titles reviewed for relevance No new articles.
3. "EMT" and "turnover" = 10,400 – acronyms not reviewed.
4. "Emergency Medical Technician" and "turnover" = 626 With limiter "since 2011" = 164 – all titles reviewed for relevance three new articles – all unpublished, one thesis, two dissertations De La Garza, 2011, Huot, 2013, Devenish, 2014
5. "Paramedic" and "turnover" = 2380 With limiter "since 2011" = about 666; all titles reviewed for relevance No new articles.

Intent to Leave

All of these article titles were reviewed for relevance.

1. "EMS" and "intent to leave" = 113 No new articles
2. "Emergency Medical Service" and "intent to leave" = 331 New article: Blau, Chapman, Pred, Lopez, 2009
3. "EMT" and "intent to leave" = 51 No new articles
4. "Emergency Medical Technician" and "intent to leave" = 27 Two New: Blau, 2011 Blau, Bentley, Eggerichs-Purcell, 2012

Previously retrieved

5. Alexander, Weis, Braude, 2009
6. Blau, Gibson, Bentley, & Chapman, 2011
7. Chapman, Blau, Pred, & Lopez, 2009
8. Hackland & Stein, 2011
9. Patterson, Moore, Sandall, Wingrove, LaCroix, 2009
10. “Paramedic” and “intent to leave” = 82 No new articles Total new articles = three

Expectations

1. “EMS” and “expectations” = 50,500
2. “Emergency Medical Service” and “expectations” = 3,020
3. “EMT” and “expectations” = 11,500
4. “Emergency Medical Technician” and “expectations” = 2,200
5. “paramedic” and “expectations” = 9,570

SATISFACTION

1. “EMS” and “satisfaction” = 38,800
2. “Emergency Medical Service” and “satisfaction” = 3,350
3. “EMT” and “satisfaction” = 11,100
4. “Emergency Medical Technician” and “satisfaction” = 2,100
5. “paramedic” and “satisfaction” = 11,200

Appendix D: Recruitment Flyer

EMT & PARAMEDIC RESEARCH STUDY

- If you are an EMT or paramedic, or have previously worked as an EMT or paramedic, you may be eligible to participate in a research study investigating the reasons why individuals enter and leave the EMS profession.
- Participation consists of one interview lasting approximately one hour.
- A short follow up interview/phone call may also be required to clarify any questions.

Please contact:

XXXXXXXX

XXXXXXXX

XXXXXXXX

Note: This research is part of a former paramedic's doctoral dissertation.

Appendix E: LinkedIn Invitation to Study Participation

Greetings (Name),

I am reaching out to you today because I am working on a dissertation for a doctorate in Public Health/Epidemiology. I wanted to contribute something to the EMS profession and spent two years exploring different topics. After much research, I came upon the issue of career longevity and turnover in the EMS profession.

While much has been written about burnout and job stress in various professions, there are few published studies pertaining to the important concepts affecting career longevity and turnover in EMS.

I am planning to conduct interviews with individuals who are working, and who have worked in the EMS profession, to understand the experiences of these professionals.

I was hoping that you would find this to be an interesting and worthwhile project and that perhaps you would be willing to participate in an interview. I anticipate the interview will take approximately one hour. An additional follow up interview (phone or in-person) may be required if clarification of information is required.

Thank you for your consideration. I hope to hear from you.

XXXXXXXX
XXXXXXXX
XXXXXXXX

Appendix F: Facebook Invitation to Study Participation

Greetings Everyone,

I am reaching out to you today because I am working on a dissertation for a doctorate in Public Health/Epidemiology. I wanted to contribute something to the EMS profession and spent two years exploring different topics. After much research, I came upon the issue of career longevity and turnover in the EMS profession.

While much has been written about burnout and job stress in various professions, there are few published studies pertaining to the important concepts affecting career longevity and turnover in EMS.

I am planning to conduct interviews with individuals who are working, and who have worked in EMS, to understand the experiences of these professionals.

I was hoping that you would find this to be an interesting and worthwhile project and that perhaps you would be willing to participate in an interview. I anticipate the interview will take approximately 1 hour. An additional follow up interview (phone or in-person) may be required if clarification of information is required.

If you would like to participate, please send me an e-mail at XXXXXXXX

Thank you for your consideration.

Appendix G: Study Protocol

Study Protocol

Impact of Preconceived Job Expectations on EMTs and

Paramedic's Job Satisfaction and Intent to Leave the Profession

Schedule of Procedures

Inclusion/Exclusion: Confirm eligibility and schedule appointment for interview.

Send Consent and Core Questions: Send to respondent prior to interview.

Consent: Obtain signed and dated consent and give participant a copy of consent

Interview:

- Begin recording
- Conduct interview
- Allow participant to make final comments and ask questions
- Remind subject of possibility of follow up call
- Thank subject for participation.
- End Recording

Screening Form

Subject Study #: _____

Demographic Information

First Name _____ Last Name _____

Age _____

Male _____ Female _____

Race:

White _____

Black or African American _____

American Indian and Alaskan Native _____

Asian _____

Native Hawaiian and Other Pacific Islander _____

Contact Information:

Phone _____

E-mail _____

Professional Status & Work History

Currently Working in EMS

Current Certification Level:	EMT-B_____	EMT-I_____	EMT-P_____
Years Certified:	EMT-B_____	EMT-I_____	EMT-P_____
Years Actively Practicing:	EMT-B_____	EMT-I_____	EMT-P_____
Current Remuneration	Fully Salaried ____	Partially Salaried____	Volunteer ___

Former EMS Professional

Highest EMT level attained	EMT-B_____	EMT-I_____	EMT-P_____
Years Certified:	EMT-B_____	EMT-I_____	EMT-P_____
Years Actively Practiced:	EMT-B_____	EMT-I_____	EMT-P_____

Current Occupation:

_____
_____
_____
_____
_____

Inclusion Criteria

1. Adults > 18 years of age Yes_____ No_____
2. Signed the Informed Consent Document Yes_____ No_____
3. Currently working as an EMT:
    a. Full Time Yes_____ No_____
    b. Part Time Yes_____ No_____
    c. Volunteer Yes_____ No_____
4. Currently working as a paramedic:
    a. Full Time Yes_____ No_____
    b. Part Time Yes_____ No_____
    c. Volunteer Yes_____ No_____
5. Working in EMS profession in capacity other than field EMT or paramedic (ex. supervisor, dispatcher)

    Yes_____ No_____
6. Former EMT or paramedic Yes_____ No_____

Informational Purposes ONLY:

Paramedic Student Yes_____ No_____

Must meet one of Criteria 3, 4, 5, or 6.

Exclusion Criteria

1. Never practiced in the field as an EMT or paramedic Yes_____ No_____

Note: This includes EMT students and individuals who obtained EMT certification and never practiced in the field (i.e. do not meet Inclusion Criteria 3, 4, 5, 6).

Consent Process

The researcher will review the information in the consent document with the prospective participant including the following:

1. The purpose and nature of the research will be explained.
2. The voluntary nature of the research will be discussed. The subject will be informed that the consent is not a contract and they have the right to decline to answer any questions with which they are uncomfortable or end their participation at any time.
3. Procedures to maintain confidentiality will be explained.
4. Consent pertaining to recording of the interview will be clarified.
5. The subject will be given an opportunity to ask questions.
6. If the consent is signed, the subject will be given a copy of the consent (hard copies for in-person interviews, mail or e-mail for remote interviews).
7. An enrollment note will be place in the research record documenting the process of consent.

Interview Guide

Introduction

The researcher will make an effort to establish trust with the participant by mentioning his own career in EMS as a paramedic and current status as a doctoral candidate, thanking the subject for their time and the importance of their contribution to the research.

Note: The core questions serve as a guide for the interviewer. Additional questions may emerge as the interview proceeds.

Core Interview Questions

Research Questions	Interview Questions
Research Question 1 What are the preconceived notions of EMTs and paramedics prior to entering the vocation and their notions of the vocation after facing the realities of the job?	1. Let's start off by talking about what you expected from the EMS vocation. 2. What was the most important influence for entering this profession? 3. How did your early experiences compare to what you expected? 4. What about your experiences now? Is your experience of the job now how you thought it would be after working in the field for (# of years participant

	has been working)? 5. If alignment between expectations and experiences is different now than how you felt early in your career, what changed?

Research Question 2 How does alignment or misalignment between preemployment and postemployment perceptions of the vocation affect EMTs and paramedics?	6. Did the alignment or misalignment between your expectations and experiences affect you? 7. When you first started working in the field, how did you feel about your career choice?

	8. What about now? How do you feel about your career choice now?

Research Question 3 How does alignment or misalignment between the notions of the vocation prior to and following entry into the profession contribute to job satisfaction or dissatisfaction?	9. What was the most important thing that made you feel satisfied about your job? 10. What was the most important thing that made you feel dissatisfied with your job? 11. How did the relationship between your expectations and experiences affect how you felt about EMS work?

	12. Has how you felt about the job changed over time? 13. If your job satisfaction has changed over time, what was the most important issue affecting your change in satisfaction?

Research Question 4 How does job satisfaction or dissatisfaction contribute to the intent to stay in or leave the profession?	14. Do you plan to work as an EMT/paramedic in the field until retirement? 15. Are you planning to leave the EMS profession?

	16. For those planning to leave the profession: What is the most important factor affecting your decision to leave the profession? 17. For those planning to stay in the profession: What is the most important issue affecting your decision to stay in the profession?

Ask participant if there is anything else they would like to say.

Remind the participant that a follow up visit or phone call may be required if clarifications are necessary.

Thank the participant.

Appendix H: Master Subject Log

Master Subject Log

Name	Date Screened	Date Signed Consent	Status

Signature_____ Date_____

Appendix I: Enrollment Note

Date:

To: MEMO TO FILE

From: Michael Belotto

Protocol: EMS Career Longevity: Impact of Alignment Between Preemployment Expectations and Postemployment Perceptions

Subject: Enrollment Note

Subject # _____ has been enrolled in the above study. The subject meets inclusion criteria and does not meet the exclusion criterion. Consent was obtained prior to the performance of any study procedures. The subject was given an opportunity to ask questions. The subject acknowledged understanding of the information given. The subject has a copy of the consent form.

Signature_____ Date_____

Appendix J: Content Validity Panel Correspondence (E-mail)

Greetings (NAME),

Thank you for helping me with this survey.

While much has been written about burnout and job stress in various professions, there are few published studies pertaining to the important variables affecting career longevity and turnover in EMS. Since this research is at such an early stage, I am planning to conduct a qualitative study.

The qualitative interview is typically constructed with open-ended questions designed to let the interviewee lead the researcher. That being said, the researcher needs to be certain that there will be a set of core questions to ensure that one gets the information necessary to answer the research questions. Therefore, I am assembling a panel to advise me with regard to the content validity of my core interview questions.

I am sending you a link to the Survey Monkey web site where you can access a survey. The survey contains the questions that I will ask participants.

At the top of each page, you will see the research question that each interview question was designed to gain insight into. Please rate the interview questions on a 4-point Likert scale as follows: no relevance, low relevance, moderate relevance, strong relevance. You may also suggest revisions to the questions as you see fit.

SURVEY MONKEY LINK: https://www.surveymonkey.com/r/2YCJQCX

Thank you, your help is very much appreciated!

XXXXXXXX
XXXXXXXX
XXXXXXXX

Appendix K: Content Validity Ratios and Content Validity Index

	Responses				Total Responses	Mean	CVR	CVR	CVR
	1	2	3	4					
1	0	1	1	9	11	3.73	0.818182	0.81818	0.81818
2	0	1	2	8	11	3.64	0.818182	0.81818	
3	0	0	6	5	11	3.45	1	1	
4	0	0	3	8	11	3.73	1	1	
5	0	0	3	8	11	3.73	1	1	1
6	0	0	5	6	11	3.55	1	1	
7	0	0	0	11	11	4	1	1	1
8	1	0	3	7	11	3.45	0.818182	0.81818	
9	0	1	3	7	11	3.55	0.818182	0.81818	
10	1	2	2	6	11	3.18	0.454545		
11	0	0	1	9	10	3.9	1	1	1
12	0	1	2	8	11	3.64	0.818182	0.81818	0.81818
13	1	0	4	6	11	3.36	0.818182	0.81818	
14	0	0	4	7	11	3.64	1	1	1
15	0	0	2	9	11	3.82	1	1	1
16	0	0	2	9	11	3.82	1	1	1
17	0	0	3	8	11	3.73	1	1	
18	0	0	2	9	11	3.82	1	1	1
19	0	0	2	9	11	3.82	1	1	
20	0	0	0	11	11	4	1	1	1
21	1	0	1	9	11	3.64	0.818182	0.81818	
22	0	0	2	9	11	3.82	1	1	1
23	0	0	0	9	9	4	1	1	1
24	0	0	2	9	11	3.82	1	1	1
25	1	0	2	8	11	3.55	0.818182	0.81818	
26	0	0	0	10	10	4	1	1	
27	0	0	0	10	10	4	1	1	
28	0	1	0	10	11	3.82	0.818182	0.81818	0.81818
29	0	0	3	8	11	3.73	1	1	1
30	0	0	1	10	11	3.91	1	1	1
31	1	0	0	10	11	3.73	0.818182	0.81818	
32	0	0	1	10	11	3.91	1	1	1
33	0	0	1	10	11	3.91	1	1	
						CVI	0.928375	0.943181	0.967914

Appendix L: Institutional Approvals

Community Research Partner:

St. John's University

Contact Information:

XXXXXXXX

January 18, 2016

Dear Mr. Belotto,

Based on my review of your research proposal, I give permission for you to conduct the study entitled "EMS Career Longevity: Impact of Alignment Between Preemployment Expectations and Postemployment Perceptions" within the St. John's University Emergency Medical Services Institute.

As part of this study, I authorize you to recruit research participants at the institute. Recruitment flyers may be posted on site. In addition, I will also email the flyer to students and staff. It isunderstood that in addition to the initial interview, an additional shorter interview (in-person or phone) may be conducted if clarification of information is required.

Individuals ' participation will be voluntary and at their own discretion. You have also indicated your plan to disseminate the results of the study by submitting a summary of your research to EMS and public health journals.

I understand that my organization's responsibilities include:

1. Allow recruitment through dissemination of flyers
2. While it is anticipated that most interviews will be scheduled off-site; a private room here on site will be available to conduct interviews when convenient for participants.

No supervision or involvement in research activities is required by any personnel at St. John's University. We reserve the right to withdraw from the study at any time if our circumstances change.

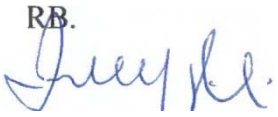
The student will be responsible for complying with our site's research policies and requirements, including the ethical principles governing all research involving humans as subjects, as set forth in the report of the National Commission for the

Protection of Human Subjects of Biomedical and Behavioral Research (the "Belmont Report") and by the principle of respect for human persons as taught by the Catholic Church.

I confirm that I am authorized to approve research in this setting and that this plan complies with the organization's policies.

I understand that the data collected will remain entirely confidential and may not be provided to anyone other than you, the principal investigator, without permission from the Walden University I

RB.



Sincerely,

XXXXXXXX

From: XXXXXXXX
Sent: Wednesday, March 02, 2016 11:10 AM
To: Belotto, Michael
Cc: XXXXXXXX
Subject: RE: St. John's Univ. IRB - Dissertation Research on Emergency Medical Services

Michael

The IRB does not review studies that are done by people who are not employees, faculty, students, or administrators of the University. It is your responsibility to have your home agency’s IRB review and approve the project.

It is also our policy that to collect data at SJU, you only need the permission of the person who is the gatekeeper to the people you wish to recruit as potential participants. It appears you already have this approval participants. So you may proceed if you have your agencies IRB approval.

XXXXXXXX

St. John’s University

Community Research Partner:
North Shore Long Island Jewish Health System
XXXXXXXX

Contact Information:
XXXXXXXX
XXXXXXXX
XXXXXXXX

January 18, 2016

Dear Mr. Belotto,

Based on my review of your research proposal, I give permission for you to conduct the study entitled "EMS Career Longevity: Impact of Alignment Between Preemployment Expectations and Postemployment Perceptions" within the Northwell Health Center for Emergency Medical Services (CEMS).

As part of this study, I authorize you to recruit research participants at the CEMS. Recruitment flyers may be posted on site. It is understood that in addition to an initial interview (approximately one hour), an additional shorter interview (in-person or phone) may be conducted if clarification of information is required.

Individuals' participation will be voluntary and at their own discretion. You have also indicated your plan to disseminate the results of the study by submitting a summary of your research to EMS and public health journals.

I understand that my organization’s responsibilities include:

1. Allow recruitment through dissemination of flyers

No interviews or data collection will occur at the CEMS. No supervision or involvement in research activities is required by any personnel at Northwell Health Center for Emergency Medical Services. We reserve the right to withdraw from the study at any time if our circumstances change.

The student will be responsible for complying with our site's research policies and requirements, including the ethical principles governing all research involving humans as subjects including the Nuremberg Code, Declaration of Helsinki, Belmont Report, International Conference on Harmonization (ICH E6), and the Common Rule (45CFR46).

I confirm that I am authorized to approve research in this setting and that this plan complies with the organization's policies.

I understand that the data collected will remain entirely confidential and may not be provided to anyone other than you, the principal investigator, without permission from the Walden **University** IRB.

XXXXXXXX
XXXXXXXX
XXXXXXXX

From: XXXXXXXX
Sent: Wednesday, June 17, 2015 12:55 PM
To: Belotto, Michael
Cc: XXXXXXXX
Subject: RE: Investigator Initiated Research at NSLIJ CEMS

Hi Michael

So sorry for the delayed response.

Based on your email and our conversation, it seems that the only role NSLIJ would play is allowing you to post your flyers to recruit NSLIJ staff into your study.

As long as no one from NSLIJ staff is serving as a co-investigator on your study, this study would not engage NSLIJ IRB in research. Thus, you would not need to come through my office for IRB approval.

You should obtain approval from someone with oversight of the CEMS facility to post the flyers, but that would be the only thing needed.

Please let me know if you have additional questions.

XXXXXXXX

_____

XXXXXXXX
XXXXXXXX
XXXXXXXX

Community Research Partner:

Stony Brook University

Contact Information:
XXXXXXXXX
XXXXXXXXX
XXXXXXXXX

January 18, 2016

Dear Mr. Belotto,

Based on my review of your research proposal, I give permission for you to conduct the study entitled "EMS Career Longevity: Impact of Alignment Between Preemployment Expectations and Postemployment Perceptions" within the Stony Brook University Emergency Medical Services Department.

As part of this study, I authorize you to recruit research participants at the Stony Brook University Emergency Medical Services Department. Recruitment flyers may be posted on site. In addition, I will also email the flyer to students and staff. It is understood that i n addition to the initial interview, an additional shorter interview (in-person or phone) may be conducted if clarification of information is required.

Individuals' participation will be voluntary and at their own discretion. You have also indicated your plan to disseminate the results of the study by submitting a summary of your research to EMS and public health journals.

I understand that my organization's responsibilities include:

1. Allow recruitment through dissemination of flyers
2. While it is anticipated that most interviews will be scheduled off-site; a private room here on site will be available to conduct interviews when convenient for participants.

No supervision or involvement in research activities is required by any personnel at Stony Brook University. We reserve the right to withdraw from the study at any time if our circumstances change.

The student will be responsible for complying with our site’s research policies and requirements, including the ethical principles governing all research involving humans as subjects, as set forth in the report of the National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research (the "Belmont Report") and the Common Rule (45CFR46).

I confirm that I am authorized to approve research in this setting and that this plan complies with the organization's policies.

I understand that the data collected will remain entirely confidential and may not be provided to anyone other than you, the principal investigator, without permission from the Walden
University IRB.

Si ature

XXXXXXXX
XXXXXXXX
XXXXXXXX

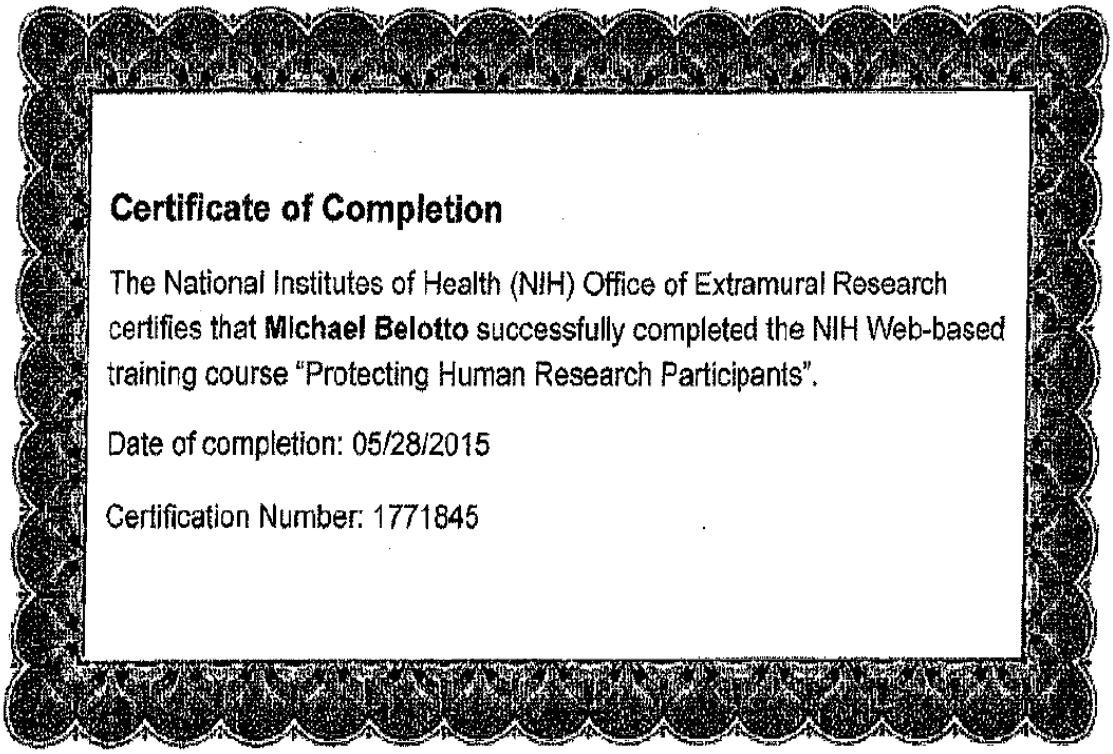
From: XXXXXXXX
Sent: Monday, February 15, 2016 4:46 PM
To: Belotto, Michael
Cc: XXXXXXXX
Subject: Re: Stony Brook IRB - Dissertation Research on Emergency Medical Services

Dear Michael,

Per section III.B.4 of the OHRP Guidance on Engagement of Institutions in Human Subjects Research (http://www.hhs.gov/ohrp/policy/engage08.html), the activity described would not engage Stony Brook University in the research so IRB approval or oversight from SBU's IRB would not be required.

Thank you for checking with our office. Good luck with your research!
XXXXXXXX

Appendix M: Human Subjects Protection Training



Certificate of Completion

The National Institutes of Health (NIH) Office of Extramural Research certifies that **Michael Belotto** successfully completed the NIH Web-based training course "Protecting Human Research Participants".

Date of completion: 05/28/2015

Certification Number: 1771845

Appendix N: Curriculum Vitae

Michael J. Belotto, PhD(c), MPH, CCRA, CCRC

Education:

Walden University	PhD(c), Public Health, Epidemiology
New York Medical College	Master of Public Health, Epidemiology

Thesis: The role of genetic versus environmental factors in the etiology of Parkinson's disease

Queens College of the City University of New York	Bachelor of Arts, Psychology

Employment:

Biomedical Research Alliance of New York (BRANY) January 1998 - Present

Director, BRANY Institute Of Research Education June 2004 - Present
Responsible for the development of lectures and instruction of clinical research classes.

Institutional Review Board (IRB) Member June 2004 - Present
Responsible for the review of protocols to ensure safety and welfare of human research subjects. Responsible for review of protocol amendments, updates to Investigational Drug Brochures, and Investigational New Drug safety reports.

Compliance Officer/Clinical Monitor January 2003 - Present
Responsible for the conduct of Quality Assurance/Good Clinical Practice (GCP) audits and clinical monitoring to ensure compliance of investigators with FDA regulations and GCP guidelines, enrollment of appropriate patients, and adherence to IRB approved protocols.

Clinical Research Coordinator January 1998 - June 2004
Responsible for the coordination of principal investigators, institutional review boards, and sponsors, in the conduct of clinical trials. Responsibilities include patient screening and enrollment, obtaining informed consent, collection of data, and completion of case report forms.

Queensborough Community College September 1997 - June 1998
Adjunct Faculty
Responsible for the instruction of first aid, safety**,** and Cardiopulmonary Resuscitation courses in the Department of Health and Physical Education.

St. Francis Hospital April 1997 - January 1999
Nurse Extender
Responsible for pre-operative and post-operative patient care. Duties included initiation of intravenous therapy, phlebotomy, 12-lead EKG, glucometer testing, vital signs, and general care of patients.

St. Mary's Hospital of Brooklyn June 1988 - August 1996
Director of Emergency Services
Responsibilities included:
Manage every facet of operations for hospital based ambulance department, operating in the New York City Emergency Medical Service 911 System.
Responsible for the overall development and oversight of the departmental Quality Assurance program, insuring quality patient care and patient relations.
Review call reports for appropriate diagnosis, including EKG recognition, medication administration, and adherence to New York State and New York City emergency treatment protocols.
Plan and coordinate Continuing Medical Education with Medical Director for EMT's and paramedics.

St. Mary's Hospital of Brooklyn April 1986 - June 1988
Paramedic
Provided Advanced Life Support care within the New York City Emergency Medical Service 911 System

Publications

Hart, R. & Belotto, M. (2010). The Institutional Review Board. *Seminars in Nuclear Medicine, 40,* 385–392.

Ball, R., Shadomy, S., Meyer, A., Huber, B., Leffel, M., Zachary, A., Belotto, M., Hilton, E., Bryant-Genevier, M., Schriefer, M., Miller, F., & Braun, M. HLA Type and Immune Response to Borrelia burgdorferi Outer Surface Protein A in People in Whom Arthritis Developed After Lyme Disease Vaccination. (2009). *Arthritis & Rheumatism, April, 60*(4), 1179–1186.

Professional Memberships

Association of Clinical Research Professionals (ACRP)

Certifications (ACRP)

CCRA – Certified Clinical Research Associate

CCRC – Certified Clinical Research Coordinator