A Study Into The Factors That Have The Greatest Effect On Job Satisfaction For
North Carolina Paramedics

A Dissertation submitted
to the Graduate School
Valdosta State University

In partial fulfillment of requirements
for the degree of

DOCTOR OF PUBLIC ADMINISTRATION

In Public Administration

In the Department of Political Sciences
Of the College of Arts and Sciences

May 2019

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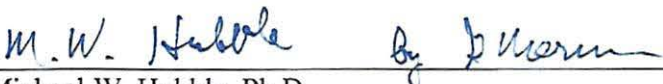**Dissertation Committee Chair**

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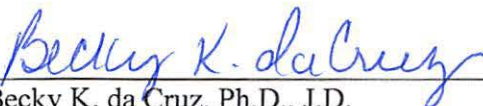
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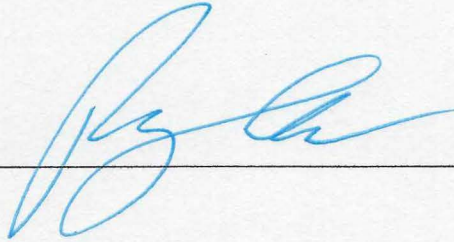
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ABSTRACT

This study seeks to determine which factors have the greatest influence on paramedic job satisfaction. More specifically, it seeks to determine if intrinsic or extrinsic factors have the greater effect. Additionally, the effects of education on paramedic job satisfaction are examined. Finally, it seeks to determine if the generation to which the paramedic belongs has an effect on job satisfaction.

A cross-sectional survey was utilized to assess how paramedics felt about how their organizations rated regarding various motivational factors. In addition, the surveys sought to determine the paramedics' current level of job satisfaction. The surveys were sent to various EMS agencies in North Carolina so as to only receive results from currently employed paramedics. The Human Services Job Satisfaction Questionnaire developed by Shapiro, Burkey, Dorman, and Welker (1997) was utilized to formulate the survey. Data was collected via an online survey during the period of October to December 2018.

The number of returned surveys totaled 254. Only surveys completed by paramedics were retained for analysis, which reduced the sample size to 222. Analysis revealed that both intrinsic (r_s = .68, p = < .001) and extrinsic (r_s = .73, p = < .001) factors had strong positive relationships with job satisfaction, with extrinsic factors being slightly stronger. Education level, while showing a minimal negative relationship, did not have a statistically significant correlation with job satisfaction (r_s = -0.108, p = .111). Further analysis did reveal statistically significant differences in job satisfaction levels between education groups ($X^2(3)$ = 2.840, p = 0.014). Finally, differences in job satisfaction levels between generations did prove statistically significant ($X^2(4)$ = 12.756, p = 0.013).

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Chapter I

Introduction

Paramedics are frequently called upon for assistance when an emergency occurs. They are expected to quickly respond, assess, formulate a treatment plan, and then transport to the most appropriate facility. Paramedics must be available to deliver these services without regard to time of day as well as on weekends and holidays. This study seeks to determine which motivational factors have the greatest impact on paramedic job satisfaction. Is job satisfaction for the paramedic related to intrinsic, altruistic characteristics or extrinsic factors such as pay and job security? Are the factors that cause one to enter the field the same as those that keep them there? Where this locus of control lies has significant implications for those in management.

Emergency Medical Services (known henceforth as EMS) is a relatively young field, with modern EMS primarily dating back to the 1960s (Jollis, 2010). EMS plays a significant role in the fields of public health, health care, and public safety, yet lacks a discernable identity (Wingrove & Reinert, 2009). Further complicating the task of finding its identity is a movement in the field toward community paramedicine. Kizer, Shore, & Mouline (2013) describe community paramedicine as a "new and evolving mode of community-based health care in which paramedics function outside their customary emergency response and transport roles in ways that facilitate more appropriate use of emergency care resources and/or enhance access to primary care for medically underserved populations" (p. 2). In addition to this community paramedicine

role, there are additional efforts to utilize paramedics in assisting mental health populations as well as to play a significant role in the nation's fight against opioid abuse (NCEMS, 2017).

Given these recent additions to the field of EMS, it is evident that the role of the paramedic will continue to evolve. While it is likely that paramedics will continue to perform all of their classic duties, it is quite possible that these new movements will be the impetus for a paradigm shift within the field. How these additional services affect recruiting and retention has yet to be seen. Some may be attracted to additional career pathways within EMS, while others may be less inclined to buy in. A more thorough understanding of the factors that motivate paramedics will help to determine the best way to assist them in adapting to this ever-evolving field.

Statement of the Problem

EMS managers are faced with ever-increasing staff shortages. Alexander, Weiss, Braude, Ernst, and Fullerton-Gleason (2009) noted that while call volumes are increasing, the rates of EMS professionals leaving the field "are reaching record proportions" (p. 831). As further confirmation of the issue, Chapmen, Blau, Pred, & Lopez (2009) stated that "Retention of EMTs and paramedics has been considered the greatest human resources challenge for EMS services" (p. 500). Determining which motivational factors have the greatest effect on paramedic job satisfaction is crucial for improving retention both within specific organizations and within the field itself (Chapman et al., 2009). It is the intention of this study to provide insight to EMS management on how best they can increase job satisfaction within the field

Conceptual Framework for the Study

This study utilizes the work of Frederick Herzberg as the framework within which to examine job satisfaction in paramedics. Herzberg (2001) developed his two-factor theory that examined which factors had the greatest effects on job satisfaction. He defined two major categories in examining job satisfaction. The first category includes factors known as motivators. These motivators deal with intrinsic (internal) factors such as achievement, the work itself, and bearing responsibility, among others. The second category that Herzberg examined includes hygiene or maintenance factors. These include extrinsic (external) factors such as salary, working conditions, work status, and job security (Herzberg, 2001).

In his study, Herzberg determined that the presence of motivators caused job satisfaction; however, their absence did not cause dissatisfaction. In contrast, hygiene or maintenance factors caused job dissatisfaction when absent, but did not cause job satisfaction when present. To further the point, Herzberg posits that the opposite of satisfaction is no satisfaction rather than dissatisfaction. Likewise, the opposite of dissatisfaction is no dissatisfaction. This makes it possible for an employee to be neither satisfied nor dissatisfied with their work.

Smith and Shields (2013) utilized Herzberg's two-factor theory in an effort to determine which factors had the greatest impact on social workers' levels of job satisfaction. With this study, they reaffirmed the applicability of Herzberg's work when examining job satisfaction. In addition, Helbing, Teems, & Moultrie (2017) found that the utilization of Herzberg's work was an effective method of evaluating job satisfaction

levels for emergency room registered nurses. It is believed that, as in studies examining

their social worker and registered nurse counterparts, Herzberg's work will be an

effective means of evaluating job satisfaction in paramedics.

Employee motivation has a prominent presence within the literature on

organizational behavior. Despite this, many managers tend to focus on other

organizational issues. Latham and Locke (2001) succinctly state why this is the case for

many employers:

> The problem of how to motivate employees has puzzled and frustrated managers
>
> for generations. One reason the problem has seemed difficult, if not mysterious,
>
> is that motivation ultimately comes from within the individual and therefore
>
> cannot be observed directly (p. 68).

Adding additional complexity to this matter is the dichotomy of extrinsic and intrinsic

motivation and how one affects the other. Intrinsic motivators are defined as being innate

and are performed because individuals "derive spontaneous satisfaction from the activity

itself" (Gagne & Deci, 2005, p. 331). Extrinsic factors, by contrast, shift the focus away

from the activity itself and tend to focus the individual on the reward (Singh, 2016).

Deci (1976) found that extrinsic rewards can actually undermine the effects of

intrinsic motivators by shifting the focus to the external. If true in the field of EMS,

individuals who enter the field for altruistic reasons may in turn stay in the field for

external rewards. If this proves to be the case for the paramedic, then maintaining all

extrinsic rewards would be important for keeping motivational levels high. Furthering

this understanding may have significant effects on the paramedic's level of job satisfaction.

Additionally, the effects of generational differences on job satisfaction will be examined. Johnson (2015) notes that there are three main generations within the current workforce. These generations include baby boomers, born 1946–1964; Generation X, born 1965–1980; and Generation Y, born 1981–2000. Those who belong to Generation Y are also referred to as millennials. Millennials have quickly moved into first place in terms of numbers, representing approximately 53 million workers in the United States (Pew Research Center, 2015). This disparity in the workplace necessitates that managers understand how employees' generational affiliations may affect their perception of certain motivators.

Smola & Sutton (2002) note that generational groups are also referred to as cohorts. These cohorts, in addition to being defined by their year of birth, are also defined by cultural occurrences. Examples of these cultural occurrences include events such as the September 11, 2001 attacks and the Great Depression (Joshi, Dencker, Franz, & Martocchio, 2010). Such events tend to bind a generation and shape its viewpoint, thus producing similar, shared viewpoints in the workplace. If generational differences lead to motivational differences, then it may be necessary for managers to adapt their leadership styles in order to better relate with each individual. Understanding these differences is also key in helping employees understand the diverse viewpoints held by their coworkers.

Educational disparities will also be examined to determine if they lead to motivational disparities. Paramedics are primarily educated through non-degree certificate courses, associate degree programs, and/or bachelor degree programs. These dissimilar educational experiences can add diversity to the workplace. Alexander et al. (2009) found that as the paramedics' level of education increases, their organizational commitment decreases. Similarly, Forsyth & Copes (1994) found comparable relationships between the educational level and organizational commitment among police officers. The researchers posit that since career advancement opportunities are minimal in public safety fields, frustration can build on the part of those with higher levels of education. Increased education may also lead to increased opportunities to move between organizations.

<center>Purpose of the Study</center>

This study intends to add to the body of literature that has contributed to Behavioral Public Administration. Behavioral Public Administration is defined as "the analysis of public administration from the micro-level perspective of individual behavior and attitudes by drawing on insights from psychology on the behavior of individuals and groups" (Grimmelikhuijsen, Jike, Olson, & Tummers, 2017, p. 45). The influence of psychology on public administration has been well documented in the literature (Follet, 2001; Roethlisberger, 1941). Dahl (1947) further solidifies this notion by stating that "…most problems of public administration revolve around human beings; and the study of public administration is therefore essentially a study of human beings as they behaved,

and as they may be expected or predicted to behave under certain special circumstances" (p. 4). This study intends to assist EMS managers in better understanding how to motivate their employees in ways that will increase job satisfaction.

Research Questions

The primary research question of this study is, "Do intrinsic or extrinsic factors have the greater effect on paramedic job satisfaction?" Associated with this question are these secondary questions: 1.) "Does a higher educational level affect the job satisfaction of the paramedic?" 2.) "Does the paramedic's generational affiliation affect the level of perceived job satisfaction?" The information derived from answering these questions may allow EMS managers to better understand what they can do to increase job satisfaction for their employees.

Hypotheses

H_1: Intrinsic motivational factors have a greater influence on job satisfaction than those factors that are extrinsic.

H_0: There is no difference in the influence of intrinsic and extrinsic factors on job satisfaction.

H_2: As the educational level of the paramedic increases, job satisfaction will decrease.

H_0: As the educational level of the paramedic increases, job satisfaction will remain constant.

H_3: The generation to which the paramedic belongs will influence the level of perceived job satisfaction.

H_0: The generation to which the paramedic belongs will not influence the level of perceived job satisfaction.

Procedures

The population that was studied are those paramedics who are currently both credentialed and working in the state of North Carolina. Currently, the number of those credentialed in North Carolina is approximately 6,000 (Timmons, 2018). A cross-sectional survey was administered utilizing the online survey website, Qualtrics. A link to the survey was sent to each agency operating at the paramedic level within North Carolina. Only agencies that had contacts with a publicly available e-mail address were included. A request was made to each agency to provide a central point of contact to assist in the distribution of the survey. The e-mail with the link to the survey included information about the survey as well as consent information for the participant. Multiple e-mail reminders were sent during the survey period in an effort to maximize response. No surveys were sent prior to receiving approval from Valdosta State University's Institutional Review Board (Appendix B).

The survey instrument is developed from the Human Services Job Satisfaction Questionnaire (HSJSQ) developed by Shapiro, Burkey, Dorman, and Welker (1997). Originally intended to assess job satisfaction in social workers, review of the instrument and consultation with the original author confirmed the utility of this instrument to assess job satisfaction levels in paramedics. The survey asked questions regarding how strongly

the paramedic feels about various intrinsic and extrinsic motivational factors. In addition, the survey assessed demographic information of the respondents. No identifying information was collected in an effort to increase the honesty of the respondents. The survey utilized a Likert scale of 1–5 with 1 = Strongly Disagree to 5 = Strongly Agree.

The dependent variable for this survey was the paramedic's level of job satisfaction assessed by the question, "I am satisfied with my job." The independent variables are various intrinsic and extrinsic motivational factors that are listed in detail in Chapter 3. In addition, the demographic questions assessing the educational level and generational affiliation of the paramedic were utilized to assess for statistically significant differences in job satisfaction. These questions are utilized to assess for differences in the impact of various motivators throughout the survey.

Data was analyzed using SPSS Statistics software, version 25. Descriptive statistics were reported and analyzed to present an overview of the data. Regression models were utilized to determine if there are correlative relationships between the various independent variables and job satisfaction. Models were run to examine relationships between intrinsic only and extrinsic only; then, a full model was run to examine all tested motivators and job satisfaction. Additionally, regression analysis was utilized to depict correlation differences between both educational and generational differences. For all statistical tests run, an alpha of 0.05 was utilized to determine statistical significance.

Significance of Study

The findings of this study will have immediate significance for those in EMS management. With a greater understanding of job satisfaction, EMS managers will be able to target those items that have the greatest effects in an effort to increase retention within their organizations. This study will also have an impact on the existing literature on paramedic job satisfaction and will hopefully prompt others to continue to examine this important subject.

Limitations of This Study

This study is limited by its cross-sectional survey approach. It reflects how individuals felt at the time of the survey. It is possible that employees will place importance on different factors at different times. In addition, this study is only examining those individuals who are working as paramedics within North Carolina. It is unclear whether the results will be externally valid throughout the larger field of EMS.

Summary of the Research Layout

The introductory chapter intends to present the reader with an overview of the study. This chapter includes a statement of the problem as well as the primary and secondary research questions. Also included is the conceptual framework for the study as well as a brief overview of the methods utilized. The reader should acquire a good understanding of the study from reading this chapter.

The second chapter of this study begins with the history of Emergency Medical Services. This overview grants some insight to the reader regarding how EMS and those who work in the field have evolved over time. Next, the study transitions into a thorough

review of the literature on the subject of job satisfaction and employee motivation. Included after this overview is a more detailed account of intrinsic vs. extrinsic motivators.

The third chapter offers insight into the methods utilized to perform this study. It guides the reader to understand the methods of research that will be employed. It also reintroduces the research questions for this study and include a review of the hypotheses from the introductory chapter. Chapter 3 also focuses on the survey that will be utilized to collect the desired data. The chapter concludes with an overview of the dependent and independent variables that are being studied.

The fourth chapter introduces the results of the research that was performed. This chapter enables the reader to view the descriptive statistics captured through the research. In addition, this chapter reveals the results of each of the statistical tests that were performed to test each hypothesis. Pertinent relationships between variables are highlighted; motivational factors that proved to be statistically significant are also included. To assist the reader with the interpretation of the data, a brief synopsis will be listed with the results of each analysis.

The final chapter of this study consists of the conclusion and recommendations from this study. This chapter is intended to advise the reader on what steps can be taken to better motivate paramedic employees and thus increase their job satisfaction. In addition, this chapter reveals any discovered limitations that are associated with this study. This chapter concludes with a summation of the problem that was evaluated and a summary of the overall findings.

Chapter II

A Review of the Literature

Introduction to the Literature

Job satisfaction is defined as "a pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences" (Locke, 1976, p. 1300). Herzberg (2001) demonstrated that various motivational factors have a direct influence on job satisfaction, with greater emphasis to be placed on those forces that originate within the individual. Determining which motivational factors have the greater effect, whether intrinsic or extrinsic, is the main theme of this study.

To express the differences between extrinsic and intrinsic factors, Gagne and Deci (2005) succinctly state the following:

> Intrinsic motivation involves people doing an activity because they find it interesting and derive spontaneous satisfaction from the activity itself. Extrinsic motivation, in contrast, requires an instrumentality between the activity and some separable consequences such as tangible or verbal rewards, so satisfaction comes not from the activity itself but rather from the extrinsic consequences to which the activity leads. (p. 331)

This leads EMS managers to determine if it is the work itself that drives the paramedic or if external forces drive the paramedic to serve. EMS managers who are more aware of

the effects of these motivators will be able to make their organizations more satisfactory places to work.

This literature review will first cover the history of Emergency Medical Services. This historical overview will grant the reader the opportunity to see the evolution of the driving factors behind the field. An overview of job satisfaction will follow, including how it will help EMS managers ensure that job satisfaction among their employees is high. Next, the review will cover an overview of employee motivation, including both classical and contemporary works. Finally, a differentiation will be made between intrinsic and extrinsic motivational factors and will include an overview of generational and educational effects on employee motivation.

The History of EMS

Early Military History

The Ancient Romans understood that medical care should be provided in close proximity to the battlefield (Goniewicz & Bogucki, 2013). In order to ensure that their soldiers quickly received care, the Romans constructed large treatment centers in locations that were likely to see frequent military action. In addition, the Romans located hospitals within each legion within the Roman Empire. These legions were assigned physicians; each physician was assisted by a nurse and an aide. Unfortunately, despite the efforts of these physicians, mortality rates among those injured on the battlefield were as high as 80 percent on average.

Medicine continued to progress until the fifth century. At this point, the Roman Empire had fallen, and along with it, advances in art, music, science, and medicine (Hajar, 2012). Medicine continued its decline under the influences of the Catholic Church, which had contrasting views on health care compared to the Romans. Catholics believed, and few argued, that illnesses were punishments from God sent in reprisal for sins committed. They believed that the most natural cure for such conditions was faith and prayer. Very few advances in medicine emerged until the seventeenth and eighteenth centuries (Hajar, 2012).

When France saw the ascension of Napoleon Bonaparte as its leader, it not only saw a great political leader but also experienced what would be the beginnings of modern-day Emergency Medical Services. A surgeon in Bonaparte's Imperial Guard named Dominique-Jean Larrey bridged many gaps to help form the foundation of EMS. Larrey became known as "the father of modern military surgery and of the modern ambulance" (Skandalakis, Lainas, Zoras, Skandalakis, & Mirilas, 2006, p. 1392). Larrey was born in France in the year 1766. He learned the arts of medicine and surgery from his uncle and, by the age of 21, became assistant surgeon in the Navy (Chalmers, 1906). While at sea, he suffered from such severe seasickness he had to leave the Navy and join the Army. History reveals that this move had great influence on the development of EMS.

Through observations of how injured soldiers were removed from the battlefield, Larrey began to realize that many improvements could be made. Conditions during that time had regressed far more than what the Romans had encountered previously. Soldiers

were only moved after the battle was won. In many cases, soldiers would remain on the battlefield for 24 to 36 hours, causing many of them to die long before help ever arrived. Larrey saw the need to get medical care to the soldiers more quickly and more efficiently. Based on this conclusion, he developed vehicles known as "ambulances volantes or flying ambulances" based on the design of horse-drawn artillery (Skandalakis et al., 2006, p. 1394).

The ambulances were equipped with medical equipment and personnel that could quickly arrive and initiate care and transportation of wounded soldiers. In addition to moving soldiers quickly off the battlefield to more advanced care, Larrey is credited with creating a triage system (Pearn, 2004). This system allowed the patients with the most serious injuries to be treated first, regardless of rank. Many of Larrey's innovative practices have been crucial in the development of what we now know as EMS. Napoleon, demonstrating a great amount of respect for Larrey, is quoted as saying, "He is the most virtuous man I have ever known" (Skandalakis et al., 2006, p. 1392).

The Civil War and Beyond

The American Civil War brought home the realities of the need for rapid care to soldiers on both sides of the Mason-Dixon Line. Much like the French, prior to Larrey's intervention, neither side had a provision for the removal of injured soldiers from the battlefield (Goniewicz & Bogucki, 2013). The Surgeon General of the Union Army recognized the issue at hand and was quoted as saying, "An ambulance corps should be organized and set in instant operation" (Goniewicz & Bogucki, 2013, p. 509). He then appointed a seasoned surgeon, Jonathan Letterman as the medical director of the Union

Army. Letterman took the lessons learned from Larrey and developed a light, two-wheeled ambulance cart that could quickly and efficiently remove wounded soldiers from the battlefield and take them to field hospitals for medical care.

Their efforts saw such reductions in mortality rates that Lincoln was prompted to sign into law "An Act to Establish a Uniform System of Ambulances in the Armies of the United States." This act standardized the provision of ambulances throughout the United States Army. The law granted the authority to administer an ambulance corps to the medical director of each chief medical office in the Union Army. It continues by describing the number of men each ambulance must carry, as well as their specific ranks and the roles that soldiers or officers would play. In addition, it specifies how many ambulances were required for a given number of soldiers (An Act to Establish a Uniform System of Ambulances in the Armies of the United States, 1864).

World War I spurred additional innovation in ensuring that soldiers quickly received care. Signal boxes were given to soldiers to alert medical teams when they became injured. These teams were able to quickly respond, provide care, and transport the injured to aid stations. During World War II, the army ceased utilizing physicians to care for soldiers in the trenches. Instead, the army began training soldiers as first aid men, the precursor to combat medics (Van Stralen, 2008). This move spawned the beginning of the use of the modern-day medics and corpsmen who are so heavily relied upon by the military today. The Army also began utilizing air transportation to help evacuate soldiers more quickly during battle. All of these efforts combined to lower

mortality rates from eight percent in World War I to less than two percent during America's involvement in Vietnam (Hubble & Hubble, 2002).

It would be impossible to overstate the importance of the influence of the experiences witnessed over the last 2,000 years on modern-day EMS. Certainly, the military campaigns of the Greeks, Romans, French, and finally the United States helped to shape EMS into what it is today. While the civilian field of EMS is relatively new, its roots can be traced back for 2,000 years.

Early Civilian Emergency Medical Services

Participants of the Civil War realized the need to transfer the lessons they had learned to the civilian world. Many of those serving in various health-care roles in the military suddenly found themselves available for other tasks. This available force fostered the nation's first civilian EMS service. It was based out of the Commercial Hospital in Cincinnati, Ohio (Goniewicz & Bogucki, 2013). New York City's Bellevue Hospital followed suit four years later in 1869 with its own ambulance service (EMS Agenda for the Future, 1996). Each ambulance was staffed with a medical doctor or surgeon. During its first year of operation, Bellevue Hospital ambulances responded to more than 1,800 calls for help. As call volume continued to increase, the service no longer had enough experienced medical personnel to respond. Eventually, it found itself utilizing any personnel that were available, without regard to medical training and even including janitors (FDNY History, 2014).

After the shaky start of the Commercial and Bellevue Hospital's ambulance services, the majority of EMS systems were provided by public and private hospitals.

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The staff utilized by most of these hospitals' ambulance services were physicians and nurses who responded to emergencies with the ambulance. World War II complicated this practice when a large percentage of the nation's medical staff was called into service (Shah, 2006). Once again, ambulances were staffed with untrained personnel, much like what was seen in the 1860s. Volunteer agencies began to spring up after 1950 to provide ambulance services to their communities. Funeral homes also began to provide prehospital emergency transportation. By 1960, 12,000 morticians were providing over 50 percent of all ambulance services in the United States (Committee on Trauma and Shock, 1966).

Several well-trained physicians pondered over whether the lessons learned on the battlefield could be applied to the civilian world. Two doctors, J.D. Farrington and Sam Banks, decided to apply those same principles; and with that thought in mind, they developed the nation's first EMT training program. The program was taught at the Chicago Fire Department, and students were granted the certification of EMT-Ambulance (Van Stralen, 2008). This is the first documented EMT classroom training for civilians.

Modern EMS: 1960 to Today

In 1960, only six states had standard courses for rescuers and four states that regulated ambulance design specification. Fewer than half of those serving as rescuers had even a minimal amount of education in the field of EMS. This occurred because there was only minimal oversight of EMS practices by the federal or state governments. Development was primarily a grassroots effort carried out by physicians, hospitals, fire

departments, government officials, and local entrepreneurs who had an interest in advancing EMS (Shah, 2006).

In 1960, President John F. Kennedy said that "traffic accidents constitute one of the greatest, perhaps the greatest, of the nation's public health problems" (West Virginia History of EMS, 2015). With EMS continuing to exist as a program somewhere between public safety, public health and health care, it was interesting that traffic accidents were declared a public health problem (Brown & Devine, 2008). This kind of presidential proclamation, combined with the lessons learned from the battlefield, brought much attention to the new field of EMS. Many headlines would later halt that momentum, including President Kennedy's untimely assassination.

In 1964, President Johnson asked that a program be developed to conquer heart disease, cancer, and stroke. In response, Regional Medical Programs (RMP) were developed and were centered in large academic medical centers around the nation. These programs enabled funding and grants to become available that also offered hope in other areas of the medical field. Shah (2006) notes, "RMP funding helped create a number of EMS systems and train emergency medical technicians. Without the RMPs, it is unlikely that sufficient funds would have been available in an organized manner to advance EMS" (p. 415). These RMPs pushed EMS to center its focus on heart disease, cancer, and stroke. Heart disease and strokes are two time-dependent emergencies for which EMS systems around the world continue to look for ways to improve outcomes.

In 1965, two physicians in Ireland, Drs. Geddes and Pantridge, realized that if trained staff with proper equipment could reach victims of ventricular fibrillation in time,

successful out-of-hospital resuscitation was possible (Geddes, 1986). Their mobile

coronary care unit was introduced in Belfast on January 1, 1966. During this same year

in the United States, Congress passed the Highway Safety Act of 1966. The purpose of

this act was to "reduce traffic accidents and deaths and injuries to persons resulting from

traffic accidents" (Committee on Trauma and Committee on Shock, 1966). This law

addressed many public safety issues in an attempt to achieve this goal, including vehicle

safety, driver regulations, and emergency services. Despite the fact that President

Kennedy had declared auto accidents a public health problem six years earlier, EMS

would finally find its home within the Department of Transportation. This meant that

EMS was thought of as primarily necessary for transportation rather than as a useful tool

to further public health. During this time, given the development of CPR, portable

defibrillators, and other advanced interventions, many in the medical community began

to see EMS as a larger player in health care in general. (Bledsoe, Porter & Shade, 2000).

In 1966, a paper entitled the "Accidental Death and Disability: The Neglected

Disease of Modern Society" was prepared by the Committee on Trauma and the

Committee on Shock of the National Academy of Sciences (Committee on Trauma and

Committee on Shock, 1966). This paper revealed just how lacking the EMS systems of

that day were in terms of being able to effectively respond and provide treatment.

According to the EMS Agenda for the Future (1996), many of the nation's ambulances

were staffed with ill-prepared providers. In addition, morticians continued to provide up

to 50 percent of prehospital transportation in the country. The paper went on to list 29

recommendations for improving care to victims, of which 11 were directly related to EMS.

The year 1967 saw the development of the first official EMT program, which was founded by Dr. Walter Hoyt and Dr. Joseph Farrington. This prompted the first official EMT text to be published in 1968, which was entitled "Emergency Care and Transportation of the Sick and Injured." This text became the standard from which EMT training commenced during that period. During this same era, significant advancements for prehospital care occurred throughout the nation.

Haywood County, North Carolina, created the first system in the United States to employ trained paramedics. Other cities quickly followed suit: Pittsburgh, PA; Seattle, WA; Miami, FL; and Los Angeles, CA (Jollis, 2010). These advancements closely mimicked the Belfast Project that had been conducted in Ireland a couple of years earlier (Geddes, 1986). These providers were trained to perform endotracheal intubation, start IVs, administer medications, and interpret ECG rhythms.

Helping to continue the momentum, the show *Emergency* made its television debut in 1972 and helped to cast a positive image of EMS professionals. The show did this by depicting quick thinking, clean-cut young men who were able to respond to and deal with any type of emergency. In 1973, Congress passed the Emergency Medical Services Systems Act, or Title XII of the Public Health Services Act. This act allotted $300,000 to be distributed to state and local governments for the development of EMS services (Emergency Services Systems Act, 1973).

Federal funding for emergency medical services was reduced with the passage of the Omnibus Budget Reconciliation Act of 1981. This act ended much of the regional federal funding in favor of awarding states with preventative health and health services block grants (Title IX, H.R.3982). This helped establish the system that is in place today, one that includes a state-based model of certifying EMTs at all levels. Several national associations have initiated an attempt to nationalize the credentialing/licensing process for paramedics, but thus far, none have been universally accepted.

The organization to most closely gain universal acceptance in the United States is the National Registry for Emergency Medical Technicians. Founded in 1970 (NREMT, n.d.), the National Registry attempted to standardize the way EMTs were trained across the nation. According to the NREMT website, 46 states and territories utilize the National Registry as the sole basis for certification at one or more levels. Despite the near universal acceptance of the NREMT certification process as either a means to gain stand-alone certification or to obtain reciprocity from the state's credentialing board, there continues to be a vast difference in what paramedics can do from one state to the next. North Carolina still does not require the National Registry Certification from applicants who wish to become credentialed within the state (NCEMS, 2015). It will, however, grant reciprocity on a case-by-case basis for those from other states who are nationally registered.

Paramedic Education

Paramedics can generally be educated in one of three ways. The first and most common is for the prospective paramedic to attend continuing education classes; upon

completion, the student is eligible to take the National Registry exam and/or their respective state exam. Currently the National Registry requires completion of a state-approved, CAAHEP-accredited, paramedic program (NREMT, n.d.). The State of North Carolina requires a class of 1,096 hours—96 of which are didactic, 200 of which are in clinical education, and 300 of which are in the form of a field internship. These individuals must also place at a certain level on a college entrance exam and complete an Office of EMS–approved anatomy class (NCEMS, 2015).

Paramedics can also become credentialed through the associate degree programs offered by numerous community colleges. While this can be costlier than attending a continuing education program, it does not add a great deal of time. In these programs, students will cover all of the objectives and complete the instructional hours requirement set forward by the credentialing state. In addition to medical classes, students in community college programs are able to take other basic education classes and electives. Paramedics then graduate with an associate degree, which can better allow them to further their career or education. It is unknown how many of these programs exist in the United States.

The final way in which paramedics can earn their credential is through a bachelor's degree program. According to the National Association of EMTs (NAEMT, n.d.), there are currently 20 universities in the United States that offer a bachelor's degree in emergency medical services. In addition to meeting all of the hourly and objective requirements, these programs equip paramedics with additional skills in management, and science; in some cases, paramedics are required to have pre-med instruction.

In addition to the aforementioned methods of education, graduate programs are beginning to emerge that offer either majors or concentrations in emergency medical services. These programs are not for initial credentialing, but rather allow those in the field to continue to advance their education. According to the NAEMT (n.d.), there are currently four programs in the nation that offer graduate degrees concerning EMS. These educational advancements continue to help legitimize this relatively young field.

<center>Job Satisfaction</center>

Herzberg defined job satisfaction as an individual's "overall attitude towards his job, whether he likes or dislikes it" (Herzberg, 1959, p. 5). Locke (1976) went on to define job satisfaction as "a pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences" (p. 1300). Pitts, Marvel, & Fernandez (2012) found that job satisfaction was the number one predictor of turnover when assessing federal workers. This has significant implications for the field of EMS, considering that EMS professionals are leaving the field in record numbers (Alexander et al., 2009).

Bowron & Todd (1999) assessed job satisfaction levels for paramedics in an urban EMS service. Their study found that demographic categories were not reliable predictors of job satisfaction for their population. The researchers did find that an intrinsic factor, namely a "perceived quality of career choice," was highly predictive of job satisfaction (p. 34). Additionally, the only extrinsic factor found to accurately predict job satisfaction was physician interaction. The researchers posit that physician interaction has a great effect due to the minimal number of interactions that actually occur, increasing the effect that a single poor interaction might have on an individual.

Many studies that examine job satisfaction in the field of EMS utilize secondary data from the Longitudinal EMT Attributes and Demographics Study (LEADS). This survey was intended to track a certain group of nationally registered paramedics and EMTs to assess if their views of certain items had changed over time. The second function of the survey would act as a "snapshot" of particular issues and would be changed each year (Brown, Dickison, Misselbeck & Levine, 2002, p. 434). This survey was administered annually from 1999–2008, both to respondents from previous years and to new potential respondents in order to maintain fresh sample viewpoints. This survey data has been a large driver in determining job satisfaction levels in the field of EMS. It is unclear, as time continues to pass, whether the data collected from 1999–2008 will continue to be representative of the field as a whole. More studies such as this must be conducted to ensure that future generations of EMS professionals are represented.

Chapman et al. (2009) found that both intrinsic and extrinsic motivators were negatively related to paramedics' and EMTs' intent to leave their jobs, indicating that both intrinsic and extrinsic motivators help to improve overall job satisfaction. This study confirmed that overall job satisfaction was positively correlated with intent to leave one's job (p. 499). Blau and Chapman (2016) had similar findings when examining the LEADS data. In addition, they found that items such as stress and perceived levels of health were predictors of intent to leave the field of EMS. As in previous studies, they determined that extrinsic job factors such as pay and benefits were important to retaining EMS professionals within the field. Additionally, intrinsic job satisfaction significantly affected paramedics' intent to leave their jobs. Like their federal worker counterparts,

EMS professionals must be offered improved overall job satisfaction in order to minimize turnover.

The financial impacts of employee turnover are not insignificant. In an effort to calculate costs for paramedic turnover, the following categories were tracked: advertising/recruiting, vacancy costs (backfilling with overtime), hiring costs, orientation and training costs, pre-turnover costs, and termination costs (Peterson, Jones, Hubble, Carr, Weaver, Endberg & Castle, 2010). Further the authors discovered that the median annual turnover cost for all included paid agencies was $86,452.05. The average cost per terminated employee was $7,000. This is likely a conservative estimate today given that this study is eight years old at the time of this writing. The authors also noted that this figure was likely low due to the great disparity in the EMS service size utilized in the study.

<div align="center">Employee Motivation</div>

The challenge of motivating people has been a problem for humanity throughout all of history. In 2100 BC, the king of Babylon, Hammurabi, established a new code that would dominate every facet of life. This new code included how individuals would act, what relationships they would have, and how they would conduct other social aspects of life. Ott, Parkes, & Simpson (2008) credit this as the first employee handbook. Since that day, many different opinions have emerged regarding how people can and should be motivated. This section will give a thorough overview of what work motivation is and where it has originated from, dating from the Age of Enlightenment through present day.

Latham & Pinder (2005) defined work motivation as "a set of energetic forces that originate both within as well as beyond an individual's being, to initiate work-related behavior and to determine its form, direction, intensity, and duration" (p.486). Rainey (2003) describes work motivation as "a person's desire to work hard and work well—to the arousal, direction, and persistence of effort in work settings" (p.225). Standard practices about with what and how to motivate employees have gone through many changes throughout the course of modern history. Managers today still fear the question of how to motivate their employees, likely because many of them do not understand the issue (Latham and Locke, 1979; Rainey, 2003). Despite the trepidation that many managers feel concerning the idea of employee motivation, it is an issue that must be addressed and conquered if employees and organizations are to be successful.

Researchers and managers alike debate how best to measure and implement motivational methods. Some researchers believe that motivation is best measured by asking employees how motivated they feel; others believe that it should be directly observed. Rainey (2003) points out that many employees tend to rate themselves as more highly motivated and harder working than their colleagues might. He goes on to state "there must be organizations in which everyone works harder than everyone else" (p. 225-226).

<center>The Origins of Motivation</center>

Classical Studies of Motivation

Modern work motivation study can be credited to Fredrick W. Taylor (Natemeyer, 2001). His work, entitled "Scientific Management," was one that tended to

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depersonalize the employee in an effort to increase organizational efficiency. His work found that, generally, forces within an organization influence an individual, rather than forces within the individual. Taylor's work was presented to convince the reader that not only was the conservation of natural resources important, but that equally important are renewed efficiencies in the process of management (Taylor, 2001). In the introductory section of his work, Taylor lists three reasons why he has written a paper on the science of the work process. He notes that he is writing

1. To illustrate "the great loss which the whole country is suffering through inefficiency"

2. To show that "the remedy for this inefficiency lies in systematic management, rather than in searching for some unusual extraordinary man."

3. "To prove that the best management is a true science, resting upon clearly defined laws, rules and principles." (p. 7)

Taylor's work brought the science of management to light and presented principles of management, many of which, while altered, still survive today (Wren, 2011). Wren goes on to point out that though many of these ideas have undergone change, the true value of Taylor's work is that he provided the impetus to "search for improving management" (2011, p. 10). Taylor's work was not without skeptics, however. Derksen (2014) points out that during Taylor's day, many felt that he was removing the human factor from management and, in a sense, equating man with machine.

Taylor did believe that the success of the company and the employee were directly intertwined. As he notes, "the firm conviction that the true interests of the two

are one and the same; that prosperity for the employer cannot exist through a long term of years unless it is accompanied by prosperity for the employee, and vice versa" (Wren, 2011, p. 10). Taylor's conclusion that the prosperity of the employee and the corporation must be viewed together demonstrates that his work was intended to improve conditions for both.

Follet (2001) wrote a revolutionary piece entitled "The Giving of Orders." This work was one of the first to advocate for a participative style of management (Natemeyer, 2001). In this paper, she gives managers advice on how best to give orders in a way that employees are willing to follow. She likens the manager to a salesperson and insists that the manager must become adept at skills of persuasion and sell employees on why a task must be done. At times, the salesmanship will not be enough. Follet points out that employees are fighting a lifetime of habits and hang-ups. These must be overcome to achieve true change, which is a task not easily accomplished. According to Follet, when employees fail to complete a task, it is not always simply because they didn't want to, but often because they did not know how. Summing up what she saw to be the problem, Follet states: "It has been hard for many old-fashioned employers to understand that orders will not take the place of training" (Follet, 2001, p. 21). Ott et al. (2008) point out that Follet advocates for an environment in which employers and employees "collaborate" on what and how things should be done. This paper, while written well before these ideas were popular, was certainly a glimpse of the attitudes to come later.

Maslow (2001) is one of the most influential behavioral theorists of all time. His hierarchy of needs theory is still taught in management classes today and is utilized to

predict how people will react in given situations. From a management standpoint,

Maslow's theory established that humans have needs that must be fulfilled if managers

expect to get the highest productivity from them. Latham and Pinder (2005) note that the

practical significance of Maslow's theory is still accepted by researchers today.

Each level of the hierarchy only becomes important after the previous is fulfilled.

Likewise, any need ceases to be a motivator once it has been fulfilled. A brief

description of each level of the hierarchy is listed below.

a) Physiological Needs: These are the needs of the body, such as food, sleep,

   oxygen, and any other need required for homeostasis.

b) Safety Needs: The employee wishes to feel safe at the job and at home.

c) Love Needs: This includes the desire to have a feeling of belongingness or

   acceptance.

d) Esteem Needs: This is the desire to be respected by others.

e) Self-Actualization: "A musician must make music, an artist must paint, a poet

   must write, if he is to be ultimately happy." (Maslow, 2001)

Participative management is another factor that has been extensively examined

throughout the literature. Argyris (1955) notes that participative management and

democratic management can be used synonymously. Argyris further points out, "These

phrases are taken to mean that the subordinates should be given an opportunity to

participate in the various decisions that are made in their organization that affect them

directly or indirectly" (1955, p. 1). Kim (2012) found that in local governments,

participative management results in higher levels of job satisfaction. Kim (2012) found a

similar relationship between job satisfaction and participation in strategic planning. This indicates that employees have an interest in shaping the direction of their organization.

McGregor (2001) brought forth a revolutionary view of employees in his contemporary-turned-classic paper entitled "The Human Side of Enterprise." The diverging theories presented in the study coax readers to choose how they will view the worker. Argyle (2006) posits, "(McGregor) recognized the importance of this, relating how a view of man affects any given theory of organization." McGregor believed that management practices in the United States followed his Theory X (Rainey, 2003). Theory X states that people are "basically lazy, passive, resistant to change and responsibility, and indifferent to organizational needs" (p. 39). This view is rather Machiavellian, in which an authoritarian view is advocated for the managing of people. To quote McGregor:

> Without this active intervention by management, people would be passive—even resistant—to organizational needs. They must therefore be persuaded, rewarded, punished, controlled—their activities must be directed. This is management's task. We often sum it up by saying that management consists of getting things done through other people. (2001, p. 42)

Theory Y, in comparison, viewed the worker in a much more favorable light. In this argument, McGregor (2001) advocated for a more participatory style of management since he felt employees were capable of making internal choices to act in ways consistent with furthering their organizations. This revolutionary way of thinking does not sound

nearly as radical now as it did when it was first published. The idea that employees were driven by an intrinsic desire to be successful is a direct contradiction of Taylor's work.

McGregor (2001) summed up Theory Y by stating the following:

> The motivation, the potential for development, the capacity for assuming responsibility, the readiness to direct behavior toward organizational goals are all present in people. Management does not put them there. It is a responsibility of management to make it possible for people to recognize and develop these human characteristics for themselves. (p. 46)

Some of the steps toward rectification that McGregor advocated were decentralization and delegation, job enlargement, and participation and consultative management. He also advocated for changing how employee appraisals were dealt with, likening them to a product inspection on an assembly line (McGregor, 2001, p. 48). McGregor's monumental work paved the way for future participatory advocates such as Theory Z, which will be discussed later in this review.

McClelland (2001) discusses several different ways in which an individual is motivated. According to Rainey (2003), McClelland's theory on achievement, power, and affiliation "was one of the most prominent theories in management and organizational behavior" (p. 254). McClelland's study divides motivation into three different categories (McClelland, 2001). The principle here is that people are not motivated or unmotivated, but rather are motivated by one of the needs listed here. A brief description of each motivator is listed below.

- Need for Achievement: "The need for a sense of mastery over one's environment and successful accomplishment through one's own abilities and efforts; a preference for challenges involving moderate risk, clear feedback about success; and the ability to sense personal responsibility for success" (Rainey, 2003, p. 250).

- Need for Power: "A general need for autonomy and control over one's own self and others, which can manifest itself in different ways; when blended with degrees of altruism and inhibition and low need for affiliation, can facilitate effectiveness at management" (Rainey, 2003, p. 250).

- Need for Affiliation: "The need to establish and maintain positive affective relations or "friendship" with others." (Rainey, 2003, p. 250)

Perhaps the most interesting thing to note about McClelland's (2001) research is that people are not necessarily locked into their primary method of motivation from birth. Their environment influences much of what motivates them. This was tested by administering 10-day courses and subsequent follow-ups on the subject of becoming motivated by achievement. Throughout these classes, McClelland (2001) noticed changes in those who were not initially driven by achievement. He posits that perhaps this type of training could be used to help correct some of the socioeconomic issues in society. Rainey (2003) points out that even now, scholars are much divided on whether McClelland's theories have come to fruition. There is no doubt, however, that this research deserves to be included in any thorough review of the literature on the subject of motivation.

As discussed in the introductory chapter, Frederick Herzberg plays a very large role in the formulation of this research study. His work, "One More Time, How Do You Motivate Employees?" has been very influential in the study of various motivator effects on job satisfaction. In his work, he makes a presentation regarding hygiene factors and motivators. Hygiene (extrinsic) factors are those factors that Herzberg determined were associated with extreme job dissatisfaction. Likewise, Herzberg determined that motivator (intrinsic) factors were associated with job satisfaction. This theory, known as the Two-Factor Theory, was present in some of Herzberg's earlier works as well (Herzberg, 1959). It is important to note that Herzberg makes a special point to clarify the meaning of satisfaction and dissatisfaction. As he states:

> Since separate factors need to be considered depending on whether job satisfaction or job dissatisfaction is being examined, it follows that these two feelings are not opposites of each other. The opposite of job satisfaction is not job dissatisfaction but, rather, no job satisfaction; and similarly, the opposite of job dissatisfaction is not job satisfaction, but, no job dissatisfaction. (Herzberg, 2001, p. 86)

This distinction is important for managers to understand. Employees who are not dissatisfied with their work may still not be satisfied. This can have serious implications regarding output and overall employee morale.

Table 1: Hygiene vs. Motivators adapted from Herzberg (2001, p. 87)

Motivators	Hygiene Factors
Achievement	Company Policy and Administration
Recognition	Supervision
Work Itself	Relationship with Supervisor
Responsibility	Work Conditions
Advancement	Salary
Growth	Relationship with Peers
	Personal Life
	Relationship with Subordinates
	Status
	Security

As pointed out in the introduction, the use of Herzberg's work as a basis for determining which factors affect job satisfaction is supported in the literature. Smith and Shields (2013) point out that "social service workers declare there are more important reasons to work other than a paycheck, using Herzberg's insights on motivation to work becomes an excellent perspective with which to investigate factors that influence their job satisfaction" (p. 190). They go on to state: "Our results suggest that Herzberg's conception of the motivation of work presented many years ago remains relevant and grounding for contemporary job satisfaction studies, particularly with respect to social service work" (p. 195). Helbing, Teems, & Moultrie (2017), in an assessment of job satisfaction in emergency room nurses, further utilized the work of Herzberg.

They found strong correlations between intrinsic factors and overall job satisfaction. This study further supports the use of these factors to examine job satisfaction.

While there are many studies that confirm utilizing Herzberg's work, it is not without controversy. As soon as 1968, Herzberg's two factor theory was referred to by Behling, Labovitz & Kosmo (1968) as "one of the most heated and durable controversies in modern management theory" (p. 99). Kalleberg (1977) discusses variations in work values which may have an effect on how certain motivator and hygiene factors are viewed. One example given is how someone with many dependents may value monetary reward more than one without as many financial obligations. The implication from this is that various circumstances surrounding the individual can influence the effects of items in Herzberg's work effects on job satisfaction.

Latham and Locke (2001) make the argument that goal setting is one of the most effective methods to motivate employees. They posit that employees who are given very high goals of output tend to outperform those who are given lesser or no goals. In order to test their theory, they randomly assigned 20 logging crews to either a control or an experimental group. Those in the experimental group were presented with high but obtainable goals concerning their daily output. Those employees in the control group were simply urged to do their very best in producing output. Researchers visited both groups an equal number of times in order to ensure that the Hawthorne effect was not playing a role. Those in the experimental group significantly outperformed those in the control group, despite all other aspects being equal. It is unclear if this goal-setting technique would be as effective in a field such as EMS. Output is generally not

something the individual has a lot of control over, since calls are originated by those in need. That said, setting goals for time-dependent emergencies, resuscitation rates, and other patient/operational outcomes could prove important. It is beyond the scope of this study to answer those questions.

Theory Z was developed by Dr. William Ouchi (1981) as a theory that continues to build on theories X and Y. The theory is thought to have a major impact on social culture, which is defined as "the social energy that drives, or fails to drive, the organization" (Watson & Burkhalter, 1992). Theory Z advocates a type of participative style of management that allows the employee to buy in within the organization. Watson and Burkhalter (1992) note that "the basic foundation required to plan and implement a participatory model was trust, fairness, integrity, involvement, and holistic concern for individual uniqueness and capability." Daft (2004) noted the organizational ideals that are derived from Theory Z. They are listed below.

- Long-term employment

- Consensual decision-making

- Individual responsibility

- Slow evaluation and promotion

- Implicit, informal control with explicit, formalized measures

- Moderately specialized career path

- Holistic concern, including family

Many of these fit in with what paramedics are faced with daily. They are often expected to work autonomously with very little oversight. Their career path is specialized, generally with a slow process of promotion. It is yet to be seen how much of a motivational effect Theory Z would have on the paramedic. The implication of this theory for management seems to focus on the long-term care and strengthening of employees. The theory also hinges on long-term employment for many of its facets. As noted throughout the study, job satisfaction has a direct linkage to employee turnover, thus making satisfaction a central tenant of Theory Z.

Intrinsic and Extrinsic Motivators

Intrinsic factors occur within the individual and are those that Herzberg referred to as motivators. Extrinsic motivators occur outside of the individual and are what Herzberg referred to as hygiene factors (Lyden, 1970). True motivators are innate, while external motivators or hygiene factors can actually cause dissatisfaction once they are removed (Herzberg, 1959). Deci (1976) notes that external motivators do not always have the desired effects on intrinsic motivation. He found that with certain external rewards such as increases in pay, the focus of why the act is performed begins to shift. This tends to weaken the intrinsic motivational desire, while strengthening the effects of the extrinsic. If the extrinsic factor is then removed, it is possible that individuals will be unable to revert back to their intrinsic drive for motivation. Dermer (1975) found that intrinsic motivation is necessary for extrinsic motivation to have an effect. Further

stated, extrinsic motivators only work because of their effects on intrinsic drive. This differs from Deci's findings that extrinsic motivators work to remove intrinsic motivators.

Deci, Koestner, & Ryan (1999) reaffirmed previous studies that external rewards frequently undermine intrinsic motivations when examining school-age children. The researchers go on to point out: "Specifically, the results indicate that, rather than focusing on rewards for motivating students' learning, it is important to focus more on how to facilitate intrinsic motivation, for example, by beginning from the students' perspective to develop more interesting learning activities" (p. 15).

Houston (2000) found that public sector employees value intrinsic rewards over those that are extrinsic in nature. This could indicate that there is value in placing a greater emphasis on the work itself than by promoting extrinsic rewards. This is accented further if the locus of control over the activity was to make a full transition to the extrinsic. Once this occurs, the employer must be able to continue to provide those extrinsic rewards or risk causing dissatisfaction.

Further, it must be determined if motivational factors shift over the course of time. Are the same factors that attract one to become a paramedic the same factors that keep them in the field? It is beyond the scope of this study to answer this question. It may be that this study prompts further longitudinal testing to evaluate whether the locus of control concerning intrinsic and extrinsic factors shifts over time.

Public Service Motivation

Public service motivation plays a crucial role in trying to understand why those who serve in the public sector do so. The majority of paramedics in North Carolina function in the public sector. Those that function in the private sector likely do so through a privatization effort and thus fill the void of the public sector service. Perry and Wise (1990, 368) define public service motivation (PSM) as "an individual's predisposition to respond to motives grounded primarily or uniquely in public institutions and organizations." Houston (2000) affirms that public service motivation is a real phenomenon. As he states:

> In sum, public employees are more likely to place a higher value on the intrinsic reward of work that is important and provides a feeling of accomplishment, and they are less likely to place a high value on such extrinsic reward motivators as high income and short work hours. These findings indicate that public service motivation does exist. (Houston, 2000, p. 725)

These findings link the study of public service motivation directly back to the research question of whether intrinsic or extrinsic effects have the greater effect on job satisfaction. Kjeldsen and Hansen (2016) further found that PSM is positively associated with office workers in the public sector, while negatively associated among similar employees in private industry.

There are various motives that could present the individual with a predisposition to public service. They are listed below.

- Rational: This consists of participation in the process of policy formation, commitment to a program because one identifies with it on a personal level, and advocacy and/or private interest.

- Norm-Based: This is described as having a desire to serve public interest, loyalty to duty, and an interest in providing for social equity.

- Affective: This is described as having a commitment to a program because of a conviction about its social importance. (Perry and Wise, 1990)

While each of these factors involves an altruistic motive, the list does show that PSM can differ significantly from person to person (Rainey 2003).

Brewer, Selden, and Facer (2000) further determined that employees in the public sector could be broken down into four different groupings based upon their responses to various questions asked. The results of this study revealed that the motives listed by Perry and Wise (1990) are important to all four of the groups listed here (p. 261). These groups are broken down and defined below.

- Samaritans: Individuals in this group are strongly motivated by serving other people. They see themselves as guardians of the underprivileged and are moved emotionally when they observe people in distress.

- Communitarians: This group is motivated and stirred by sentiments of civic duty and public service.

- Patriots: Patriots act for causes much bigger than themselves, such as protecting, advocating, and working for the good of the public.

- Humanitarians: They are motivated by a strong sense of social justice and public service. (Perry & Wise, 1990)

This reaffirms Rainey's (2003) contention that what motivates the public employee can differ drastically from person to person. It can also make it harder for public managers to manage their organization, since all public employees are not the same.

Kim (2012) discusses the relationship between public service motivation and the person-organization fit when analyzing work attitudes. The person-organization fit "assumes that attitudes, behaviors, and other individual-left outcomes result not from the person or organization separately, but rather a combination between the two" (Kim 2012, p. 830). Kim (2012) realized that PSM has both a direct and indirect effect on work attitudes. His conclusion is that public service motivation and person-organization fit are independent factors regarding the work attitudes of employees in the public sector. This further confirms the work of Perry and Wise and reveals that PSM should be examined when recruiting employees in the public organization.

Hsieh, Yang, & Fu (2011) note that emotional labor is equally as important as cognitive and physical labor when evaluating for PSM. They state that "emotional labor is an essential component of service delivery regardless of whether it is in the public, nonprofit, or private sector" (p. 341). Guy, Newman, & Matracci (2008) state that "to ignore the emotion work that is required in the public service is to luxuriate in the myth that mission accomplishment is merely a matter of correctly allocating resources. If the

service in public service means anything, it is the relational component of public service jobs must be acknowledged" (p. 69) Emotional labor can be subdivided into two categories. The first of these categories is known as deep acting, which is generally described as a sincere response from a person in service to another. This occurs when the actor is thinking of a situation in order to deliver the appropriate emotional response or is sincere in the actual response.

The second type of acting is surface acting, which occurs when the outward response differs from the inward response. This term was coined by Guy et al. (2008) as "false face acting." Researchers have found that if surface acting is not detected by the person served, it has few negative effects regarding customer service but unfortunately can have long-term negative effects on the employee (Hsieh et al., 2011). Paramedics could easily encounter a call for surface acting in the performance of their duties. Overuse of false face acting could potentially contribute to burnout and turnover over time.

Emotional labor is a subject that requires much more study. If employees are not sincere about their job responsibilities, this can have serious impacts on them and the organizations they work for. Hsieh et al. (2011) note that compassion is associated with deep acting and not with surface acting. They note, "People with higher levels of compassion may experience less emotional distress when following organizational rules" (p. 247). Understanding this can allow organizations to utilize the principle of person-organization fit, which can help to prevent hiring those who are surface acting.

Few fields epitomize public service as well as EMS. These individuals are available to respond to calls 24 hours a day, 7 days a week, without exception. Understanding public service motivation may be key to understanding what drives paramedics to be there for the public. Even those paramedics in the private sector are serving the public in the same manner. It is yet to be seen whether the health care, public health, or public safety dimensions have the largest impact on the motivation of paramedics. Regardless of which, public service motivation is sure to play a huge role.

Education's Effect on Motivation

One of the reasons professionals further their education is the thought that by doing so, they will be able to find more satisfaction throughout their careers (Glenn & Weaver, 1982). It is counterintuitive, however, to discover that many who further their education actually seem to be less satisfied in their professions. The disparity in levels of EMS education are well established (Alexander et al., 2009). It has been found that as the level of education for paramedics increases, their level of organizational commitment tends to decrease. The authors determined that this could be due to the fact that higher levels of education may often be obtained for personal rather than occupational reasons. With this decreased commitment, there is an associated increase in turnover. This is likely due to the increase in career opportunities in other organizations that become available to those with a higher education. This higher level of education also opens up other avenues of advancement, including positions in other advanced health-care fields (Alexander et al. (2009).

Forsyth and Copes (1994) found that "Police are members of a 'class of occupations' that have generally shown negative associations between education and job satisfaction" (p.113)   Since EMS and police officers are often grouped together as first responders within similar organizational structures, it is not entirely surprising that there would be similar results. It is unclear from the literature whether or not paramedics belong to a "class of occupations" that generate a negative correlation.

Helbing, Teems, & Moultrie (2017) found negative correlations between job satisfaction and education for registered nurses in emergency rooms. The highest job satisfaction associated with the work itself was seen in nurses with associate degrees, followed by those with master's degrees; nurses with bachelor's degrees reported the lowest satisfaction. This again was likely due to a lack of opportunity for advancement. In their study, 54 percent of the respondents had bachelor's degrees, which would increase competition for any potential advancement within the field.

Generational Differences

The vast generational differences that constitute today's workforce add additional complexity to the job of determining what drives employees.   As noted in the introductory section, Johnson (2015) points out that the current workforce is comprised primarily of workers from three generations. These generations are the baby boomers (1946–1964), Generation X (1965–1980), and Generation Y, also known as millennials (1981–2000). These date ranges will be used for the purpose of this study, although there is disagreement in the literature regarding the exact date ranges for each generation (Woods, 2016).

According to the Pew Research Center (2015), millennials have recently become the largest group in the workforce. They are followed by Generation X and then by baby boomers, who have begun to retire out of the workforce in large numbers (Woods, 2016). Ng, Gossett, and Winter (2016) state that millennials have been "characterized as entitled, egoistic, self-absorbed and narcissistic" (p. 41). This bad rap can cause managers to prejudge these employees in what could be a simple lack of understanding. Understanding what motivational factors will have the greatest effect on that generation may help to encourage their altruistic nature.

Twenge, Cambell, Hoffman & Lance (2010) notes that the majority of studies show that members of Generations X and Y (millennials) have a weaker work ethic than their baby boomer counterparts. The aforementioned generations tend to rank work as less important and more highly value leisure. These are classic examples of extrinsic motivational factors and may prove that leisure and scheduling flexibility in EMS are more important than formerly thought. This would be counter to Herzberg's (2001) thought that work-life balance is a hygiene factor; it may display that, for this generation, it becomes a motivator. This would also indicate that work motivation is an evolving subject that must regularly be revisited. This study intends to determine what effects, if any, generational differences have on motivational factors.

<div align="center">Summary</div>

This review of the literature has given a snapshot of both paramedicine and employee motivation. The modern field of Emergency Medical Services is still very young compared to many other fields. Paramedics have been around for an even shorter

amount of time. Despite its comparative youth, the history of the field of Emergency Medical Services reveals what has led the field to where it is now. This review of EMS and its history has attempted to display what forces have contributed to its creation and growth.

Like EMS, the concept of employee motivation has a history much longer than many researchers credit. Civilizations have tried to determine how to motivate people for thousands of years. Over the past 100 years, the evolution of motivation has seen a shift from authoritarian, scientifically run organizations to those that are much more participatory in nature. Understanding how to best motivate employees can help managers ensure that their employees are satisfied within their work. Work satisfaction has been proven to predict turnover among employees. Thus, the full understanding of what motivates paramedics can aid in achieving more production while reducing turnover at the same time.

Chapter III

METHODOLOGY

Overview

This chapter provides an overview of the methodology that was utilized to complete this study. A comprehensive view of the research design is provided. An overview of the targeted population and method of obtaining a sample set is explained. Also included is an overview of the survey instrument that was chosen to measure job satisfaction. Concluding the chapter is an overview of the dependent and independent variables accompanied by an explanation of the analytical process that was employed.

Exploratory Questions

The primary research question for this study is: Do intrinsic or extrinsic factors have the greater effect on paramedic job satisfaction? This question is prompted by an examination of Herzberg's (2001) work regarding hygiene and motivator effects on job satisfaction. More recently, Smith and Shields (2013) utilized a similar methodology, employing many of Herzberg's factors, to examine job satisfaction in social workers. Some of the methods utilized by Smith and Shields (2013) are incorporated within this study. Herzberg's Theory of Motivation was further utilized in a study that examined job satisfaction among emergency room nurses (Helbing et al., 2017).

Additionally, two secondary questions warrant exploration. The first of these questions is: Does a higher educational level affect the job satisfaction of the paramedic? This question is prompted by the findings of Alexander et al. (2009) in their study that found that education is inversely related to organizational commitment for paramedics. Helbing et al. (2017) obtained similar findings when examining job satisfaction in nurses. A determination of difference in the factors that predict job satisfaction may allow employers to recreate the work environment in an effort to bolster satisfaction for specific populations.

The final secondary question is: Does a paramedic's generation affect the level of perceived job satisfaction? This question examines the multigenerational workforce that makes up the field of EMS. Having a strong understanding of how motivational factors influence the different generations will allow EMS managers to better modify their styles to achieve the greatest effects. Much attention has been paid recently in the literature to the range of generations that are present in today's workforce (Ng et al., 2016; Twenge et al., 2010; Woods, 2016). Understanding this will allow EMS managers to act effectively regardless of generational differences.

These research questions served as the impetus for the completion of this study. Determining which factors have the greatest influence on job satisfaction can allow EMS managers to construct their organizations to meet those needs. Further, if it is determined that educational levels and generational differences influence job satisfaction, it may be that organizations can offer multiple motivators to meet multiple needs.

Hypotheses

H_1: Intrinsic motivational factors have a greater influence on job satisfaction than those factors that are extrinsic.

H_0: There is no difference in the influence of intrinsic and extrinsic factors on job satisfaction.

H_2: As the educational level of the paramedic increases, job satisfaction will decrease.

H_0: As the educational level of the paramedic increases, job satisfaction will remain constant.

H_3: The generation to which the paramedic belongs will influence the level of perceived job satisfaction.

H_0: The generation to which the paramedic belongs will not influence the level of perceived job satisfaction.

Method of Data Collection

A cross-sectional survey was utilized to obtain the needed data to conduct this study. This design offers a snapshot in time of how the respondents feel regarding the subject matter of the questions. While this can be affected by the mood of an individual at a particular moment, it offers the best opportunity to gather data in the allotted time. Further, longitudinal study may be warranted in the future to determine if individuals change their perceptions over time regarding certain motivators as related to job satisfaction. Such testing was performed in a limited scope between 1999 and 2008 as part of the Longitudinal EMT Attributes and Demographics Study (LEADS) (Levine, 2016).

The website Qualtrics was utilized to administer and collect data. An e-mail containing a link to the study was sent to the agency administrator of various EMS agencies in North Carolina. Services were chosen based on whether or not the EMS administrator had a publicly available email address, per IRB guidance. A request was made that each administrator appoint a central contact to distribute the surveys and encourage participation. In addition, the opening page of the survey included an informational sheet about the study as well as consent information. Any respondent that did not consent, was not allowed to begin the survey. Assurance of anonymity was provided to encourage honesty when answering questions. The initial e-mail was sent on October 23, 2018, with periodic reminders over the next couple of months. The survey window closed on midnight, December 31, 2018, to allow ample time for the analysis of the data.

The utilization of web-based surveys includes several advantages. According to Hoonakker and Carayon (2009), these include:

- Easy access to a large population

- Speed

- Reduced costs

- Reduced time and error in data entry

- Ease of administration

- Higher flexibility

- More possibilities for design work

- Higher response quality

The main concerns expressed by Hoonakker and Carayon (2009) include the potential for a biased population and computer illiteracy. These concerns are minimized since this study will target a very specific population for this study. Paramedics have to demonstrate basic competencies in order to obtain their professional credentials (Timmons, 2018). In addition, paramedics generally have access to computing equipment and internet while at work, making it easy for them to complete their paperwork requirements. This ensures that most currently employed paramedics have the proper skill set and resources to be able to complete a web-based survey.

<div align="center">Instrumentation</div>

The Human Services Job Satisfaction Questionnaire (HSJSQ) was selected to assess job satisfaction levels. The HSJSQ was developed by Shapiro et al. (1997) to assess job satisfaction levels in social workers. While initially utilized for this narrow population, the survey authors did intend this instrument to be utilized in populations broader than only social workers (Shapiro et al., 1997). The HSJSQ requests that respondents indicate how strongly they agree or disagree with certain elements of job satisfaction, both intrinsic and extrinsic. These feelings are derived from personal work experiences the individual currently encounters. In an effort to ensure that the HSJSQ was suitable for use with paramedics, communication was made with Dr. Jeremy Shapiro, the first author of the HSJSQ. After a thorough review of the items on the HSJSQ and consultation with the survey author, it was determined that this survey is a good tool for this study.

The HSJSQ utilizes a five-point Likert scale. Responses include "Strongly Agree," "Agree," "Neutral," "Disagree," and "Strongly Disagree." Responses were quantified as ordinal data with 5 = Strongly Agree, 4 = Agree, 3 = Neutral, 2 = Disagree, and 1 = Strongly Disagree. All but five items were worded such that a higher score will indicate higher job satisfaction. Those five questions were reverse-coded so as not to affect data analysis, and thereby having a higher score indicate satisfaction. In an effort to boost responses, the original 49-question survey was reduced to 24 questions. The questions selected have high factor loadings in relation to the five categories of the survey (Jeremy Shapiro, personal communication, June 1, 2018). Those categories include Self-Actualization, Affect, Working Conditions, Professional Self-Esteem, and Futility/Avoidance. The survey utilized for this study can be found in Appendix A.

Validity

Shapiro et al. (1996) reported a Cronbach's alpha of 0.92 to demonstrate a strong level of internal consistency for the HSJSQ. Prior to data analysis, a Cronbach's alpha was calculated using the current survey results. This test yielded a robust Cronbach's alpha of 0.91, which is consistent with the survey's original author's findings. In further efforts to ensure the validity of each question, the original researchers required a correlation of at least 0.15 ($p < 0.005$) in regression models utilizing the question "I am satisfied with my job." "I am fairly paid for my work" was the only question included within this survey that was not included in the original instrument (due to internal consistency concerns). This item did, however, maintain a validity correlation of 0.24, which exceeds the minimum standard. This question was included due to its inclusion as

one of the original hygiene factors in Herzberg's work. Its inclusion is further supported

based on conclusions from the LEADS study when examining pay and benefits as a

reason for paramedics leaving the field (Blau & Chapman, 2016).

Participants

This study focused on paramedics who are credentialed in the state of North

Carolina. The logistics of collecting data beyond the boundaries of the state make a

national study of paramedic motivation unfeasible within the bounds of this study.

Currently, there are approximately 6,000 paramedics credentialed in the state of North

Carolina (Timmons, 2018). Only paramedics who are currently employed were sought.

In an effort to ensure the employment of the population, links to the survey were

administered through paramedic-level EMS services within North Carolina. That the

paramedic is currently employed is crucial due to the dependent variable of current job

satisfaction for this study.

Outcome Variables

Dependent Variable

The dependent variable is the level of job satisfaction that the paramedic feels.

This variable is assessed by the question, "I am satisfied with my job." For this variable,

the higher the value of the response, the higher the level of satisfaction perceived. The

use of this question as the dependent variable is supported by Smith and Shields' (2013)

usage to assess job satisfaction in social workers.

Independent Variables

The independent variables included in the study are intrinsic motivators, extrinsic motivators, levels of education, and the generations to which the paramedics belong. Each of these variables were tested against the dependent variable to assess for any causative/correlative relationships. The level of education and generational affiliation are factors that will also be utilized to control for the intrinsic and extrinsic motivator variables. This will be performed in an effort to determine whether education or generational affiliation has the strongest correlation with job satisfaction.

The questions assessing intrinsic factors are included below.

1) My work is intellectually interesting.

2) I feel like the work that I do makes an important contribution to people's lives.

3) I feel I am growing professionally and personally through my job.

4) I have about the right amount of independence in my work.

5) There are opportunities for advancement at my job.

6) I am confident in my ability to effectively serve my patients.

7) I sometimes wonder whether I really know what I am doing in my work (reverse-coded).

The questions assessing extrinsic factors are as follows.

1) I get clear feedback from my supervisor about my work.

2) My supervisor is knowledgeable, skillful, and helpful to me in my work.

3) My supervisor's expectations of me are clear.

4) I like most of the people I work with.

5) The environment at my agency is pleasant.

6) The work requirements of my job are reasonable.

7) I generally have good working conditions.

8) There are a number of stupid policies and procedures at my job (reverse coded).

9) My job provides adequate flexibility in my work schedule.

10) My job provides adequate vacation time.

11) I am fairly well paid for my work.

Demographics

In an effort to control for each of the aforementioned variables, several demographic questions were assessed. These include age (actual); gender (1 – male, 2 – female); years of experience (actual); position (1 – field paramedic, 2 – supervisor, 3 – administrator); level of education (1 – certificate, 2 – degree, 3 – postbaccalaureate); length of shift (1 – 24-hour, 2 – 12-hour, 3 – 8-hour); and year of birth grouped by generational affiliation (1 – Pre-1946, 2 – 1946–1964, 3 – 1965–1980, 4 – 1981–2000, and 5 – post-2000) (Johnson, 2015). Each of these demographic categories were analyzed to determine if they produce differences in effects of intrinsic and extrinsic factors on job satisfaction.
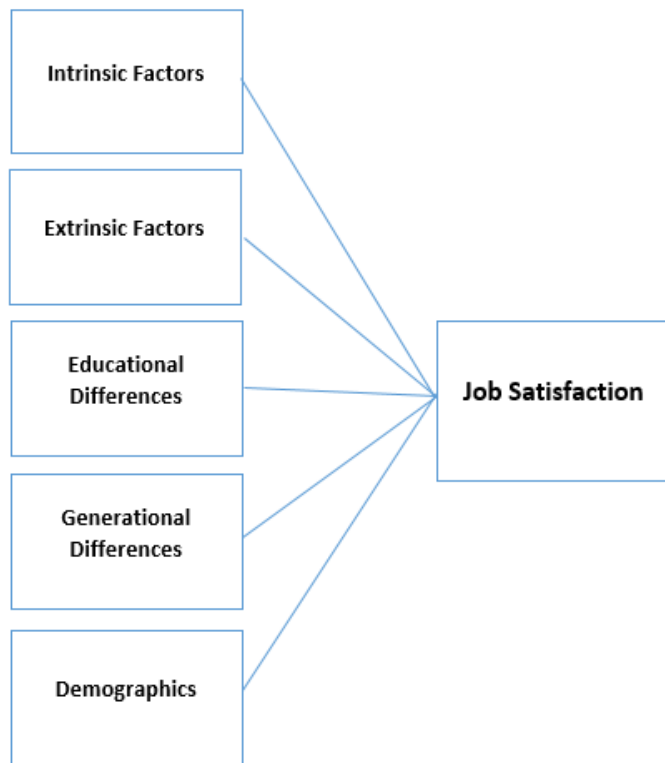
Figure 1: *Conceptual model depicting intrinsic, extrinsic, educational, generational, and demographic effects on job satisfaction*

Data Analysis

SPSS Version 25 was utilized to analyze the data presented from the survey instrument. Descriptive statistics were utilized to provide an overview of the data that was collected. These statistics will help to describe the sample set in better detail. Overall job satisfaction scores were derived from taking the mean of responses to the question, "I am satisfied with my job." A mean score was calculated for all intrinsic questions as a group; the same procedure will be carried out for all extrinsic questions. The Wilcoxon signed-rank test will be utilized to see if there are statistically significant differences between mean scores of intrinsic and extrinsic motivational factors.

Regression models were utilized to determine if there are strong correlative relationships between the independent variables and job satisfaction. Models were run using intrinsic variables only, extrinsic variables only, and a combined analysis utilizing both intrinsic and extrinsic variables. In addition, regression analysis was utilized to depict correlation differences between both educational levels and generational affiliations to assess the two secondary research questions. Due to the ordinal nature of Likert data, non-parametric tests such as Spearman's rank-order correlation were utilized. For all statistical analysis above, the selected alpha for significance will be 0.05.

Hypothesis one: A higher correlation value for intrinsic factors other than extrinsic factors and job satisfaction that is statistically significant would result in the confirmation of this hypothesis.

Hypothesis two: Regression models showing that as educational levels rise, job satisfaction decreases to a point of statistical significance would confirm this hypothesis. Analysis of Variance testing was used to further test for differences in job satisfaction levels between educational groups.

Hypothesis three: Confirmation of this hypothesis would result from statistically significant differences in job satisfaction levels by generation.

Additionally, each demographic was utilized as a control, and regression models will be utilized to see if any differences exist in the effects of intrinsic and extrinsic factors on job satisfaction that are present between groups.

Ethical Considerations

Since this study involves research utilizing human subjects, no research was conducted prior to IRB approval. To ensure anonymity, no identifying information was collected within this survey. Participation in this study was optional for each participant, and each participant was able to withdraw from this study at any time prior to submitting their survey responses. There are no known risks to those who did participate, nor was any reward offered for participation.

Summary

This chapter has presented a detailed account of the methods that will be utilized to answer the research questions. A sample was drawn from the population of paramedics who are employed at a paramedic-level EMS service in North Carolina. Surveys were distributed utilizing Qualtrics, with an email containing a link to the survey sent to each service. The data collection period was open for 71 days with periodic reminders sent out during this period. Data analysis was performed using the described procedures during this chapter.

Chapter IV

RESULTS

Overview

The purpose of this chapter is to report the results of the cross-sectional survey that was administered during the period of October−December of 2018. The results of the surveys were utilized for analysis to answer the three research questions that prompted this study. This chapter begins with an overview of the sample and then will progress to a presentation of the results of the various hypotheses testing.

Sample Overview

During the data collection phase, 254 surveys were returned. Only the surveys that indicated that the respondent was a paramedic were retained for analysis. This reduced the sample to 222 completed surveys. This sample represents 3.7% of the approximately 6,000 employed paramedics within North Carolina. The sample demographics were similar to that of the Longitudinal Emergency Medical Technician Attributes and Demographics Study (LEADS) (Levine, 2016). When examining nationally registered paramedics included in the LEADS study, gender was found to be 74.6% male compared to this study's 62%. In addition, this study's population is slightly older, with the LEADS study reporting an average age of 34.2 compared to 38.75 years in this study. Further, this study's population is slightly more experienced, with a mean experience level of 14.14 years compared to 10.0 years noted in the LEADS study.

Nearly 90% of this study's sample report to be from Generation X or Y (millennial).

This is similar to the findings of current day generational findings about the general

workforce (Woods, 2016). The following table presents a description of the sample

including gender, education, current position, shift length, and generation.

Table 2. *Overview of the sample by Demographic Category*
Breakdown of Sample by Demographic Category

Category	n =	%
Gender		
Male	137	62
Female	84	38
Education		
Certificate	70	31.7
Associate's Degree	86	38.9
Bachelor's Degree	50	22.6
Master's Degree or Above	15	6.8
Current Position		
Field Paramedic	130	58.6
FTO/Asst. Supervisor	28	12.8
Supervisor	31	14.0
Administrator	30	13.7
Current Shift Length		
24 Hours	98	44.1
12 Hours	90	40.5
10 Hours	8	3.6
8 Hours	19	8.6
Other	7	3.2
Year of Birth		
Pre-1946	1	0.5
1946−1964	22	10.0
1965−1980	92	41.8
1981−2000	104	47.3
Post-2000	1	0.5

Exploratory Questions

Primary Question

The primary research question for this study is: Do intrinsic or extrinsic factors have the greater effect on paramedic job satisfaction? The hypothesis that was developed is stated as follows:

H_1: Intrinsic motivational factors have a greater influence on job satisfaction than those factors that are extrinsic.

H_0: There is no difference in the influence of intrinsic and extrinsic factors on job satisfaction.

In order to assess this question, two new variables were created from survey data. The first combined all intrinsic motivator questions into one variable. The second combined all extrinsic motivator questions into its own variable. Spearman's Rank-Order Correlation was calculated utilizing the question "I am satisfied with my job" as the dependent variable. Analysis revealed that intrinsic scores had a positive correlation with job satisfaction ($r_s = .68$, $p = < .001$). Additionally, extrinsic scores were found to have a stronger positive correlation with job satisfaction ($r_s = .73$, $p = < .001$). When both intrinsic and extrinsic factors were combined into one variable, Spearman's correlation was found to be $r_s = .768$, $p = < .001$. The table below reveals the Spearman's correlation by demographic for all categories other than education and generation. These two demographics are covered in greater detail in the sections below.

Table 3. *Correlation by Intrinsic and Extrinsic Variables to Job Satisfaction by Demographic*

Spearman Rank-Order Correlation by Demographic

Category	n =	JS (SD)	Intrinsic	Extrinsic
Gender				
Male	137	3.80 (0.98)	.640**	.696**
Female	84	3.58 (1.13)	.713**	.747**
Current Position				
Field Paramedic	130	3.55 (1.08)	.660**	.697**
FTO/Asst. Supervisor	28	3.75 (1.14)	.650**	.719**
Supervisor	31	4.03 (0.75)	.725**	.669**
Administrator	30	4.07 (1.02)	.596**	.685**
Current Length of Shift				
24 Hours	98	3.77 (1.05)	.679**	.735**
12 Hours	90	3.59 (1.02)	.704**	.670**
10 Hours	8	3.50 (1.31)	.878*	.878*
8 Hours	19	4.05 (1.08)	.606*	.717**
Other	7	3.86 (1.07)	-.047	.356
Years of Experience				
0−4	31	3.74 (1.00)	.488*	.677**
5−10	67	3.42 (1.12)	.743**	.750**
11−15	37	3.92 (0.80)	.642**	.585**
16−20	33	3.73 (1.20).	714**	.695**
21+	48	3.92 (1.05)	.632**	.723**

(*Correlation is significant at the 0.01 level. **Correlation is significant at the 0.001 level.)

The Wilcoxon Signed-Rank Test was utilized to determine if there is a statistically significant difference in mean scores of intrinsic and extrinsic variables. Intrinsic variables had a mean score of 3.97 (SD = 0.55) compared to a mean score of 3.45 (SD = .73) for extrinsic variables. The result showed a statistically significant difference in mean scores (Z = -10.570, p = 000).

Spearman's rank-order correlation was performed on each survey item to determine if any strong relationships with job satisfaction were present. The table below

highlights any items that had a correlation value of p > 0.500. For purposes of the table,

each question has been abbreviated to reflect only the motivational variable.

Table 4. *Survey Items with Moderate to High Correlation to Reported Job Satisfaction*

Survey Items with Moderate to Strong Correlation with Job Satisfaction

Question	$r_s =$	sig
3. Personal/Professional growth through my work	0.599	.000
4. Independence in my work	0.518	.000
5. Opportunities for advancement	0.605	.000
8. Clear feedback from supervisor	0.515	.000
12. Pleasant environment at agency	0.642	.000
13. Job requirements are reasonable	0.537	.000
14. Good working conditions	0.577	.000
18. Fairly well paid for my work	0.546	.000
21. Eagerness to go to work each day	0.671	.000
22. Desire to continue in profession for a long time	0.680	.000
24. Counting hours until I can go home (reverse-coded)	0.507	.000

Secondary Question Number 1

The first secondary question that was assessed is: Does a higher educational level

affect the job satisfaction of the paramedic? The developed hypothesis for this question

is stated as follows:

H_2: As the educational level of the paramedic increases, job satisfaction will decrease.

H_0: As the educational level of the paramedic increases, job satisfaction will remain

constant.

In order to assess for this question, Spearman's rank-order correlation was

calculated to determine if there was a definitive relationship between education and job

satisfaction. The results of this test revealed a very weak negative relationship between

education levels and reported job satisfaction that was not statistically significant at the

preset alpha of 0.05 ($r_s = -.108$, $p = .111$).

Current position was utilized as a control variable to determine if this had any

effect on the relationship between job satisfaction and level of education. Each position

(paramedic, FTO/asst. supervisor, supervisor, administrator) revealed a weak negative

relationship between job satisfaction and education. None of the reported correlations

reached a level of statistical significance. The strongest correlation among positions

found was in the supervisor position ($r_s = -.220$, $p = .233$). The administrator position

showed the weakest correlation ($r_s = -.092$, $p = .629$).

Table 5. *Job Satisfaction by Education Level*

Education	N	M	SD
Certificate	70	3.81	1.081
Associate's Degree	86	3.73	1.011
Bachelor's Degree	50	3.62	1.048
Master's Degree or Above	15	3.40	1.183

In order to further assess for any differences in job satisfaction, the Kruskal-

Wallis H Test was utilized to test for differences in job satisfaction between educational

groups. The table above demonstrates the job satisfaction mean score and sample

number for each education group. The results of the test revealed that there are

statistically significant differences between education level ($X^2(3) = 2.840$, $p = 0.014$).

Secondary Question Number 2

The final secondary question is: Does a paramedic's generation affect the level of

perceived job satisfaction? The following table represents responses to the question "I

am satisfied with my job" as answered by generation. The following hypothesis was

formulated:

H$_3$: The generation to which the paramedic belongs will influence the level of perceived

job satisfaction.

H$_0$: The generation to which the paramedic belongs will not influence the level of

perceived job satisfaction.

Table 6. *Job Satisfaction by Generation*

Generation	N	5	4	3	2	1	M	SD
Pre-1946	1	1	0	0	0	0	5.00	0.000
1946−1964	22	5	12	3	2	0	3.91	0.868
1965−1980	92	29	40	13	6	4	3.91	1.055
1981−2000	104	14	48	20	18	4	3.48	1.052
Post-2000	1	0	1	0	0	0	4.00	0.000

(5 = Strongly Agree, 4 = Agree, 3 = Neutral, 2 = Disagree, 1 = Strongly Disagree)

To assess for any statistically significant differences between generations, the

Kuskal-Wallis H Test was utilized due to the ordinal nature of the data. Mean job

satisfaction levels were calculated for each generation with the results noted above. The

results of the test showed that there is a statistically significant difference in reported job

satisfaction between generations ($X^2(4) = 12.756$, P $= 0.013$).

Table 7. *Spearman's Rank-Order Correlation Scores by Generation for Reported Job Satisfaction*

Generation	N	Intrinsic	Extrinsic
1946−1964	22	.655**	.672**
1965−1980	92	.682**	.755**
1981−2000	104	.640**	.694**

(**Correlation is significant at the 0.01 level.)

In order to further assess for differences between generations in job satisfaction

characteristics, both intrinsic and extrinsic mean scores were calculated by generation.

Correlation models were utilized to determine the strength of relationship between

intrinsic and extrinsic motivational factors and reported job satisfaction. The table above

outlines those findings. For the purposes of this table, the pre-1946 and post-2000 groups were excluded due to having only one respondent in each.

<div align="center">Summary</div>

This chapter has presented an overview and analysis of the data collected from the distributed cross-sectional survey. The analysis was presented by research question in an effort to ensure a logical approach. This chapter presents the data to allow readers to draw their own conclusions of the results. Chapter 5 will present the conclusions drawn by the researcher for each of the research questions presented. Chapter 5 will also provide the opportunity to present recommendations for the field as well as for future research on job satisfaction for paramedics.

Chapter V

CONCLUSION

Summary

This chapter serves as the closing of this study. This study examined the effects of intrinsic and extrinsic motivational factors on paramedic job satisfaction. The study was prompted by the question: Do intrinsic or extrinsic factors have the greater effect on job satisfaction? The focus was on paramedics who were employed with a North Carolina EMS agency at the time of the data collection. A cross-sectional survey was utilized to assess how strongly each employee agrees or disagrees with various intrinsic and extrinsic motivational factors. Also included in the survey was a question to assess current job satisfaction; this served as the dependent variable. The overall results of the survey found that both intrinsic and extrinsic motivational factors have a moderate to strong relationship with job satisfaction. Extrinsic factors were shown to have a stronger relationship with job satisfaction than their intrinsic counterparts.

This chapter is laid out by utilizing each research question as a section. Each section will provide an overview of the results of that question and will discuss whether the hypothesis for each question should be accepted. Next, the chapter will provide the implications for the field of EMS that are derived from the results. Finally, the chapter will discuss the limitations of the study as well as recommendations for future research that would be driven by this study.

Discussion of the Results

Primary Research Question

Do intrinsic or extrinsic factors have the greater effect on paramedic job satisfaction?

This question served as the impetus for the completion of this study. As presented in the introduction, call volumes and workloads continue to rise as the number of paramedics exiting the field has reached record levels (Alexander et al., 2009). This implies that paramedics within the field must pick up the slack and endure increasing workloads. In an effort to ensure that these paramedics remain satisfied with their work, it is important to understand what motivational factors have the greatest influence.

When examining the results of the data analysis, it is clear that both intrinsic and extrinsic motivational factors have a positive correlation with job satisfaction, both of which reached statistical significance. Extrinsic motivational factors were found to have a slightly stronger relationship with job satisfaction than those that are intrinsic. This was true across demographic categories with the exception of those paramedics who worked 12-hour shifts as well as paramedics who reported to supervisors. Paramedics with 11-to-20 years of experience were also found to have higher correlations with intrinsic motivational factors and job satisfaction. It is unclear as to why the findings in these particular groups differed. The differences were very slight and could have been related to sample size or selection. Further study is warranted to determine if these differences are found in the broader population.

Further analysis compared the mean results of intrinsic and extrinsic factors. Intrinsic factors were found to be ranked higher and to the point of statistical significance. This was an interesting finding in that, while intrinsic factors were ranked higher, extrinsic factors had the stronger correlation values to job satisfaction. This seems to imply that organizations are not able to rely on paramedics' intrinsic (internal) motivational factors and must make changes based on external motivational factors to continue to improve job satisfaction levels.

To further assist organizations in understanding what specifically has the greatest effect on job satisfaction, each item was examined for correlation value as it related to job satisfaction. The results are outlined in Chapter 4, Table 3; only items that achieved a correlation stronger than .500 were included. The intrinsic item having the highest correlation value to job satisfaction was personal/professional growth in work, ranking nearly even with opportunities for advancement. This type of factor can be related both to an individual's ability to grow as well as the opportunities an organization provides for advancement. Regarding extrinsic items, a pleasant work environment and good working conditions ranked at the top. This may indicate that individual EMS agencies have some ability to improve job satisfaction, even if overall budgets do not allow. Projects that set out to improve working conditions and environments could potentially include some low-cost options.

Interestingly, "being fairly well paid for my work" was found to have a positive, moderate correlation value with job satisfaction. This differs from various works in the literature that indicate that pay is not an important part of motivating public employees

(Herzberg 2001; Houston 2000). This could be indicative of a changing workforce and warrants further exploration for confirmation. If determined to be true, it is likely that pay will continue to increase in importance in relation to job satisfaction. It is very important that those in charge of EMS budgeting, both appointed and elected, pay attention to this development.

From the results of the survey data, it is concluded that the null hypothesis for the primary research question is unable to be rejected. Thus, we must conclude that intrinsic factors do not have the greater effect on job satisfaction. It must also be concluded that extrinsic factors seem to have a stronger relationship than previous literature has indicated.

<div align="center">Secondary Research Questions</div>

Does a higher educational level affect the job satisfaction of the paramedic?

The first of two secondary questions was prompted by previous studies, both within the field of EMS and beyond, that suggested an inverse relationship between educational level and job satisfaction (Alexander et al., 2009; Forsyth & Copes, 1994; Helbing et al., 2017;). Generally, these studies placed blame on organizational compaction as a reason why more highly educated employees would be less satisfied. In order to assess this for this study, educational level was quantified and testing was run to assess for correlation between education level and job satisfaction. This study sought to confirm these findings and hypothesized that: As the educational level of the paramedic increases, job satisfaction will decrease.

Correlation testing showed a minimal negative relationship between education level and job satisfaction that was not statistically significant. This was further analyzed utilizing a respondent's current position as a control variable. While each category of position was found to show a minimally negative correlation between education and job satisfaction, none of the relationships were found to be statistically significant. It is noted that supervisors reported the highest negative correlation, but this is likely due to the fact that they reported a job satisfaction level of 4.03 out of 5. This, coupled with the fact that only 12.9% of supervisors reported an educational level above an associate's degree, lends the conclusion that this is an insignificant finding. Administrators reported the weakest relationship between education level and job satisfaction. This is likely due to there being limited, if any, room for growth above their levels within the organization.

While correlation models did not reveal statistically significant results, analysis of variance testing did. Each category of education reported lower mean job satisfaction scores than the one before, ranging from 3.81 for certificate paramedics to 3.40 for those with a master's degree. These findings do suggest that as the level of education rises, job satisfaction levels decrease. This supports previous studies that had similar findings within their results.

Findings for this research question were mixed, with correlation testing showing no significant relationships. Mean job satisfaction score differences did prove to be statistically significant between education groups. For the purposes of this study, the null hypothesis—that as educational levels rise, job satisfaction levels will remain constant—is rejected. Thus, the conclusion is drawn that as educational level rises, job satisfaction

levels decrease. Further study of how the level of education effects job satisfaction, with a larger sample, is warranted to determine if education and job satisfaction have a causative relationship.

Does a paramedic's generation affect the level of perceived job satisfaction?

The final secondary question examines whether generational differences have an effect on job satisfaction. Much is heard in the media and literature about changing generations in the workplace, specifically regarding millennials. Ng et al. (2016) note that millennials often are perceived as being less dedicated to their organizations and less satisfied with their work. Millennials made up 47.3% of this sample, followed by Generation Xers at 41.8%. It is clear from this sample that baby boomers in the workforce have significantly decreased in number, making up only 10% of the sample. The generational blend of this sample is consistent with recent literature findings (Woods, 2016, p. 96).

Overall job satisfaction was shown to be identical between baby boomers and Generation Xers. Millennials reported lower job satisfaction numbers, with the differences between groups reaching the point of statistical significance. This study found similar findings to Twenge et al. (2010), which found that Generations X and Y valued extrinsic factors at a higher level than intrinsic factors. Generation X proved to have the highest correlation between job satisfaction and extrinsic factors, with millennials reporting very similar numbers. The intrinsic and extrinsic correlation values for baby boomers were nearly even.

Upon analysis, the results in response to this question further solidify the findings of the primary research question. Intrinsic factors, while very important, cannot solely be counted on to improve job satisfaction among paramedics. Across generations, organizations must take steps to improve the external factors that influence satisfaction for paramedics. Extrinsic items yielding the highest correlation values were a pleasant agency environment and good working conditions, much like the overall sample. Pay, again, received moderate positive correlation numbers across generations, which continues to support its increasing importance. The focus on this becomes even more important with millennials showing lower job satisfaction levels.

Upon examination of the results, the null hypothesis of this research question is rejected. Thus, the study concludes that the generation from which one belongs influences the levels of perceived job satisfaction. Additional study focusing on generational job satisfaction levels is warranted. The generational make-up of EMS employees will continue to change as time passes. More and more from Generation Z will enter the field as baby boomers and those in Generation X exit. This topic must be continuously focused on because it is ever changing.

Implications for the Field of EMS

This study reveals that both extrinsic and intrinsic motivators have an influence on paramedic job satisfaction. Clearly, in this study extrinsic factors hold a higher correlation across the sample as a whole and the majority of its demographics. It is important that EMS administrators and agencies understand how much influence they have over the satisfaction of their employees. Additionally, this study found that job

satisfaction was highly correlated to the desire to remain in the field for a long time and an eagerness to go to work. Further study is required to solidify that effect, but it falls within standard thinking that satisfied employees would like to remain within their fields. This could greatly reduce turnover and costs and perhaps make available more resources to improve job satisfaction.
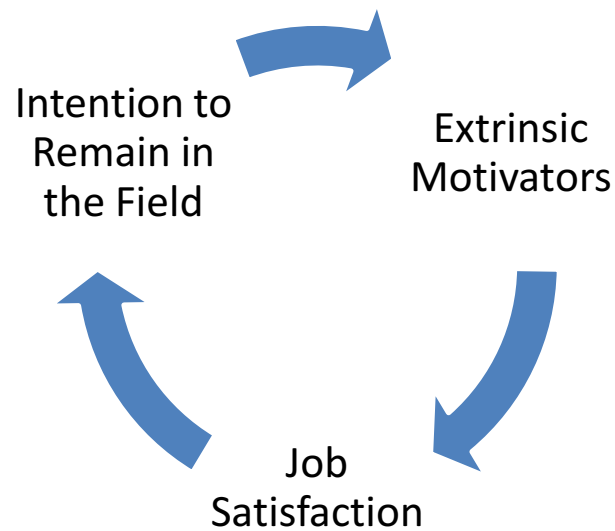

Figure 2. *Cycle of Motivation, Satisfaction, and Retention*

Across all demographics, ability to advance and grow as well as the environment in which the paramedic is employed have a strong relationship to job satisfaction for this sample. That these factors show influence may be advantageous since many aspects of agency environment are not connected to budgetary constraints and can be affected within the EMS department. Extrinsic items such as pay are items that must be addressed outside of the EMS departments in many cases.

This study also finds that there are differences in job satisfaction levels related to educational and generational makeup within the field. This implies that EMS administrators must have a better understanding of these differences and how to adapt their organizations to increase job satisfaction among all groups of employees. Researchers must continue to provide such data within EMS feedback so that the field as a whole will be in a better position to react to these and other findings.

<center>Public Administration Theory</center>

This study intended to add to the body of literature on behavioral public administration by studying which motivational factors have the greatest effect on job satisfaction. Behavioral public administration connects psychology and public administration by understanding that public administration is essentially a study of people (Grimmelikhuijsen et al., 2017). Dahl (1947) pointed out that "most problems of public administration revolve around human beings; and the study of public administration is therefore essentially a study of human beings as they behaved, and as they may be expected or predicted to behave under certain special circumstances" (p. 4).

This study assists EMS managers and managers from other public sector fields in understanding which motivational factors should be focused on to increase job satisfaction. Analysis of the data indicate that increasing job satisfaction has a strong impact on desire to remain in one's field and eagerness to go to work each day. Additionally, this study shows that paramedics may differ from traditional public employees regarding the theory of public service motivation (PSM). PSM posits that public employees are generally driven by intrinsic factors rather than extrinsic rewards

such as pay (Houston, 2000). Results from this study show that extrinsic factors have the greater effect on paramedic job satisfaction when compared to intrinsic factors. Additionally, this study indicates that pay has a moderately strong positive correlation with job satisfaction differing from traditional PSM studies. Additional study is needed to determine external validity both for paramedics outside of North Carolina and for public employees in general.

Limitations of Study

This study was limited by the cross-sectional approach that was taken to obtain data. Cross-sectional surveys often reflect what a respondent is feeling while taking the survey. Depending on the timing, this can greatly affect how they will answer questions. Additionally, this study is limited by its small sample size and that it only focused on employed North Carolina paramedics as its target audience. External validity to other states or unemployed paramedics is not known.

Recommendations for Future Research

Additional research is required to continue examining job satisfaction in paramedics. While the LEADS study provided a longitudinal view of paramedics and how they changed over time, the results are now over 10 years old. The generational makeup of the workforce in 2009 is likely much different than that of 2019. Additional longitudinal and cross-sectional work can help further define factors that improve job satisfaction. In addition, more qualitative research, such as using focus groups, could help to define what exactly paramedics view as "pleasant agency environments" to assist

agencies in knowing where to focus. Future studies can also further determine the effects of job satisfaction on paramedics, their agencies, and the field as a whole.

Further research in determining the effect of educational level on job satisfaction must be performed. As the push for increasing educational requirements in EMS continues to be felt (Timmons, 2018), it is imperative that this relationship is fully understood. Efforts to reduce organizational compaction and develop avenues of professional growth within the field of EMS will prove to be increasingly important. Allowing paramedics to receive full returns on their educational investments may increase job satisfaction levels regardless of level of education. It is up to researchers and organizations to continue to recognize and understand the relationships between various factors and job satisfaction.

Conclusion

This study has sought to determine what factors have the greatest effects on job satisfaction. Specifically, it has focused on whether intrinsic or extrinsic factors had the greater effect. Secondarily, the study sought to determine if increased education had negative effects on job satisfaction. The study also sought to determine generational differences in job satisfaction. Throughout the study, it became evident that additional research must be performed on this very important topic. Paramedic job satisfaction must become a top priority for EMS administrators and agencies. The future of the field depends on paramedics entering and remaining within their agencies and the field. It is the hope of the study author that this study will be a catalyst for future research and conversation both in North Carolina and beyond.

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APPENDIX A

Job Satisfaction Survey

Job Satisfaction Survey

Please rate how strongly you agree or disagree with each of the following statements.

1. My work is intellectually interesting

Strongly Agree

Agree

Neutral

Disagree

Strongly Disagree

2. I feel like I make an important contribution to people's lives with the work that I do.

Strongly Agree

Agree

Neutral

Disagree

Strongly Disagree

3. I feel like I am growing professionally and personally through my job.

Strongly Agree

Agree

Neutral

Disagree

Strongly Disagree

4. The work I do is important for our society.

Strongly Agree

Agree

Neutral

Disagree

Strongly Disagree

5. I have about the right amount of independence in my work.

Strongly Agree

Agree

Neutral

Disagree

Strongly Disagree

6. There are opportunities for advancement at my job.

Strongly Agree

Agree

Neutral

Disagree

Strongly Disagree

7. I am confident in my ability to effectively serve my patients.

Strongly Agree

Agree

Neutral

Disagree

Strongly Disagree

8. I sometimes wonder whether I really know what I am doing in my work.

Strongly Agree

Agree

Neutral

Disagree

Strongly Disagree

9. I get clear feedback from my supervisor about my work.

Strongly Agree

Agree

Neutral

Disagree

Strongly Disagree

10. My supervisor is knowledgeable, skillful, and helpful to me in my work.

Strongly Agree

Agree

Neutral

Disagree

Strongly Disagree

11. My supervisor's expectations of me are clear.

Strongly Agree

Agree

Neutral

Disagree

Strongly Disagree

12. I like most of the people I work with

Strongly Agree

Agree

Neutral

Disagree

Strongly Disagree

13. The environment at my agency is pleasant.

Strongly Agree

Agree

Neutral

Disagree

Strongly Disagree

14. The work requirements of my job are reasonable.

Strongly Agree

Agree

Neutral

Disagree

Strongly Disagree

15. I generally have good working conditions.

Strongly Agree

Agree

Neutral

Disagree

Strongly Disagree

16. There are a number of stupid policies and procedures at my job.

Strongly Agree

Agree

Neutral

Disagree

Strongly Disagree

17. My job provides adequate flexibility in time scheduling.

Strongly Agree

Agree

Neutral

Disagree

Strongly Disagree

18. My job provides adequate vacation time.

Strongly Agree

Agree

Neutral

Disagree

Strongly Disagree

19. I am fairly well paid for my work.

Strongly Agree

Agree

Neutral

Disagree

Strongly Disagree

20. I am satisfied with my job.

Strongly Agree

Agree

Neutral

Disagree

Strongly Disagree

21. Worries about work often bother me during my free time.

Strongly Agree

Agree

Neutral

Disagree

Strongly Disagree

22. I am eager to go to work each day

Strongly Agree

Agree

Neutral

Disagree

Strongly Disagree

23. I want to continue in my present type of work for a long time.

Strongly Agree

Agree

Neutral

Disagree

Strongly Disagree

24. I sometimes call in sick because I just need a break from work.

Strongly Agree

Agree

Neutral

Disagree

Strongly Disagree

25. I sometimes count the hours until I can go home from work.

Strongly Agree

Agree

Neutral

Disagree

Strongly Disagree

Please select your gender.

Male

Female

Please indicate your age. _____

How many years have you been working for a paid city or county EMS service? _____

Which of the following best describes your education level?

Certificate

Associate/Bachelor's Degree

Master's Degree or above

Please identify your certification level.

EMT-Basic

EMT-Intermediate

EMT-Paramedic

Please indicate the length of your normal EMS Shift.

24 hour

12 hour

8 hour

Other

Which of the following best describe your current position?

Field Paramedic

FTO/Assistant Supervisor

Supervisor

Administrator

Which of the following best describe your year of birth?

Pre-1946

1946-1964

1965-1980

1981-2000

Post 2000

APPENDIX B

Institutional Review Board Exemption

Institutional Review Board Exemption

Institutional Review Board (IRB)
For the Protection of Human Research Participants
PROTOCOL EXEMPTION REPORT

PROTOCOL NUMBER:	03663-2018	**INVESTIGATOR:**	**Ray Vipperman**
		SUPERVISING FACULTY:	**Dr. Napoleon Bamfo**
PROJECT TITLE:	*A Study into the Factors that have the Greatest Effect on Job Satisfaction in North Carolina Paramedics.*		

INSTITUTIONAL REVIEW BOARD DETERMINATION:

This research protocol is **Exempt** from Institutional Review Board (IRB) oversight under Exemption **Category 2**. Your research study may begin effective **08.14.2018**. If the nature of the research project changes such that exemption criteria may no longer apply, please consult with the IRB Administrator (irb@valdosta.edu) before continuing your research.

ADDITIONAL COMMENTS:

- *Upon completion of your research study all compiled data must be securely maintained (locked file cabinet, password protected computer, etc.) and accessible only by the researcher for a minimum of 3 years.*

☒ *If this box is checked, please submit any documents you revise to the IRB Administrator at irb@valdosta.edu to ensure an updated record of your exemption.*

Elizabeth Ann Olphie   08.14.2018
Elizabeth Ann Olphie, IRB Administrator

Thank you for submitting an IRB application.
Please direct questions to irb@valdosta.edu or 229-253-2947.