EMERGENCY MEDICAL SERVICES: A PROVIDER'S PERSPECTIVE

by

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A senior honors thesis submitted in partial fulfillment of the requirements
of the degree of Bachelor of Arts
in the Department of American Studies
in the College of Arts and Sciences
at Tufts University
Medford, MA

Spring Term
2016

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Abstract

This study worked to understand paramedics' attitudes on their profession. It strived to investigate the personality of these providers, their interpretation of public perception of emergency medical services, as well as the causes and implications of occupational stress. This qualitative study analyzed the interviews of five paramedics to reveal a basis of understanding on these themes. It was found that paramedics were characterized by a caring nature, and they believed that the public lacked an accurate understanding of emergency medical service capabilities. In addition, paramedics believed that the emergency medical service system as a whole, placed stress on the providers due to the limited career opportunities that it affords. Based on these results, a foundation was built for further inquiry into those who answer the call for medical emergencies.

Keywords: emergency medical services (EMS), paramedic, first responder, occupational identity, public perception, public services, occupational stress, and qualitative research.

This study is dedicated to those who inspired my passion for prehospital medicine and the often un-thanked responders who answer the call.

Acknowledgments

This thesis could not have been completed without the support and contribution of numerous people.

I would like to thank my thesis committee for their guidance, time, and encouragement throughout this process. Dr. Carolyn Rubin was a vital counsel and consulted expert in completing this project. Dr. Frances Chew has been a mentor and coach in my corner since 2013. Her direction and intelligence was vital to my success.

Though not on my committee, special thanks is extended to Dr. Matt Hooley who readily provided constructive feedback during every step of this process.

Thanks are also due to those who connected me with different providers and readily allowed me to utilize their extensive networks. Additionally, I would like to thank the participants who so generously partook in my study, opening up and giving of their time, insights, and opinions.

I would like to extend a special thanks to my mother and father, who spent time listening to me bounce off ideas and provided encouragement to complete this thesis.

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Introduction

No matter the medical emergency, they respond to the call for help. It could be as minor as a paper cut or as serious as a heart attack; not knowing what the next call will bring, they arrive ready to provide the care one needs. Often un-thanked for their efforts or labeled 'ambulance drivers,' these responders continue to patiently serve the public. Whether it's transporting patients between medical facilities, responding to 911 callers, or providing medical support, emergency medical services personnel truly make the world a safer place.

Across the United States, if there is a need emergency medical attention it is as easy as picking up the phone and dialing 911. By doing so, emergency medical services (EMS) are activated. Within minutes trained medical responders will arrive on location ready to deliver lifesaving interventions and provide transportation to an appropriate medical facility. This system, which began in the 1960s, responds to hundreds of millions of calls every year, transporting tens of millions of patients to the hospital (Federal Interagency Committee on EMS, 2011). Even today, the field continues to grow and change at a rate faster than other first responders such as fire and police departments (NHTSA, 2008). EMS provides professional medical care in a pre-hospital environment, which incorporates the "intersection of public health, public safety, and acute patient care" (Federal Interagency Committee on EMS, 2011).

Despite the societal benefits and contributions that EMS provides, the system and its providers remain unorganized, understudied, and relatively not understood. Lacking a significant presence in the literature, the problems and difficulties that EMS personnel personally face remain predominantly unstudied. Attention is often refocused away from the opinions of the providers to topics that economically, procedurally, or legally affect EMS. In order to bring attention to these issues and instigate beneficial change, a base of literature must be built. This study serves as a foundation. By pooling the limited research on these topics, an understanding of its shortcomings is sought. Further, the research conducted in this study has brought forward various new theories and ideas. These topics include the personality characteristics and profile of providers, providers' sentiments of public opinion on EMS, as well as the generators and effects of the stress of the job. It is thus the hope of the author that the themes established in this paper be further studied, analyzed, and evaluated so that EMS can be changed for the betterment of the public, patients, and providers.

Background of EMS

Brief History of EMS

Although the EMS system as it is known today is a new profession dating back only fifty years, systems analogous to EMS to treat medical emergencies began in ancient Greece and Rome. Throughout periods of war, soldiers were carried off the field of battle in carts to be treated. This was mirrored during the French Revolution and the American Civil War as soldiers were extricated to field hospitals and provided with minor pre-hospital care en route. In the United States, the first ambulance service based out of a hospital was formed in 1865 in Cincinnati. The next year, the first city-run ambulance was established in New York, and after the turn of the century, the Red Cross began teaching first aid classes in 1910. The military advances in prehospital care from World War I and II provided significant pre-hospital medical interventions but took years to adapt to the civilian sector. In the time after World War II, EMS agencies, which operated with first aid capacity, were run through fire departments and hospitals. In less populated areas the local hearse served as the ambulance, easily fitting a stretcher into the coffin-carrying compartment. In 1960, the implementation of cardiopulmonary resuscitation (CPR) and external defibrillators changed capabilities from the first aid level to advanced life support (ALS) (IOM, 2007). Still, a 1966 publication reported that more than half of all ambulances in the country were staffed by morticians and their hearse ambulances (NREMT, 2016).

In 1965 and 1966, two major reports were released that changed the future of EMS. The first was by the President's Committee for Traffic Safety, which demanded a nationwide plan to address death and injury on highways. This was followed by the National Research Council (NRC) and National Academy of Sciences' (NAS) report entitled *Accidental Death and Disability: The Neglect of Modern Society*. It called for federal training standards, ambulance regulations, designated radio communications, evaluative initiatives, and a host of other recommendations that would professionalize and standardize EMS across the country (IOM, 2007). In an effort to address the morbidity and mortality happening on highways, the National Highway Traffic Safety Administration (NHTSA) was created within the Department of Transportation (DOT) in 1966. The NHTSA created a standardized prehospital emergency

medicine course at the emergency medical technician (EMT) level and provided states with legislation and grants to fund improvements to their EMS systems (NREMT, 2016).

In 1972, the NAS and NRC released a second landmark report, this time calling for federal oversight by what is today the Department of Health and Human Services (DHHS) for the creation of state level regulation for EMS. In response, Congress formed the Division of EMS within the DHHS, putting forth upwards of $300 million for categorical grants (NREMT, 2016). This was matched by an additional $15 million from The Robert Wood Johnson Foundation earmarked for regional EMS development. With these funds, states were incentivized to create EMS systems[1] and basic requirements were outlined. However, due to contradictory recommendations coming from both the DHHS and the DOT, the DHHS Division of EMS was ended in 1981 (IOM, 2007).

This return to DOT oversight of EMS switched the categorical grants, which were specifically designated for EMS, to block grants, which states did not have to dedicate exclusively to funding their EMS systems. Consequently, some states opted to keep varying levels of state regulation and control over EMS, while others shifted responsibilities to municipal levels (NREMT, 2016). For example, Maryland created the Maryland Institute of Emergency Medical Services Systems, which provided both air and ground emergency medical care and transport as a government service. This was contrasted by California issues licenses on the state level but relied on counties to be responsible for the management of the EMS agencies operating in their jurisdiction (IOM, 2007). During this period, the disparity between rural systems and urban/suburban systems increased due to increased lack of state funds for EMS in rural places (NHTSA, 2008). Rural EMS will not be focused upon in this paper due to the substantial differences in procedure, organization, and issues between rural and other forms of EMS.

Across the country, EMS systems continued to operate in fragmented fashion. In an effort to respond to these differences, the NHTSA began to formulate a strategy for the future of EMS in 1995. Their plan made steps to unify and standardize the system. Over the next decade the components of this plan that have been implemented and have taken root, can be seen in the following section. Further, the September 11th terrorist attacks exposed weaknesses in

[1] It is important to distinguish that EMS systems were not the same as EMS services or agencies. Though their functions differed by state, these systems were created to oversee and regulate EMS services, agencies, and companies that provided the actual care in the state (IOM, 2007).

organizational and technical ability of first responders to work together, which led to many preventable responder deaths. In an effort to unify public safety efforts in future situations, the National Incident Management System (NIMS) was created to form a standardized operating procedure for all types of incidents (IOM, 2007).

Current State

With the current unorganized and not unified nature of EMS, many problems arise. Relations between EMS providers and public safety agencies create tensions, especially when service areas, care protocols, and institutional procedures have the ability to vary drastically between agencies. Further, issues in receiving funding from both governmental sources as well as being paid for their services create operational difficulties. Lack of consistency in training and inconsistent licensure requirements, for both EMTs and paramedics, create varying levels of skill and experience depending on location and agency.

States have a dual responsibility as both the promoters and regulators of EMS within their jurisdiction. Not only does this create inherent tension, but also the level of state involvement is subject to variation. For example, the majority of states have EMS offices that investigate complaints (100%), set training requirements (96%), conduct system planning (94%), accredit providers (90%), perform discipline (90%), and collect data (88%). On the other hand, few states fund EMS agencies on the local level (34%) or run communication services (18%). Varying state duties and requirements for all aspects of EMS, from certifications to inspections, create a lack of uniformity across the country (IOM, 2007).

Despite public expectation for the availability of EMS, there is an overall lack of funding and interest for this field. On the federal level, the major functions of EMS are regulated by the NHTSA of the DOT. However, many other government agencies play minor roles in overseeing and influencing EMS systems across the country, with little communication between these agencies. For example, the Centers for Disease Control and Prevention (CDC), the Health Resources and Service Administration (HRSA), and the Department of Homeland Security (DHS) all provide federal sources of funding, in turn influencing and acting as stakeholders in the field. However, EMS often gets omitted by the federal government and labeled not a priority as compared to fire and police departments. For example, after the September 11th attacks, the DHS designated $3.38 billion for emergency preparedness, but only 4% of these funds went to

EMS. Other funding sources depending on the EMS agency can include states, county, municipal, and local governments (IOM, 2007).

EMS agencies receiving varying amounts of compensation for the services they provide due to the heterogeneous environment of issuance providers. Reimbursements for EMS are standardized and set by the Centers for Medicare and Medicaid Services (CMS) at a minimal amount. People who are older than 65 and are thus on Medicare insurance are significantly (4.4 times) more likely to utilize the EMS system then those younger than 65. The CMS fee schedule is used as a base by private insurance companies, which set their own reimbursement rates. The return on these transports are low and often do not account for patients that are treated and then released, refuse care, or whose care does not end with transportation to a hospital (IOM, 2007).

Medicine as a field follows evidence-based practices, meaning that scientific proof is required for different medicines, procedures, and policies to be implemented. EMS, on the other hand, has very little evidence backing its current practices. Recent studies have shown that procedures that have been thought to be the gold standard for years are now proving harmful to patients (Myers et al, 2008). In addition, the structure and type of different EMS systems have little or inconclusive evidence favoring any specific type. There is an overall need for further scientific research into the field of prehospital care so that evidence-based practices instead of intuition can guide patient care (IOM, 2007).

Types of Providers

Estimates show that there are approximately 826,111[2] licensed EMS providers in the United States. Providers are predominantly male (67%), and most (70%) have worked in EMS for between 20 and 49 years (Federal Interagency Committee on EMS, 2011). The average age is 35 years old with the majority (73%) of providers being 40 years or younger (NHTSA, 2008). The majority of EMS providers are White (75%), followed by Black (8%), Asian (5%), and American Indian (4%) (Federal Interagency Committee on EMS, 2011). A study found that the majority has an undergraduate certificate as their highest level of education (NHTSA, 2008).

Emergency medical responders are separated into four major classes. Each level builds on the knowledge, skill, and ability of the previous, creating a hierarchy. The scope of practice

[2] This statistic is a 2011 estimate that does not account for Emergency First Responders. It only accounts for EMT, AEMT, and paramedic level providers.

differences between each of the four levels can be seen in Table 1. Paramedics are at the top of the hierarchy, followed by Advanced Emergency Medical Technician, Emergency Medical Technician Basic, and Emergency First Responder. It is important to note that in some EMS systems nurses and doctors may also provide pre-hospital care, and they would be considered to be above a paramedic. This hierarchy also serves as a chain of command system with the orders of those of higher licensure controlling the actions of those below (Pollack et al., 2011).

As the lowest level responder, Emergency First Responders (EFR) have a small, basic scope of practice. The primary responsibility of the EFR is to provide non-invasive actions, prevent additional harm or injury, and comfort the patient or bystander. A higher-level responder takes over care from the EFR, since they may not function as a sole caregiver (NREMT, 2016). In short, an EFR is someone who has taken a basic first aid course but has a responsibility to act when called upon. Depending on the state and system, EFRs may not be a component in pre-medical care.

An Emergency Medical Technician (EMT) or Emergency Medical Technician Basic (EMT-B) has a larger scope of practice compared to an EFR. Depending on the EMS system, EMTs might constitute the highest level of care, which is especially true in rural areas. This is the case for over half (51%) of all EMS agencies in the US. In addition, 64% of EMS providers are EMTs (Federal Interagency Committee on EMS, 2011). This is the lowest level license that allows for transport of a patient in an ambulance. However, like EFRs, EMTs perform non-invasive treatments. EMTs rely on higher-level providers, such as doctors, to decide the disposition of a patient. With their ability to transport, EMTs are used for the transferring of non-urgent patients, who fall within their scope, between healthcare facilities or to medical appointments. EMTs provide basic life support (BLS), which is a second-tier form of cardiac care. In addition, depending on the service, EMTs are able to administer or assist patients with a number of medications (NREMT, 2016).

The Advanced Emergency Medical Technician (AEMT) has had many names throughout the years, including EMT Intermediate (EMT-I), EMT-I/99, and EMT-I/85 (NHTSA, 2008). In recent years, these mid-tier emergency medical providers have merged together into the nationally recognized AEMT. Only 9% of EMS agencies in the US operate at the AEMT level, with 6% of EMS providers being AEMTs (Federal Interagency Committee on EMS, 2011). The AEMT is able to provide select invasive interventions and pharmacological treatments, which

are considered advanced care. AEMTs are also able to administer certain intravenous interventions and provide advanced life support (ALS). Similar to an EMT, the AEMT must transport to an emergency medical facility unless transporting a non-urgent patient between healthcare facilities (NREMT, 2016).

A Paramedic, or EMT-P, is often the highest-level provider present in EMS. They work closely with and use the assistance of all lower-level providers. Over a third (38%) of EMS services operate at the paramedic level. In addition, about a quarter (26%) of pre-hospital providers are paramedics (Federal Interagency Committee on EMS, 2011). Paramedics have an extensive invasive collection of interventions at their disposal, including significant pharmacological abilities (NHTSA, 2008). In partnership with medical direction, the advanced skills of paramedics are limited to interventions that can be completed safely in the pre-hospital environment. Paramedics, like AEMTs, perform ALS (NREMT, 2016).

Table 1. Difference in medical abilities between providers. Reconfigured from table (Pollack et al., 2011).

EMR	EMT	A-EMT	Paramedic
Airway and Breathing Minimum Psychomotor Skill Set			
Oral airway	Humidifiers	Esophageal-tracheal intubation	BiPAP/CPAP
Bag-mask device	Partial rebreathing mask	Multilumen airways	Needle decompression
Sellick maneuver	Venturi mask		Chest tube monitoring
Head tilt-chin lift	Manual ventilators		Percutaneous cricothyrotomy
Modified chin lift	Automatic ventilators		ETCO2/capnography
Obstruction, manual	Oral and nasal airways		NG/OG tube
Oxygen therapy			Nasal and oral endotracheal intubation
Nasal cannula			Airway obstruction removal by direct laryngoscopy
Nonrebreathing mask			Positive end-expiratory pressure
Upper airway suction			
Assessment Minimum Psychomotor Skill Set			
Manual blood pressure	Pulse oximetry	Blood glucose monitor	ECG interpretation
	Manual and auto BP		Interpretive 12-lead
			Blood chem. analysis
Pharmacologic Intervention Minimum Psychomotor Skill Set			
Medication Administration Routes -Unit does auto-injector for self or peer care	*Assisted Medications* -Assisting a patient in administering his/her own prescribed medications	-Peripheral IV insertion -IV fluid infusion -Pediatric IO insertion	-Central line monitoring -IO insertion -Venous blood sampling
	Medication. Administration Routes -Buccal, Oral	*Medication. Administration Routes* -Aerosolized, SC, IM, Nebulized. SL, Intranasal, IV push or D_{50} and narcotic antagonist only	*Medication. Administration Routes* -Endotracheal, IV, nasogastric, rectal, IO, topical, accessing implanted central IV port

	Medication To Be Administered -Physician-approved over-the-counter medications (oral glucose, aspirin for chest pain or suspected ischemic origin)	*Medication To Be Administered* -SL nitroglycerin for chest pain of suspected ischemic origin -SQ and IM epinephrine for anaphylaxis -Glucagon and IV D_{50} for hypoglycemia -Inhaled beta-agonist for dyspnea and wheezing -Narcotic antagonist -Nitrous oxide for pain relief	*Medication To Be Administered* -Physician-approved medications -Maintenance of blood administration -Initiation of thrombolytics
Emergency Trauma Care Minimum Psychomotor Skill Set			
Manual cervical stabilization	Spinal immobilization		Morgan lens
Manual extremity stabilization	Seated spinal immobilization		
Eye irrigation	Long board		
Direct pressure	Extremity splinting		
Hemorrhage control	Traction splinting		
Emergency moves for endangered patients	Mechanical patient restraint		
	Tourniquet		
	MAST/PASG		
	Cervical collar		
	Rapid extrication		
Medical/Cardiac Care Minimum Psychomotor Skill Set			
CPR	Mechanical CPR		Cardioversion
AED	Assisted complicated delivery of an infant		Carotid massage
Assisted normal delivery of an infant			Manual defibrillation

In an effort to unify the quality of care and standardize nationwide practices, the National Registry of Emergency Medical Technicians (NREMT) was formed in 1970 (NREMT, 2016). One can obtain an NREMT certification by passing an exam, which incorporates both a practical and written section. Each provider level has its own examination process. The certification is not a license to practice; licenses are administered on a state level. However, once the exam is passed, the certification can be taken to the state EMS office and a license is issued from there. By standardizing the exam across states and eliminating individual state examinations, one aim of the NREMT is to create, ensure, and maintain homogeneity among providers. Despite its creation near the beginning of EMS, by 1984 only 24 states and territories used the NREMT exam instead of a state specific exam. In 2005, the NREMT exams were being implemented by 46 states and territories (NREMT, 2016). In 2014, the NREMT proctored 133,000 examinations for all levels of providers, with 77% of paramedics passed on their first attempt, while only 67%

of EMTs did (NREMT, 2015). Furthermore, as shown in Figure 1, only four states did not use the NREMT certification in 2014. As shown in Figure 2, there were 311,945 NREMT registered providers distributed across the country.

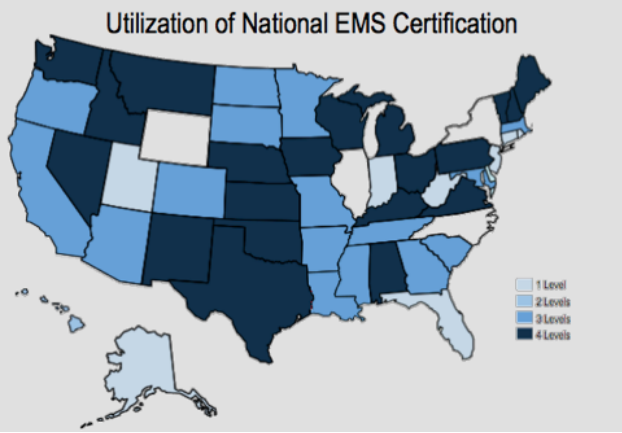

Figure 1. Utilization of National EMS Certification (NREMT, 2015)

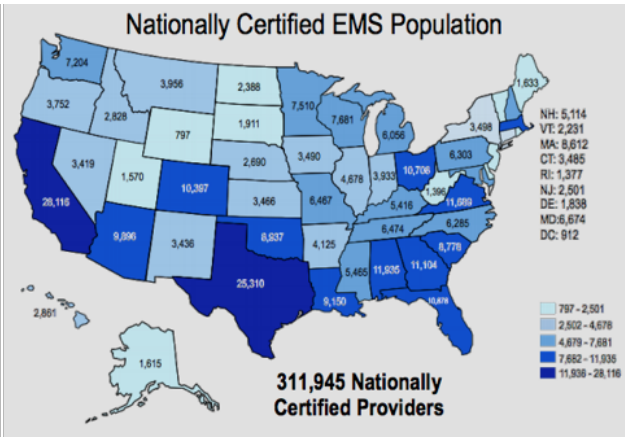

Figure 2. Nationally Certified EMS Population

Types of Services

EMS systems rely on several different types of EMS agencies to answer the call. There are approximately 21,283 separate EMS services across the country, operating over 81,295 vehicles. The vast majority (93%) of them respond to 911 emergency calls while only 65% are able to provide transportation for their patients (Federal Interagency Committee on EMS, 2011). EMTs and Paramedics work in a multitude of environments, including the public sector (30%), private ambulance (40%), and hospital (20%) (IOM, 2007). These include fire department-based, municipal services, private companies, and hospital-based EMS agencies. It is important to note that in one jurisdiction, a fire- or municipal-based public service can operate alongside multiple private and hospital-based EMS services. It is up to the contracts and emergency dispatch center within an area to designate the appropriate responding agency (IOM, 2007).

Fire department-based EMS is a common and growing source of emergency medical care. With the increase of fire prevention initiatives, the role of the fire service as solely fighting fires is no longer an efficient or appropriate use of funds. Over 80% of the calls fire departments respond to are medical in nature. In order to protect their occupation, over 80% of fire departments respond to and deliver care on medical calls. Fire departments have also taken on roles such as water rescue and dealing with hazardous materials to supplement their firefighting

and medical response obligations (IOM, 2007). Further, both the logistics of and the level of care provided by EMS providers can vary significantly between departments. Medical providers in a fire service might have the sole responsibility of EMS or may have firefighting duties as well (NHTSA, 2008). The fire department may operate transporting ambulances themselves or supply paramedics to a contracted private ambulance company. In general, though, they primarily respond to 911 emergencies, receive funds from the local government, and do not transport non-emergent patients between health care facilities. Fire departments are generally funded through public sources, but in small cities or rural areas they may be staffed with volunteer personnel. EMS is able to benefit from the infrastructure and command structure that comes along with this well-established occupation. However, it often plays a secondary role to fire training and operations. EMS providers in the fire service benefit from the protection of fire union and level of societal respect placed upon the fire profession (IOM, 2007).

A municipal service is an EMS agency operated by the local government as a third service[3]. Just as a fire department or police department is run, a municipal service operates as an independent public agency. The city hires EMS providers, supplies ambulances, and provides the necessary medical supplies. The public service may or may not bill for their services and runs their own operations. Municipal services respond to 911 calls and work closely with other first responders such a police and fire. Because they operate through the municipality, the pensions and benefits of these providers often mirror that of a fire department EMS provider (IOM, 2007).

Private EMS is run by for-profit companies, which operate ambulances. These companies may contract with cities to provide response for 911 calls and/or with hospitals to facilitate transportation of patients to appointments or other non-emergent transports. They may do a combination of both 911 response and inter-facility transports (NHTSA, 2008). These companies range in size to include national companies that are publicly traded. Depending on its contract, a company may provide any level of personnel or type of vehicle and work independently or in conjunction with other public EMS agencies. Private EMS companies are often contracted because it provides cost savings to a municipality that does not need to provide the service itself. Due to their private nature, these companies may bill patients directly. Providers that work for

[3] A third service is jargon for a public EMS agency, where a first service stature is given to the fire and police departments.

these EMS companies are often paid less than and lack the benefits of public EMS providers (IOM, 2007).

Hospital-based EMS is when an ambulance is operated by a particular hospital. They provide transportation to their base hospital and may operate through the 911 system or through a private dispatch at the hospital. The reputation of the hospital is often attributed to the care performed by the EMS personnel, which provides credibility to these agencies. In addition, since hospitals staff these ambulances, the providers often have strong relationships with the emergency department providers. These ambulances are usually private in nature and charge for their services, which may create tensions between this form of ambulance service and public EMS agencies (IOM, 2007).

Since the 1970s, helicopters have become an integrated component in EMS. From 1990 to 2006, the number of EMS helicopters increased from 230 to 700 (IOM, 2007). The majority of states (90%) have helicopters as licensed EMS vehicles (Federal Interagency Committee on EMS, 2011). These aircraft are owned and operated by a variety of organizations, including public entities such as police or the military, as well as nonprofits, and for profit companies. They are utilized for critically ill or injured patients and help in reaching an appropriate level of care hospital faster than if they traveled by ground ambulance. For this reason, helicopters are used commonly in isolated, rural, or areas that are far from a designated trauma center. Helicopter EMS providers are typically paramedics or nurses due to their ability to provide advanced interventions (IOM, 2007).

There are three main categories of compensation levels among providers; paid, paid call, and volunteers. The mean national hourly wage for EMTs and paramedics is $16.88 with produced a mean annual wage of $35,100. Figure 3 shows the breakdown of annual mean wage by state (USBLS, 2015). It is important to note that these numbers combine all levels of EMTs and paramedics and do not differentiate between private and public EMS agencies.

As discussed above, the compensation for EMTs and Paramedics varies greatly between the types of service that the provider works for. The full-time nature of these responders categorizes them as career responders despite the fact that some, especially the private company employees, may not stay in the occupation for their entire career. For services that are a public service, providers tend to be unionized and have significantly higher earnings as well as generous benefit packages and pensions. On the other hand private company responders tend to

lack these benefits and pensions, and they also typically make less (USBLS, 2015). In addition, private EMS companies often employ per diem or part-time providers, but because they are compensated at a rate similar to full-time providers for these companies, they are classified as career responders. The location of the service, as shown in Figure 3, also affects the salary.

There are two types of volunteer EMS providers: paid call providers, who volunteer their time but receive compensation for the calls they respond to (NHTSA, 2008); and volunteer providers, who do not receive any compensation for their actions. These types of services are beneficial in rural areas where they provide a less expensive alternative to staffing a career-type system. Some systems also combine volunteer and paid personnel (Federal Interagency Committee on EMS, 2011). However, there is a national trend away from volunteer and paid call EMS because of a decrease in personnel as well as the difficulty of ensuring high levels of care (IOM, 2007).

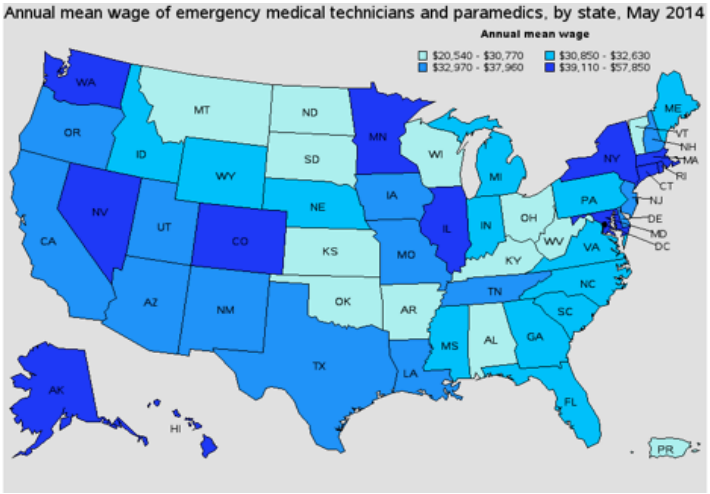

Figure 3. Annual Mean Wage of EMTs and Paramedics, by State (USBLS, 2015).

EMS as a collective is disorganized. As demonstrated from its creation to the present day, there has been a lack of unity, governance, and standardization among providers, agencies, and systems. Though effort has been made to create four distinct provider levels, the abilities and regulation of these providers vary dramatically between cities, counties and states. This is exacerbated by the myriad of different types of EMS agencies and compensation structures within any given jurisdiction. Based on the disjointed state of EMS across the country it is easy to imagine obstacles and disputes that befall EMS.

Locating Myself in this Work

This section is present to provide background and placement of the author within the context of this thesis.

While I was growing up, my typical Monday, Wednesday afternoon or Sunday morning would start with, "Mom, do I really have to go to temple?' The response was always the same: "You are going whether you like it or not; now stop complaining." From an early age, I attended a weekly Sunday school where I was taught the history of the Jewish people, from Abraham to the present day. I loathed those weekly sessions, which, as the years progressed towards my Bar Mitzvah, turned into a tri-weekly occurrence. Even after I 'became a man' and was supposedly able to make my own decisions, class twice a week at temple was not negotiable. As an immature sign of protest, I created trouble. However, it was through these teachings that I eventually gained a sense of respect, appreciation, and understanding of the culture and values of the Jewish people.

Religious school was more than just studying Jewish history, learning prayers, and playing pickup basketball during breaks. At least once a month, we would complete some type of community service activity. This ranged from letter writing campaigns to soldiers, to preparing and distributing warm meals at the local homeless shelter, to picking fruit for a food pantry. Though these activities were forced upon me, they served to embody the Jewish concepts of tzedakah and tikkun olam. Tzedakah is often translated from the Hebrew word to mean charity. However, unlike the connotation of charity, it is an obligation to help those less fortunate than you. Unfortunately, it often takes the form of a Tzedakah box, to collect a donation for a certain cause. Tikkun Olam, repairing the world, is the belief that through acts of kindness and good deeds, one can work to improve the world. These mitzvot, the performance of good acts, can be extrapolated from the 613 mitzvot listed in the Torah. I never knew all 613 mitzvot and I have no intention of learning them at this point in my life. But, I learned that the true essence of Judaism— helping others, working for the greater good, and caring for the world— is of great importance. Despite my resistance, Judaism provided me with a foundation that incorporates this strong sense of ethical morals.

These same values were emphasized and embodied by my parents. As my major role models, I closely observed how they behaved and acted. I saw the way they took time and placed importance on giving back to their communities and those around them. I learned that acts of

kindness are not just philanthropic checks in the Tzedakah box, nor can they be measured by the number of zeroes one can add to a donation. Rather, it is the giving of one's self that makes a significant positive impact on someone else's life. My parents utilized their skill sets, time, and passions to give back. From small individual actions such as taking the elderly neighbor to the hospital to organizing large community social action events, giving a helping hand was simply my family's norm. My parents did not expect recognition or compensation for their actions, but acted because it was just the right thing to do. I have never considered myself a religious person, but seeing how my parents embodied these Jewish values, I found myself trying to serve those around me.

Like every little kid, I loved going to the pancake breakfast at the local firehouse and being able to climb into the fire truck. As I got older, the intrigue of red lights and sirens intensified. In fact, in ninth grade when Ms. Morales brought Los Angeles City Fire Department Captain John Gonzalez into class to talk about his career path, I made sure I got his contact information. I promptly called him to find out what I could do to begin creating a career in the fire service.

I took Captain Gonzalez's advice and became first aid certified. At fourteen, I was proud to hand out Band-Aids with the Red Cross at the Rose Parade and other community events. I joined the Los Angeles County Fire Department Explorer Program and learned that the value of hard work and importance to detail does not change when cleaning the toilet or caring for a patient. I spent hours stocking supplies, testing the equipment, and washing the rigs, so that on each call the highest level of professionalism and quality of care could be achieved. As the youngest and most inexperienced, I learned that no task was too unimportant to not be completed efficiently, effectively, and with a sense of eagerness. Thus, my first experiences with EMS included carrying bags and fetching equipment. Even though this was grunt work, I was lucky that it allowed me the opportunity to be on scene and be a minute part of the care the patient received.

It has been eight years since I talked with Captain Gonzalez, during which time I have encountered hundreds of patients in a wide array of settings and roles. I was not satisfied just watching the care being performed as an Explorer; I wanted more, so I went on to become an EMT. I have worked in the role of an EMT not only on a suburban college ambulance squad but also on a search and rescue team in a national park. I have even started to contribute to the field

of prehospital care by completing research in best practices on resuscitation techniques in trauma patients and emergency ultrasound use. I may never shake my attraction for the red lights and sirens, but I have developed a passion and dedication for the work of EMS because it embodies my personal values and morals.

Working in EMS allows me the privilege of caring for people who are unable to help themselves. The urgent nature of an emergency medical call raises this level of need. I believe there is nothing greater a person can do than to provide of themselves in these situations. I know that I can personally handle and maintain composure in emergency situations where most people cannot. I believe that this skill enables me to excel and provide meaningful care in the roles I have held. As I further develop my technical skills, my ability to effectively operate in often hectic, stressful, and emergency environments makes it my duty and responsibility to provide care in this field.

My personal goals are shaped by the desire to do the most I possibly can for those that I interact with. My parents' mantra is that if you are going to do something, commit your all and complete it to the absolute best of your ability. I was taught that this applies to everything, no matter the size or magnitude of the task. It should be completed so that you can look back and be proud of what you have done, whether it be washing dishes or writing your Senior Honors Thesis. This sense of doing all that I can and acting to my fullest possible potential is what drives me. I share this common theme with EMS, to continue to push myself to provide care at that next level.

The themes explored in this thesis are of a personal nature because of my investment and experience in EMS. This is amplified by my career trajectory in emergency medicine and response. I was originally drawn to the field based on my desire to help people and the excitement associated with emergency situations. However, I soon realized that I stayed interested in EMS because no two calls are ever the same. On the surface this might sound obvious, that a rock climber fall off the nose of El Capitan is incredibly different than an asthma attack at the Boston Marathon, but sometimes it's not so clearly cut.

Take, for example, last week's Saturday night shift with my college ambulance squad. There were seven calls throughout the night, a little high for a college ambulance company. I could predict exactly what dispatch would say over the radio, and couldn't help but laugh a little as dispatch said, "...respond to alcohol intoxication…" for the fourth time that night. One patient

had taken 15 shots of alcohol and fell asleep in the hallway of their dorm, another 'cross faded' rowdy crowd member couldn't walk without assistance when asked to leave an event, a roommate called when he returned to find his roommate urinating in his closet, and one patient fell face first down a flight of stairs after drinking a cup of gin. On the surface, two of the calls appeared to be similar: both involved male patients the same year of age, both of whom had consumed about the same amount of alcohol. However, due to one patient's history of depression and a regimen for anti-depressant drugs, he was transported to a hospital that provides specialized psychiatric treatment, while the other was transported to the local emergency room. Each of the seven calls had the same reported complaint, a college student not knowing their limits and consuming too much alcohol. Over the radio, all of these patients sounded very similar, but when I arrived on scene, talked with the patient or bystanders, and understood what was going on, I was able to see that each patient was uniquely different. This variety forces me to stay alert so that I can break down each patient to provide personal and high quality care.

I find it important to note some of the reasons that are often associated with involvement in EMS but are not reasons or influences for my own involvement. The recognition or publicity that can come with a high priority call does not factor into my desire to respond to emergencies. Often, the calls that EMS personnel respond to end without even a thank you. It's knowing that I provided the best care possible and did the most to help a patient that puts a smile on my face after a call. Furthermore, I would never associate my actions on duty as "heroic." I would be wary of the motives of any EMS personnel that consider their actions heroic because in signing up for the job there is an understanding that you will do everything within your ability to provide for a patient. It is simply the nature of one's duty to serve their patients.

Understanding my background and how I approach this thesis are important, so it is understood that my personal biases are transparent from the beginning. The issues brought up in this thesis are topics that have not often been explored in the literature. It is my hope to bring new insight and observations to an incredibly important field so that there is greater understanding about those who provide emergency medical care. My history of involvement with EMS will be beneficial in this project as I am a part of this close-knit community, understand its nuances, and am able to bring in my own personal experiences. However, it has limitations in terms of the possibility of assuming what participants might mean, being personally affected by the material, and lack of objectivity on certain issues. Throughout this

thesis, effort will be made to insure that my personal experience serve for the betterment of this work and for increased understanding through a personalized lens.

Analysis of the Literature

This section serves as an analysis of the current literature available on the topics from both print and digital sources collected from a variety of libraries, journals, and databases.

Perception of EMS by the Public

There was a considerable absence of published literature on the topic of how communities or patients directly perceive EMS personnel. However, by looking at patient satisfaction and reported complaints, what communities expect in emergency situations, and what the public deems as appropriate usage of the EMS system, it is not difficult for one to begin to understand this perception. Nonetheless, the limited literature on these topics was collected and analyzed.

The comparative availability of patient satisfaction and reported complaint studies was explainable, as their existence was necessary in order to provide quantitative data on how to improve the care provided by EMS. The satisfaction of a patient has become a tested measure of the quality of the service provided by EMS companies (Greenberg et al., 1997). Furthermore, understanding what patients were complaining and filing claims about worked to show how patients came to view EMS. However, this strategy of obtaining the opinions of the public was inherently biased as it assumed that the patients who do not file reports were satisfied with their care. It has been documented that the majority of patients who were dissatisfied will not actually file complaints and that the higher a patient's socioeconomic level, the more likely it was that a complaint would be filed (Curka et al., 1995).

A ten-year study of lawsuits brought against a large urban EMS system found that there was an average of 8.2 claims per year. 47 out of the 82 claims made during the time period resulted in a payout to the complainant, while only eleven of the 82 claims went to court. Overall, there were 0.197 claims for every 1000 calls. The claims came from motor vehicle accidents involving the ambulance (72%), conduct of the paramedic (20%), improper care (4%), inappropriate disposition of call (2%), and disposition of call at hospital not requested (2%) (Colwell et al., 1999). The behavior of the paramedic servicing a patient produced a nontrivial proportion of the claims, showing that the care goes beyond the technical medicine.

One of the first studies on EMS complaints advanced the idea that a few issues that were repeated with high frequency generated the majority of the dissatisfaction among patients. The study found that unprofessional behavior of personnel (34%), lack of transport (19%), and poor

medical treatment (13%) were the main causes of complaints (Curka et al., 1995). A later study further advanced the idea that on-scene behavior of EMS personnel in pre-hospital care was just as important as the technical care. It found a complaint rate of 0.93 complaints for every 1000 calls occurred, which was similar to the previous study's finding of 0.9 complaints per 1000 calls (Colwell et al., 2003; Curka et al., 1995). The study found that inappropriate behavior (23%), medical skills (20%), issues with transportation (18%), and loss of property (13%) on behalf of the paramedics made up the majority of the complaints. Patients (53%) filed most of the complaints, followed by others involved in the medical care of the patient (19%) and family or friends (12%). The study concluded that patients and bystanders were able to easily tell the difference between appropriate and inappropriate provider behavior, even if they were unable tell if the medical treatment was following protocol (Colwell et al., 2003). This showed the importance that the providers need to place on their interactions with patients, family, and friends, as these interactions are often perceived as just as important as the medical care given.

A study examining overall patient satisfaction after EMS interaction showed that nearly all (95.6%) of patients were satisfied with the care they received. However, there was a difference between the ratings of patients that were transported (94.8%) versus not transported (96.3%) (Persse et al., 2004). This difference could be attributed to the extended time that the EMS personnel spent with the transported patients. However, non-transported patients stated they were more satisfied with response times (85.8% vs. 83.7%), concerned demeanor of personnel (90.7% vs. 88.5%), description of actions of personnel (92.2% vs. 83.0%), skill level of providers (96.3% vs. 85.5%), and explanation regarding the illness/injury (67.7% vs. 25.7%) as compared with patients transported (Persse et al., 2004). This separation about perception of explaining the patient's condition could be due to the requirement that if EMS personnel do not transport a patient, they must make sure a patient clearly understands their condition. This study showed that as patients spent more time with providers or had more serious conditions that required transport to the hospital, their interactions with EMS professionals were less favorable.

It is the combination of all factors of EMS, from interpersonal interactions to the technical care that influences the satisfaction of the patient. A study examining if patient satisfaction was tied to pain management found that if a patient's pain was controlled, the patient was 14.1 times more likely to rank their experience as excellent. In addition, if the patient observed notable teamwork between EMS responders, they were 16.8 times more likely to state

they had excellent overall care. However, in this study, when call characteristics were individually analyzed, they did not produce a statistically significant increase in the rating of the patient care experience. It was when pain was controlled, there was sufficient explanation of actions, and a team environment was observed, that patient satisfaction increased (Studnek et al., 2013).

A study that ranked the factors that influenced how EMS patients evaluated their care found that behavior was more important than the technical skill of the responder. The study prioritized, from most important to least important, the following: behavior of the responder, non-medical care, explanation ability, anxiety reduction, technical care, and emergency response time (Doering, 1998). There was minimal difference between each factor, as patient satisfaction placed emphasis on all components of the interaction with EMS personnel. Further, by understanding what influenced patients' opinions and their satisfaction on calls, what patients value and expect became apparent.

On a national level, there appeared to be a general understanding and positive perception of the role of EMS. A study determining the ability of EMS agencies to serve their communities found that the majority of Americans admired these first responders and believed that they met the demands placed upon them. Those that more strongly believed EMS met the needs of the community were older, had lower educational attainment, believed EMS personnel would provide care in dangerous situations, and held high levels of appreciation for EMS personnel (Blau et al, 2012).

One study of community attitudes towards a rural EMS agency showed an overall lack of knowledge regarding EMS capabilities. It is important to note that this study was published in 1994. However, owing to a lack of studies targeting the same question since this publication, it was included in the literature review. About half (51.4%) of participants could identify their local EMS company, and 49% could identify the care that different levels of EMS could deliver. However, physicians were even less likely than the general population to be able to identify the skills of different levels of EMS providers. In fact, about a quarter (26%) of physicians surveyed admitted no knowledge about the capabilities of the EMS agency in their area (Brown et al., 1994). It was expected that, with the rise of the internet, television, and other services that promote a thorough understanding of EMS, these rates could be increased. However, the results

of this study were still of note as they showed low levels of accurate public awareness around EMS.

Understanding when and why patients call EMS revealed the public's perception of the utility of EMS. By analyzing studies of what was deemed as appropriate use of EMS and when EMS was utilized, revealed the value and perception of the public. One study examined the difference between what patients and EMS providers considered true medical emergencies. It found that for the majority of calls, both the patient and providers agreed that it was an emergency (54%). Perception of the remainder of the calls was divided: EMS providers deemed it was not an emergency but the patient did (23%), neither party believed it was an emergency (20%), and the provider believed it was an emergency but the patient did not (2%). When the patient was over 50, both parties were more likely to be in agreement that it was a true emergency. It is important to note that this study did not include patients who required rapid treatment in the hospital. Thus, the study likely under-estimates the proportion of cases for which both patient and provider agree that the case was a medical emergency (Richards and Ferrall, 1999).

A study examining patients who took an ambulance to the hospital found that the majority of them (78.4%) would consider an alternative transportation method. These alternatives included car (61.6%), taxi (56.2%), transport in ambulance to clinic (37.1%), driving oneself to clinic (25.7%), and being treated and released by paramedics (40.6%). The patients listed a variety of reasons why they actually took an ambulance to the hospital. The most common reasons for a patient taking ambulances were that a person other than the patient called the ambulance (66.0%), the paramedic said it was the best course of action (51.4%), and the patient’s life was in jeopardy (41.6%). Furthermore, just less than half the patients had no alternative transportation (45.7%) or believed they would receive care faster (42.2%). The study found no correlation between type or lack of insurance and interest in other forms of transportation. This study, like some of the previous ones, did not enroll patients that were considered medically unstable and thus failed to capture a population that would be considered representative across emergency situations and require rapid ambulance transport (Yarris et al., 2006).

EMS personnel often get dispatched to psychiatric emergencies or interact with patients who have mental illnesses. These types of calls are often referred to as “psych calls” and are

often viewed as not true emergencies by the EMS personnel responding. A study of a large urban EMS service found that psychiatric calls often frustrate providers because they were not able to utilize their skills, the calls require resources that would be needed to respond to other emergencies, and the providers believed that it was not their job to deal with mental health issues. The study revealed that this resentment could be due to the lack of training on or possession of skills to appropriately handle mental health issues. This feeling of unpreparedness often caused the provider to feel additional stress by psychiatric calls (Prener and Lincoln, 2015). EMS work as a public resource and acts as the ultimate safety net by providing care for those who have nowhere else to go. Thus, when communities call on EMS for psychiatric and mental health problems, the EMS providers must meet the expectations placed upon them even if it outside the realm of their traditional training.

In addition to psychiatric calls, EMS personnel often respond to calls for domestic violence. While they respond to these situations to provide medical aid, a recent study found that EMS personnel were considered by the public to be the second most appropriate resource to contact after police. In addition, people were more willing to disclose domestic violence information to EMS providers before a social worker, counselor, friend or family member, religious leader, doctor, or lawyer. The unique role of EMS allowed for care and trust to start immediately at the scene of the violence. It also allowed for a protected safe space in the back of an ambulance for patients to disclose information to EMS personnel. Lastly, for patients who refused treatment or transport to the hospital, EMS care might be the only medical attention or help they received, causing it to be immeasurably important for both treatment and help. (Singleton et al., 2003). EMS personnel were often mandatory reporters because of their role as medical providers who interact with vulnerable populations, such as the elderly or children. Because of this role, they were obligated to report any abuse to vulnerable populations. As a mandatory reporter, if a provider even suspected abuse in vulnerable populations, they must notify the appropriate parties or face legal action themselves (Pollack, 2011).

There was an overall lack of research about how the public views medical first responders. However by reviewing the critiques, complaints, and reasons why EMS was used several themes emerged. It became visible that the public placed significant value on the interpersonal non-medical care that paramedics provide. This was shown when 911 was called for psychiatric calls as well as the large percentage of people who will confide about domestic

violence in EMS personnel. Thus, the public required paramedics to be able to deal with medical and traumatic emergencies in conjunction with being able to care for the emotional wellbeing of patients.

Occupational Identity of EMS Personnel

It took a specific type of person to deal with the stress, drama, and often traumatic nature of EMS. These men and women were often viewed as heroes by society for answering the call for help, but this recognition was not internalized or expected. In order to better understand EMS personnel as people, literature that attempted to categorize the personality types of those that join and succeed in EMS was reviewed. An analysis of job satisfaction and occupational stressors was also provided.

In his essay, which worked to break down the difference between professionalism and heroism in medicine, Joseph Fins argued that in order for the medical system to continue to operate during emergency situations, a distinction between those two types of responses needs to be made (Fins, 2015). Though his claim was formed around hospital healthcare, it could be applied to the pre-hospital environment as this population was constantly dealing with patients experiencing emergencies and comprised the first responders at most catastrophic events. Despite the case for separation, the lines between professionalism and heroism were often blended together. Because of media coverage and television, in shows such as the 1970's Emergency!, the role and capabilities of EMS were often over-exaggerated (Shah, 2006). These sources gave EMS personnel unrealistic abilities and glorified the work, attributing a heroic status to the profession. Though this might cause increased respect for the EMS personnel, it also caused the public to have unrealistic expectations (Doering, 1996). Fins warned, "we should not expect clinicians to be heroes, lest we set up expectations for professional comportment that will only be attainable by heroes." Fins also argued that medical professionals were people first. They should not be required to fulfill unrealistic or unattainable roles. He cited studies showing that consistently fewer than 20% of medical personnel would fulfill their professional obligations during epidemics that placed themselves or their families at risk. In disasters like these, Fins argued that it was important to understand the values of health professionals and to keep expectations realistic (Fins 2015).

Fins did acknowledge that, although it was important to keep the values of health professionals in perspective, EMS personnel could still often meet the heroic criteria that could be attributed to them. He argued that heroes respond with humility about their actions and with shock that people view them as heroes. Since the public that does not interact with EMS on a continuous basis determined heroism, actions were often considered extraordinary and appeared to supersede expectations. However, because the paramedics do this work on a daily basis, they had a hard time seeing how their actions were more than just what was expected of them (Fins, 2015). An example of this was seen in the ethnographic study of a search and rescue team. Despite media and patients labeling them as heroes, the team never referred to themselves in such away. In fact, it was found that the rescuers did not want rewards for their actions but rather actively deemphasized their abilities and deterred acceptance of the hero title (Lois, 1999). Since the term "hero" is bestowed upon EMS providers by society, it's up to the discretion of the public to make an informed decision about what they consider heroic.

In an effort to understand EMS professionals and why they might act in heroic ways, a personality profile of the profession was created. One of the proposed theories was the 'rescue personality.' It was described by the adaption of values formed as a child and was characterized by a person who takes practical steps to resolve problems, has high expectation of performance, was socially conservative, became disinterested easily, had high levels of dedication, was empathetic, sought risky situations, engaged in competition, and relished being needed (Mitchell and Bray, 1990). This theory was formed to apply to people who work in emergency situations in an attempt to better understand the mentality and perspective of these people. However, it did not address whether this personality was obtained through work in the emergency services field or if people with this personality were drawn to this field. This personality type can be translated into the Big Five personality types, also referred to as the five factor model. This was a tool used by psychologists to categorize people based on personality. A rescue personality would be categorized by low openness, high conscientiousness, high extraversion, high agreeableness, and low neuroticism (Klee and Renner, 2012).

As the rescue personality was further examined, it was found that not all emergency workers fall into this personality type. In one study, firefighters were compared to other blue-collar workers based on the five factor personality test, participation in risky behaviors, and type A personality tests. The study found that firefighters had higher levels of extraversion but were

not significantly different than the control population in any other category (Wagner et al., 2009). These results were mirrored by a Romanian study that found few similarities between ambulance workers with regard to the Big Five personality types (Niculita, 2012). A German study of EMS workers, both volunteer and professional, showed low neuroticism and high conscientiousness, which were both in line with the rescue personality. However, low agreeableness and no difference in extraversion was found, which was not in agreement with the rescue personality. Additionally, no difference was found between volunteer and professional EMS personnel, and the study found a negative correlation between extraversion and extent of service (Klee and Renner, 2012). Thus, the literature suggested that while the rescue personality served as a starting point for analyzing EMS workers' personalities, it was hard to group such an eclectic group together under one theory. In addition, time in occupation might slowly remove people who have disfavored personality characteristics from the occupation, creating an inherent discrepancy in these studies.

Although there has been no broadly accepted conclusion about whether the rescue personality was accurate, additional studies argued that there were specific traits more prevalent in the EMS profession. The study previously cited noted that the participants exhibited characteristics of altruistic and affectionate behavior (Klee and Renner, 2012). Another recent study worked to develop a role identity scale for EMS personnel. This followed the belief that individuals take on a specific identity through their interactions in a specific role. Those that also held this role confirm this identity through feedback and responses with each other. The study named and associated four main components with the EMS identity: caregiving, thrill seeking, capacity, and duty. Caregiving was the giving of aid and making a difference in the lives of patients. Thrill seeking described EMS personnel's attraction to emergency situations and their looking forward to calls with critical patients. Capacity was the ability of the responder to act and provide a service that other people might not be able to perform. The duty domain was the commitment to the job and the role as a public servant (Donnelly and Siebert, 2015). This study was able to show how EMS personnel, though clearly not a homogenous community, share certain similar characteristics and personality traits that set them apart from the rest of the population.

With limited ability to successfully characterize EMS personnel via a personality type, another way to address this question and gain understanding was to examine job satisfaction. A

study comparing male paramedics in a fire service to male and female private company paramedics found highest job satisfaction in fire service medics followed by male private paramedics and lastly female private paramedics. The fire service paramedics reported the highest extrinsic, intrinsic, and social benefits. These came in terms of continuing education opportunities, better pay and occupational benefits, and higher levels of respect in the community. The perceived respect given to a paramedic influenced their satisfaction with their job. The respect that the fire service paramedics obtain might be due to their involvement in the fire service since this perception of respect was significantly lower for private paramedics (Federiuk et al., 1993).

A study of stressors in EMS and their effects on satisfaction reported by EMS personnel revealed that the majority of providers were satisfied with their job. The study broke down respondents into extremely satisfied (11%), very satisfied (29%), satisfied (45%), and not satisfied (15%). Respondents placed value on both the extrinsic and intrinsic components of the job, with their interactions with physician in an emergency department directly associated with overall job satisfaction. They found that female personnel were on average less satisfied than their male counterparts (Bowron and Todd, 1999). This sentiment was echoed in the previous study, which suggested unequal treatment by other EMS personnel and high rates of sexual harassment of females in EMS (as high as 44%) (Federiuk et al., 1993). It was also suggested that EMS was an environment shaped strongly by characteristics such as "competitiveness, decisiveness, assertiveness, and risk taking" that are often deemed masculine by society (Nurok and Henckes, 2009).

EMS was unlike other occupations in that a large component of job satisfaction was based on the care and interaction with patients. A study that worked to understand the motives of EMS personnel and what gave them job satisfaction found that money was not the driving force for their satisfaction. The study found that patient care, challenges of the job, and job achievements all ranked higher than financial incentives. Furthermore, EMS personnel did not expect to be recognized for their work and did not seek out praise (Kanarian, 2001). By understanding what gives EMS personnel satisfaction in their jobs and what causes them stress, insight is given into the motives of these first responders. A study of the motives of involvement for volunteer first responders in England revealed that the largest motive was to be able to help those in the community. Furthermore, the participants expressed a desire to give to the

community their time and skill, contributing positively to its health and wellbeing (Timmons and Vernon-Evans, 2013).

A study that examined the values of EMS personnel came up with the term "fluctuating economy" to describe how these values changed even during the course of one call. The study found that calls were ranked by responders based on their social, technical, medical/surgical, intellectual, heroic, and perfection/competence value. The social value, such as the patient's age or socioeconomic status, determined how much effort a responder would dedicate to patient care. For example, a younger patient received more intensive resuscitation than their elder counterparts. Technical value, or the potential intervention that EMS personnel could provide to the patient, would increase the more action the responder could take. Medical/surgical value was the prioritization of trauma calls over medical calls because more can be done without having to receive orders from a medical control doctor. Intellectual value was the detective work of EMS and how different patients present in complex manners, requiring thought and skill to care for these patients. Heroic value was the ability to either "succeed or fail" on a call, which made it more rewarding to the responder. Lastly, the perfection/competence value was the opportunity to practice different skills and obtain experience with different types of calls. It was theorized that throughout a call these values could come in and out of play, causing the responder to become more or less invested and engaged in the call (Nurok and Henckes, 2009).

One of the biggest stressors facing EMS providers was treatment of children. A Swedish study worked to understand how responders reacted to adolescent patients that they had cared for. They showed that EMS personnel actively feared treating and transporting adolescents because of increased vulnerability of the patient, protective parent behavior, and the emotional impact that it could have on the responder. Furthermore, the study found that the increased levels of anxiety that occurred when dealing with adolescent patients caused emotional hardships, in turn making it harder to provide care (Oberg et al., 2015). These results were echoed by a previous Swedish study, which showed that ambulance nurses were most worried about calls that had to do with children or childbirth. This study also showed that other forms of worry were generated from feelings of inadequacy, personally knowing the patient, not having control, or not being able to rely on one's partner. Obtaining experience, talking with colleagues, and gaining knowledge on topics of concern all actively worked to reduce the level of worry. This study was

unique because it brought forward issues that face EMS providers and caused them stress, which was often overlooked (Svensson and Fridlund, 2008).

Scientific efforts have been made to attempt to explain why EMS personnel chose their given profession. A recent study has identified two possible human genes that could promote altruistic behavior. OXTR and CD38 were identified based on their ability to change oxytocin levels and alter behaviors between helping oneself and helping others (Thompson et al., 2013). No studies were found that examined if this gene was more common in any type of first responder. Another study examined the role of testosterone in emergency medicine in the pre-hospital setting. Testosterone was known to increase attention, assertiveness, physical prowess, and ability to excel in personal interactions. In this exploratory study, it was found that the combination of testosterone with conscientious ability slightly improved the EMS care given. The study correlated conscientiousness and extraversion with EMS performance. It was predicted that the testosterone enabled the responder to enhance their level of conscientiousness with added energy (Fannin and Dabbs, 2003).

An occupational identity of EMS personnel had been attempted to be established through both the rescue personality and EMS role identity. Even though sufficient evidence was lacking to support either of these two identities, they both brought up themes and characteristics that were present in EMS. Further looking at what draws EMS providers to the profession, what they value, and what that they fear allow for a deeper understanding of those that provide emergency medical care.

Occupational Health of EMS Personnel

From the first section of the EMT textbook, an emphasis was placed on responder safety. This was done through repetitive reminders that the "safety of you and your team is of primary concern" (Pollack, 2011). Throughout the entire curriculum, it taught that if a scene is deemed unsafe because it puts the responder in danger, then the responder should not enter the scene. This logic argued that if responder were injured, they would be unable to provide sufficient help to a patient, and the responders would then need aid themselves. Once on scene, the responder was taught to don the appropriate personal protective equipment (PPE) to provide a sense of safety to the responder. This PPE could include disposable gloves, masks, eye protection, high visibility vests, gowns, helmets, and turnout gear. A mantra of scene safety and PPE was driven

into the heads of new EMTs and paramedics. Despite these warnings, in reality EMS personnel were placed in life threatening situations and exposed to dangerous diseases and chemicals on a daily basis.

A 1992-1997 study found that the on the job fatality rate of EMS providers is more than 2.5 times that of the normal worker in the United States. In fact, per 100,000 EMTs and paramedics, 12.7 were killed in the line of duty every year. This study further found that this was higher than police (12.2/100,000) but lower than firefighters (15.5/100,000) (Maguire et al., 2002). However, a different study looking at data from 2003-2007 found that EMS personnel have a fatality rate of 7.0/100,000, almost double that of the average worker (4.0/100,000). In addition, this rate was higher than firefighters who had a rate of 6.1/100,000 (Reichard et al., 2011). These studies did take into account EMS helicopter crashes, which represented 31% of the fatalities in the second study (Reichard et al., 2011). It was found that helicopter crashes have been increasing throughout the years. From 1993-2002 there were 84 EMS helicopter crashes that caused 64 injuries and 72 deaths to both patients and providers (Isenberg and Van Gelder, 2011).

Driving was the most dangerous activity that EMS personnel were engaged in. One study found that motor vehicle accidents were responsible for 45% of all EMS provider deaths (Reichard et al., 2011). A separate study completed during this same time frame (2003 to 2007) confirmed these results and found that 8% of injuries to providers were caused by motor vehicle accidents (Maguire and Smith, 2013). When lights and sirens were used, the incidence of accidents increased about 15 times. Lights and sirens only shorten a response time by between 43 to 106 seconds, yet were activated during about two out of every three fatal ambulance motor vehicle accidents. Known poor seatbelt usage by EMS personnel, especially when in the back of an ambulance caring for a patient, increased the risk of injury and death during motor vehicle accidents (Isenberg and Van Gelder, 2011).

Other things in addition to motor vehicle accidents caused occupational injuries that affect personnel. Pre-hospital health care providers experienced a rate of injury per year of 34.6 per 100 full-time providers. This was higher than any other occupation and caused an early retirement rate of 56 per 1000 providers every year (Isenberg and Van Gelder, 2011). In fact, from 2008-2013 there were on average, per year, 23,400 injuries that required visitation to an emergency room by EMS personnel. Of the data collected in 2013, 34% of the injuries were

considered sprains/strains and 13% were contusions/abrasions. The majority of the visitations were caused by overexertion (32%), harmful exposure (20%), and contact with objects/equipment (15%). The vast majority (99%) were treated in the emergency department and discharged (CDC, 2015). These results were in line with a study from 2003-2007, which found that strains and sprains made up the largest category of occupational injuries (38%) (Reichard et al., 2011). A third study conducted during the same time period as the second agreed that the largest category of injury was sprains and strains (67%), the body part most injured was the back (43%), and overexertion caused the majority of the injuries (56%). Back injuries among EMS providers were found to be four times more likely than that of the average worker (Maguire et al., 2013). Back injuries were labeled as the most commonly injured part of the rescuer in a previous study, which could be explained due to lifting and working over a patient. Overall, it was found that injuries to EMS personnel caused lost workdays at a rate of 19.6 per 100 full-time providers (Maguire et al., 2005).

EMS personnel respond to a variety of call types, including those for patients with communicable diseases and scenes that may be toxic. Harmful exposure was the reason for 20% of EMS provider emergency department visits in 2013 (CDC, 2015). This exposure could have taken a multitude of forms, including direct contact, needle sticks (when a provider was accidentally stuck with a needle used on a patient), inhalation, or when bodily fluids came in contact with a provider. Reported exposures take place at a rate of 4.4 per 1,000 calls. Needle sticks, which were known to be underreported by as much as one in three, were found to be decreasing due to advances in safer equipment. Exposure to bodily fluid could mean the transmission of HIV, Hepatitis B, Hepatitis C, syphilis, and other communicable diseases. However, the Ryan White Comprehensive AIDS Resources Emergency Act (Ryan White Act), established in 1990, mandated that hospitals notify the EMS personnel, within 48 hours, if it was found that a patient had an infectious disease that was airborne (Isenberg and Van Gelder, 2011).

Providers were often the recipients of violence. This violence was both intentional and unintentional in nature, as often patients suffered from mental health issues or were intoxicated from alcohol and/or drugs. From 2003-2007, 5 (8%) EMS personnel on duty deaths were due to assault (Maguire et al., 2013). A variety of studies demonstrated this prevalence of violence. One study in an urban EMS system found that 90% of providers had been the victim of abuse or violence, and another study found that 60% of EMS personnel had reported being assaulted

(Isenberg and Van Gelder, 2011). A further study of paramedics in Toronto found that 69% had been assaulted and 56% had a near death experience while on the job (Regehr et. al., 2002).

EMS personnel had an increased risk of cardiovascular disease. It was shown that a significant percentage (18%) of US paramedic deaths while on-duty were due to cardiovascular issues. Further, almost half (48%) of paramedics were found to be either highly or very highly at risk for cardiovascular disease. A Canadian study of paramedics found that overall, the majority (88%) of paramedics had at least one risk factor for cardiovascular disease. In addition, as time on the job increased, so did risk of cardiovascular disease due to increases in body mass index and stress levels. The study found that these risk factors were more present in paramedics then the normal population, and among paramedics, females had slightly less risk than their male counterparts (Hegg-Deloye et al., 2015). This data was confirmed in a literature review article conducted on publications from 2000-2011, which found that paramedics were at increased risk of cardiovascular disease based on obesity, chronic stress, and acute stress (Hegg-Deloye et al., 2014).

The stress of working in emergency situations was significantly demanding and placed stress on the EMS provider. EMTs and paramedics responded to calls that were traumatic in nature, and they engaged with people at their darkest points in life, dealing with blood, guts, and death. Despite popular perception, it was not the mass casualty incidents (MCIs) that caused EMS responders the most emotional stress. Instead, it was events that the providers could not reasonably explain, such as the violence involving children and suicides. It was not the events that were significantly gory but the patients who died alone without loved ones (Regehr et al., 2002).

EMS personnel were subject to a myriad of symptoms characteristic of post-traumatic stress disorder such as difficulty sleeping, concentration issues, avoidance, anger, increases in emotion, flashbacks, and an overall change in behavior (Regehr et al., 2002). There had been a considerable lack of literature on the extent and prevalence of post-traumatic stress disorder (PTSD) and other mental health issues caused by the job. A meta-analysis of rescue workers found that ambulance workers had among the highest rates of PTSD among rescue workers, which were significantly higher than the normal population and more than previously estimated (Berger et al., 2011). This prior lack of data translated into EMS provider suicide as well. A newspaper article from Australia found that paramedics committed suicide at a rate of 1 per

3,500 as compared to the country rate of 1 per 10,000 (Ludwig, 2011). A study of EMTs and Paramedics in the United States found that the vast majority (86%) of participants had experienced critical stress. Furthermore, 37% of respondents stated they had considered suicide; this was ten times the national average of 3.7%. 6.6% of respondents stated they had attempted suicide, which was more than ten times the national average of 0.5% (Newland et al, 2015).

In EMS there was a high turnover rate among EMTs and paramedics. This burnout was not a new phenomenon, and in the 1980s studies were published on the average length of a paramedic's career lasting four years and being the shortest of any health profession (Vettor and Kosinski, 2000). A study examining reasons why EMS personnel leave the profession found that the top two reasons were "stress/burnout" followed by "lack of job challenges." The least popular reason was the "desire for better pay and benefits" (Blau and Chapman, 2011). Burnout had been characterized by three components: a rise in emotional fatigue, the depersonalization of care, and a negative self-assessment (Maslach and Jackson, 1981).

The EMS profession was considered the lowest rung of the medical ladder, which translated into a low sense of control and level of pay but high levels of stress (Vettor and Kosinski, 2000). In addition, EMS personnel were traditionally lower paid and had less respect than other first responders such as firefighters and police officers (Blau et al., 2009). One study worked to identify differences between EMTs and paramedics as to why they left their jobs, but it found that there was no difference in overall job satisfaction between these two groups. Extrinsic satisfaction was found to keep both paramedics and EMTs involved in EMS but intrinsic satisfaction was found to be related only to paramedics staying in the profession. However, despite being paid more, paramedics felt less extrinsically satisfied with the occupation. The study also discussed how high levels of collegiality among EMS providers made it hard for them to leave (Chapman et al., 2009).

It was believed that there were certain characteristics that provided protection when dealing with traumatic situations. It was hypothesized that being controlling of nature or easily bored increased the chances of experiencing burnout. On the other hand, characteristics of being goal-driven, sensation-seeking, and concerned about what one can receive from their job were hypothesized to be more protective against burnout (Vettor and Kosinski, 2000). A study of Australian paramedics found that resilience to traumatic events increased with experience until five years of experience was accumulated, producing a leveling off effect. Increased levels of

resilience were also associated with better health. Overall, paramedics were found to have a greater sense of resiliency than the average person (Gayton and Lovell, 2012).

Constantly exposed to traumatizing scenes, EMS personnel developed coping strategies to continue to do their work. One study found that there was an increase in problems related to alcohol (1.2% to 11.6%), mental health issues (2.3% to 29.1%), and a three-times increase in psychiatric drug usage in paramedics after they were exposed to a traumatic event (Refer et al., 2002). More often, this coping took the form of "thick skin" (Vettor and Kosinski, 2000). This was also described as "emotional blunting." Whether it was conscientious or not may be up for debate, but EMS personnel suppressed their emotions in an act of creating a distance between themselves and the patient in order to remove the emotion within their care (Regehr et al., 2002). Other coping strategies included "educational desensitization, humor, language alterations, scientific fragmentations, escape into work, and rationalization" (Vettor and Kosinski, 2000). This myriad of coping mechanisms allowed EMS personnel to emotionally manage the stressors they faced and continued to provide care to their patients.

Another method that providers used to deal with the stress of the job was through adjustments to their discourse. Slang served to allow the provider to remove the emotion from a topic, discuss serious problems in front of a patient, and provide a sense of humor. A study of slang usage in a large urban academic hospital found that the majority of slang terms referred to patients who were on a downward trajectory. Further, slang provided for the establishment of a medical provider identity. The slang served to create a separation between the highly emotional situations providers were often in by making light of the serious subject. The study stated, "slang translates human tragedy into human comedy," allowing providers to have a release for their stress (Coombs et al., 1993).

A "John Wayne Syndrome" in which it was thought of as a sign of weakness to open up to a partner or discuss emotions in depth, was present in EMS. This was characteristic of other male-dominated professions; rather than opening up, making "sick" jokes and laughing is often the solution (Maslach, 1976). Another study found that spouses of paramedics often shared this twisted sense of humor, which was used as a coping method for the couple. This dark sense of humor worked to bring the couple together (Regehr, 2005). Thus instead of opening up and sharing the emotional toll that EMS work takes, providers coped by laughing.

The relationship that develops between EMS personnel who are partnered together was an incredible support system for providers. A study of complaints filed against an EMS system found zero complaints filed against a partner despite numerous complaints from hospital staff or other first responders (Colwell et al., 1999). A sense of camaraderie developed between partners based on shared experiences and difficulties (Paterson et al., 2005). A partner learned to sense when something was causing a caregiver difficulty or increased levels of stress. However, because emotions were considered a vulnerable subject, if partners brought up this topic it was done so after a call and usually in a teasing manner. It was more common for a supportive dynamic to be created between partners that was built on a mutual understanding of the work needed to be done, trust, maintaining composure, and workload readjustment (Henckes and Nurok, 2015). One study found that despite the tough atmosphere in EMS, being able to talk and joke with a partner was incredibly important. This support from a partner was not echoed in feeling of support from employers or the unions (Regehr et al., 2002).

The EMS providers' family could also be affected by the stresses of the job and was visible for both the responder and their family. One study found that the vast majority (79.1%) of spouses or significant others were supportive after traumatic incidents. However, this did not stop the responder from feeling removed from their family or holding them at a distance. This caused the emotional blunting that occurred in patient care to be brought home to the family. It further resulted in feelings of disinterest and ability to have quality relationships with their children (Regehr et al., 2002). The traits that were often attributed to being beneficial at the workplace, such as controlling, quick to action, decisiveness, and questioning, were found to be detrimental in the home environment (Regehr, 2005). Further, a sense of protection could occur based on an increase of fear for the safety of their family. This could be attributed to a responder having a connection between a patient and a family member. It had the ability for the responder to place significant value in family relationship (Regehr et al., 2002).

In a study of significant others of paramedics, it was found that the spouses experienced stress from the occupation of the EMS responder. Part of this was due to the shift work nature of EMS, which produced long hours away from the home, lack of equally distributed family responsibilities, minimization of time spent as a couple, and lack of a set schedule. Further, the spouses had a general sense of worry and concern about their partner's safety in dangerous situations and did not know what type of calls they were responding to. The spouses and children

were also able to sense the stress in the behavior of the responders and discussed how the stress was brought back into the home. Some responders would discuss their work with their spouse as a form of debriefing but others would not for fear of troubling them (Regehr, 2005).

In an effort to help responders deal with the emotions generated from traumatic or stressful situation, two popular methods of aid have been developed. The most popular is Critical Incident Stress Management (CISM), which incorporates Critical Incident Stress Debriefing (CISD), which was developed in the early 1980s. This was a debriefing session formulated to be used whenever a responder felt that an incident had negative emotional effects and help was needed. It was broken into a series of three parts led by a moderator who could be a trained professional. The initial phase was the sharing of emotions followed by an evaluation of the current situation by the moderator. The second phase focused on support, and the third phase revolved around locating resources. CISD could be completed both formally and informally but was said to be most effective 24 to 48 hours after the incident (Mitchell, 1983). The CISD could be activated by anyone involved in an incident and exists to mitigate potential PTSD by providing a space to decompress (Pollak, 2011). Recent criticism of the CISM had taken the form of studies questioning its effectiveness and its ability to handle heterogeneous groups (Mitchell, 2013). Despite this disagreement, CISM still remained the primary method of stress management taught and used in EMS (Pollak, 2011).

Psychological First Aid (PFA), developed during World War II, was recently applied to rescue workers. PFA worked on an individual basis, contrasting with the group approach of CISM. It was targeted at people who were currently experiencing stress or who might soon be, by focusing on "safety, calming, connectedness, self-efficacy, and hope" (Shultz and Forbes, 2013). PFA was promoted through "expert opinion and rational conjecture" but lacked the scientific studies that provide evidence to support it (Fox et al., 2012). Despite their existence, these programs were not always accessible to EMS personnel and were often stigmatized within the EMS community (Newland et al, 2015).

EMS personnel provided a service to the communities, and they served at a risk to their own health and wellbeing. Even though much was known about the types of stress providers face, little was known about mental health effects of these often traumatic calls. In order to deal with these stressors, personnel developed coping strategies and relied on supports, but when these fail the responders were subject to burnout, PTSD, and even suicide.

Methods

The Position of the Author

The topic of EMS was chosen for this thesis due to the researcher's passion for the field. As discussed in the Locating Myself section, EMS has been a source of inspiration, dedication, and interest since early high school. The author's interaction and connections to EMS providers in a variety of settings was the impetus for this study. Noticing similarities between providers, their personalities, and family life, he was encouraged to look for literature on the topic. Finding an overall lack of current research or literature engaging with these topics, the author was inspired to conduct this study.

Due to the author's involvement and history working in EMS, an inherent bias was created. By briefly examining this association, this bias was revealed and controlled for. The author began in the EMS field as a volunteer for Red Cross First Aid Stations, staffing the medical booths at large public events such as the Rose Parade in Pasadena, California. Interactions with professional EMS responders, agencies, and culture began there. As a Los Angeles County Fire Explorer in high school, the author became involved with a fire-based EMS system. By spending time in the firehouse as well as on shift with firefighters and paramedics, insight was gained. The author took the EMT course at Pasadena City College where he made friends that went on to become providers in both the public and private sectors. The author has worked on a college-based EMS service for the past three years and held multiple leadership and training roles, as well as learning from and mentoring other providers. In this role, the author worked in partnership with multiple private sector ambulance services, fire departments, and law enforcement agencies. The author also spent a summer season working as an EMT on the Search and Rescue Team in Yosemite National Park. He coordinated responses that incorporated close teamwork with federal law enforcement, fire personnel, and both public and private EMS agencies. There were barbeques and birthday parties, which served as constant socialization with responders during off-duty time. These experiences and relationships influenced and shaped the author's opinions, attitudes, and beliefs on the topics covered in this study.

Research Question

This study was motivated by a desire to learn and uncover a deeper understanding of EMS personnel. The study was focused around three initial themes that formed branches of

inquiry and exploration. The first component was the personality of providers and the factors that attracted them to this field. The purpose of this was to understand the mindset, attitudes, and mentality of providers. The second was how providers believed the public perceived them. In today's climate with tensions around public safety, understanding the role and perception of EMS in a community, especially with regard to other first responders like law enforcement and fire service were vital components for an appraisal of EMS. The last section targeted the emotional and physical effects of the job on providers. This section was meant to illustrate where the stress originated from, the consequences it had on both the provider and their family, and the ways that the provider managed this stress. Differences and similarities across private and public sector providers as well as time spent in EMS were investigated across all three of these themes. The purpose of the investigation was to utilize these three topics as a starting point to expand the knowledge of EMS personnel.

Research Setting and Sample

The greater Boston area was selected as the research setting for this study. This was chosen due to the type of EMS services provided in the region. Boston was one of the few places where the primary EMS agency responding to 911 calls was a municipal third service, meaning that EMS was not through a private service, fire department, or law enforcement agency. Thus, these providers were significantly less likely to be influenced by other first responder identities and it was proposed that they would more fully embody EMS characteristics and identity. In addition to Boston EMS, the greater Boston area was serviced by multiple private-sector services that hold both 911 and inter-facility transportation contracts. All of these different providers transport to overlapping hospitals and often interact with each other. The study strived to provide a mix of both private and public EMS personnel to engage with differences and similarities between the two groups. Due to this mixture of private and public sector providers, the greater Boston area served as an ideal location for this study due to its ability to naturally control for variables that could confound the results.

Paramedics that had worked in the greater Boston area were chosen as the sample. Paramedics were selected because of the higher level of training, overall experience, and investment into the field they possessed compared to other providers. As discussed previously, paramedics are generally EMTs first and when they become paramedics have significantly

increased scope and abilities. Based on this increased level of involvement, paramedics were predicted to have a greater tie with EMS and would be more representative of EMS providers in general. Further two distinct groups of paramedics were chosen, those that had been involved for less than 10 years in EMS and those that had been involved for more than 25 years. This was incorporated into the study to further evaluate trends between those with relatively less experience to those with significantly more experience.

Research Methodology

A qualitative method was chosen for this study based on the inadequacy of the current literature on this topic. The author was unable to find substantial sources targeting paramedics' personality types, the way that the communities perceived paramedics they serve, or beyond the physical effects of stress caused by the job. In an effort to explore these topics, the author chose a qualitative approach. Shaped only by the researcher's personal experience and a few pieces of literature broadly relative to these topics, a qualitative study provided the opportunity to expand the current knowledge and reveal general themes in the field. With no specific general themes regarding the current state of the EMS world, defined categorical questions such as those in a quantitative study could not be formulated. Even if they could be, these questions would not adequately target the deeper truth of why. Nor would they have the ability to capture the emotions, values, attitudes, and personalities of providers in an honest and open way. Therefore, a qualitative method allowed for a study that was designed to serve as a base and foundation for future studies. It was the author's hope that this study would act as an inspiration for developing future lines of inquiry in both qualitative and quantitative research.

The design followed a phenomenological study design as described by John Creswell. This method allowed for a focus on the "lived experiences" of those involved in EMS and similarities among providers. Thus, "the basic purpose of phenomenology is to reduce individual experiences with a phenomenon to a description of the universal essence." Focused around the work of Moustakas and van Manen, phenomenology worked to "provide a deep understanding of a phenomenon as experienced by several individuals" (Creswell, 2013). This framework was selected because of its ability to illustrate trends among providers who have experienced the phenomenon of working in EMS.

Sampling was done in stratified purposeful, convenience method. The specific targeting of individuals who have shared the same experience is characteristic of a phenomenological study. The study utilized convenience sampling that was conducted based on the selection and recruitment of paramedics who the author or the author's contacts knew. This method was chosen because of its known ability to provide participants in a way that "saves time, money and effort, but at the expense of information and credibility" (Creswell, 2013). In an attempt to mitigate the negative effect on quality that a convenience sample may have, a stratified purposeful component was implemented. Following this method, potential participants were contacted based on their known qualifications such as public or private service affiliation and time in EMS. The benefit of this method is that it "illustrates subgroups and facilitates comparison" (Creswell, 2013).

In this study, between three to eight voluntary participants were sought. This was in line with the qualitative style of research because it enables a detail-oriented approach (Strauss and Corbin, 1998). It was also congruent with the phenomenological method, which recommends between five and twenty-five participants (Creswell, 2013). Participants were contacted via email or phone and asked if they would be interested in participating in this study (Appendix 1). If interested, the participant was emailed a project description and consent form for review. If the participant was still interested and consented to the study, a one-on-one interview was arranged at the time and public location of the participant's choosing. The author received a waiver to obtain verbal consent from participants to increase the privacy and confidentiality of the participants. After reviewing the consent form and obtaining verbal consent from the participant, the demographic collection sheet and interview were completed. With permission of the participant the interview was recorded via audio recorder for transcription purposes. Once transcribed, all audio recordings were destroyed.

All methods of research, including contacting, recruiting, and interviewing participants, were conducted according to procedures approved by the Social, Behavioral and Educational Research Institutional Review Board of Tufts University, Medford Campus (Study #: 1510005). The study was further conducted under the advisement and committee guidance of Dr. Frances Chew and Dr. Carolyn Rubin.

Data Collection

Data were collected in two ways that included a demographics collection form and interview. The demographics form was completed before the interview for the purpose of further understanding the participants in the study. It was used so that basic questions would not have to be covered in the interview and not forgotten. This form included age, gender, highest level of education, race, and number of years involved with EMS. Familial data comprised marital status, number of children, and personal income (Appendix 2).

The interview itself was conducted in a conversational-like manner based on the three themes presented in the research questions. The questions used the interview guide as a basis for inquiry (Appendix 3). The interview began with the researcher sharing his background in order to build rapport and trust with the participants. This created an environment that encouraged openness and sharing. Further, the interview was directed towards the material that the participants were sharing, in a way that encouraged more in-depth questions. This interview method was completed in accordance to revealing the personality, attitudes, and opinions of the participants (Creswell, 2013). Each interview was conducted in a face-to-face manner and lasted between 45 minutes to an hour and a half. All the interviews were voice recorded with the permission of the participant.

This method of data collection was deemed to have a probability of physical or psychological harm at the same level as normal life. The risks of participation had the ability to include discomfort and social harm. Participation in the study could further have negative impacts on the reputation and careers of the participants because of the close-knit nature of the EMS community. However, these risks were based on the voluntary act of sharing this information with the researcher. These risks were mitigated through the ability to terminate the interview at any time and the name of the participant not being attached to the study in anyway.

Data Analysis

The data were analyzed in a systematic process. The data were transcribed into a written document by the researcher. From there the data were first analyzed by several readings of each transcript to gain familiarity with the material. This incorporated initial note taking in the margins with highlighting of relevant script to help generate future codes and themes. This study transitioned the raw data to codes, which “involve[d] aggregating the text into small categories

of information" (Creswell, 2013). Following the order of analysis expected of qualitative research, this study incorporated transcription, involvement with the data, creation of a code system, and lastly intertwining of these codes to create meaning (Strauss and Corbin, 1998; Smith and Firth, 2011; Creswell, 2013). The framework approach was utilized which, "enable[d] the researcher to explore data in depth while simultaneously maintaining an effective and transparent audit trail which enhanced the rigor of the analytical process and the credibility of the findings." This form followed the creation of a coding matrix, which allowed initial themes to be linked into categories and then the creation of final themes and concepts (Smith and Firth, 2011). The transition from the broad research questions to codes to final concepts created a progression revealing themes and conclusions.

This study was conducted in a qualitative style in order to provide a base and background for future studies, as well as overall information about the EMS field. Through the study, themes were determined to address the topics of provider personalities, provider views on public perception, and the stress on providers due to their occupation. Study methodology and data analysis were completed in a rigorous manner to ensure the results were of quality and legitimacy.

Results

Demographic Data

The sample used for this study consisted of five male paramedics who have all worked in the greater Boston area at one point in their career. The ages of the participants ranged from 22 to 68 with the mean age of 44.2 years. Years of involvement in EMS ranged from 5 to 46 years with the mean being 25.8 years. All but one of the participants recorded their race as White with the exception recording "Filipino, German, English." In terms of educational attainment, one participant indicated some college, two indicated Bachelor's degrees, one indicated postgraduate work, and one indicated a Master's degree. Two participants reported personal income between $52,000-$74,999 and three reported $75,000+. It was of note that this personal income was reported for the previous year, even if the participant was retired from working in EMS. Four participants indicated being married or in a domestic partnership, while one indicated being single and never married. There were an average of 1.8 children per participant ranging from 0 to 3. These demographic results were summarized in Table 2.

Table 2. Demographic Data Reported by Participants. The income reported does not account for current involvement in emergency medical services.

Participant Number	Age	Gender	Highest Level of Education	Race	Relationship Status	Number of Children	Last Year Personal Income*	Years in EMS
1	22	Male	Some College	Filipino, German, English	Married/Domestic Partnership	2	$52,000 - $74,999	5
2	61	Male	Post Graduate Work	White	Married/Domestic Partnership	3	$75,0000+	42
3	68	Male	Bachelor's Degree	White	Married/Domestic Partnership	2	$75,0000+	46
4	46	Male	Master's Degree	White	Married/Domestic Partnership	2	$75,0000+	28
5	24	Male	Bachelor's Degree	White	Single, Never Married	0	$52,000 - $74,999	8

Personality Traits

Participants recalled that there was a specific instance that initiated their involvement in EMS. A common impetus for EMS work was the desire to "help people." As a teenager, one paramedic reported that he witnessed a serious vehicle accident. He recalled, "I didn't know

what to do. I never wanted to be in a situation, coming across something where I didn't know what to do or where to go. So, I took a first aid course and started volunteering on an ambulance." The environment around them motivated the participants to become involved with EMS. These social or community factors included an involvement in swimming that progressed towards a lifeguard certification, or a high school club fair with a "table for the volunteer ambulance squad." In addition, one participant stated it was the benefits associated with working for an EMS agency, in particular staffing a "stock car track," that attracted him.

Regardless of the catalyst for joining EMS, the progression to paramedic was remarkably similar between all participants. The common trajectory started with pre-EMT training as a first responder, such as first aid classes. Two of the participants began as lifeguards. Once an EMT, it was common to begin as a volunteer for an EMS agency, such as a small municipal or university service. From this position a transition was made to a paid position in either a private or public sector agency. After a number of years and gained experience, they became paramedics. Two of the participants discussed transitioning into administrative positions such as a "high-level manager" or working their way to chief of the department. Despite their varying current positions as EMT instructors, paramedics, professors, or subject matter experts, the path they took to become a paramedic followed a similar trajectory.

As they spent more time in EMS, participants became hooked. This developing passion continued, further spurring increased involvement. For example, "[I] went on to love it so I got more involved." A general theme of catching the "EMS bug," "falling in love," or "got hooked on that world" was due to "the adrenaline rush, [and] the helping people." This rush was caused by the unpredictable atmosphere created by the sensation of "you never know what you're going to do and you're not going to see anything else like it, anywhere." It could also be attributed to the feelings and emotions generated during calls. The "high from saving someone's life was like nothing else you could ever have, I have been fortunate enough to have literally hundreds if not thousands of those." But in addition to the lifesaving care, things "like going through the Sumner Tunnel at 70 miles an hour. That's a rush." These factors combined to create an overall sense that EMS was "the best job I have ever had." One participant who planned to continue working as a paramedic even when he becomes a biomedical device engineer exemplified this. The overall sentiment expressed by all the participants was that "there wasn't anything better" than EMS.

It became clear that financial enticement was not a motivating or retaining factor for their involvement in EMS. There was a divide between those who had primarily worked in private sector EMS from municipal service. The private paramedics expressed a stronger sentiment of the financial influences of the job. References to financial status followed a negative trend such as "...they are drop poor as all hell, so we don't have a lot of money..." In fact, they argued that the reason for continuing in the profession had to be more than financially driven because "economically it also doesn't make sense...working 96 hours a week to not make ends meet." It was described as "a tough thing, you always have to have a part time job...because you can't do very well financially in this world. You have to understand that, EMS, you have to do it because you love it, because you want to help people." Public sector paramedics approached the concept of financial incentives with a lesser degree of concern. This mentality was characteristic of "not many people do it for the money." However, public paramedics quickly acknowledged the inequality favoring public over private EMS, especially with regard to financial incentives and respect. Despite the differences in engagement with the monetary motivations of their careers, the paramedics agreed that "money isn't what makes the job...mostly, they want to help other people."

Participants were split on the idea of an EMS personality type. Those that supported a professional personality type believed it was characterized by "people who want instant gratification, people who want something very tangible in front of them.... very type A, want to be in control, want to calm the situation down, move people forward." This personality type was said to be visible in their actions but also in their private lives. "I have friends on Facebook that are in this field from work. Guarantee you they share the same links, they post the same things. We all talk about the same thing. Like the conversation is pretty predictable at work. Their reactions to things are pretty predictable." Those that disagreed with this EMS personality type existence believed that there was more of an eclectic mixture of provider personalities. One paramedic stated, "As corny as that sounds, I think that most people care about people. I don't think it's necessarily the Rambo type or whatever, I think it's a lot of people. If there's one common thread it's caring about people." Overall, the sentiment of the participants was that paramedics share characteristics that include a strong sense of caring as well as a combination of being laid back and stubborn.

Those that supported the idea of the EMS personality type were quick to distance themselves from it. “There are the outliers and I think I am a bit of an outlier myself.” However, when the paramedics were asked to describe their own personality, they shared many similar characteristics. They described themselves as “empathetic,” and “...easy going, understanding, caring. I do have a short temper though.” “Getting there and taking control of the situation. Being able to actually help someone and then move on.” Despite a lack of overall confirmation for a specific personality type, the providers shared a common sense of compassion, as demonstrated in their efforts to do the most for their patients. “You assume a whole different persona, when you’re with a patient. It’s not your real persona, it’s the one a patient wants to see.” It was this sense of dedication to helping others which connected the self-described personalities of the participants with their agreed upon EMS personality type of caring-ness.

Opinion on Public Perception of EMS

The participants expressed that while EMS, law enforcement, and fire departments were all first responders, there were significant characteristics that separate the three branches. These differences were visible on many emergency medical calls because of the tendency for all three services to be dispatched together. In terms of services provided, EMS was the branch that provided the care in medical emergencies despite law enforcement and fire personnel often having emergency medical training. “...The cops and fire are waiting for the ambulance to come and do something.” This difference was attributed to the mission and purpose of EMS. “I don’t want to say that we value life more but I feel that we do at the same time.” Unlike the fire department, whose job description revolved around the protection of material property, or law enforcement, whose job was to provide public safety, EMS worked to care for the patient. This created a “whole different level of interaction between people” by EMS personnel. Paramedics are “trained to be very non-judgmental. Not taking anything at face value but taking into account what the patient is saying to us. It is not ours to judge.”

Participants believed that the work they did, did not require public attention. It was done with a sense of feeling “content of being in the background,” which caused them to be often forgotten about. For example, after the Boston Marathon Bombing the Boston Bruins had “a big sign saying thank you Boston Police and Boston Fire. No Boston EMS. Boston EMS cleared the marathon bombing 18 minutes after the bombs went off. The site was cleared and the patients

were in vehicles going to the hospital. It had nothing to do with Boston Police who was working traffic." To understand this invisibility, participants referenced public perception of EMS.

When the public calls for EMS, they called 911 for professional help. "The public doesn't care what patch you have on your uniform, what color your uniform is. And they don't know the difference and they don't care the difference. They know if someone is sick or injured they want help...The public doesn't care whether its police, fire, first service EMS, third service EMS, they want professionals to come take care of them." The participants believed that the public was concerned and just wanted someone, anyone, to answer their call for help. "They don't care if you're white, back, yellow, green, fat, short, big, or tall." An emergent theme was that the public had a mentality shaped by the urgent situation they were experiencing: "take care of me and take me to the hospital. I don't care, I'll respect you in the morning maybe, if you're lucky." Being focused on their condition, the public was primarily concerned about receiving help, not who was administering it.

The participants believed that the public had a skewed understanding of EMS. Due to the novelty of EMS, the service has had only a short time period to gain a reputation as compared to law enforcement or the fire service. Despite this, EMS had increased public awareness of their existence. "When I started in EMS people honestly thought that it was Eastern Mountain Sports. It's a joke now, it was reality." In the years that modern EMS has been functioning it "has turned into a professional service...It's not long ago that people were being taken to the hospital in the back of police wagons…" Participants with less EMS experience believed the public undervalued their abilities and viewed them as "just an ambulance driver." "We get underestimated in a number of fronts…. We wear a ton of different hats…" EMS personnel provided more than just a ride to the hospital and emergency medical care. One provider noted that, "until they need us and see us work they perceive us pretty much just as a taxi and when they see us actually working they realize what we are capable of and they realize we were a greater asset than what they realized in the first place." Where another provider reported, "...mostly you call, we haul. That's kind of the attitude of a lot of the public, they don't understand what EMS does." Participants who had been involved in EMS longer instead discussed the "unrealistic expectations" of the public in terms of overestimating their ability to provide aid. It has changed into "they call 911 and expect that the best most advanced people come and take care of [them]." Despite a disagreement of an overestimation or underestimation

of EMS between participants based on years involved in EMS, a consensus of a misinformed public was agreed upon.

Several participants attributed this lack of understanding to the innate nature of EMS. It stemmed from EMS providing a service "that people don't envision happening to them and they don't think about it as much." In addition, it is not a topic that many want to engage with "because if EMS is coming to your house that means you are sick, or you are injured, or you are killed. It means you." This sense of vulnerability was not something that participants believed the public wanted to engage with. In turn, it caused there to be a societal knowledge gap with regard to the capabilities of EMS.

Participants believed that one way the public misinterpreted their role was by classifying their actions as heroic. They agreed that "most EMTs or paramedics wouldn't think what they do is heroic at all. Its just part of the job. But other people may look at it and say it's heroic." One paramedic said, "I wouldn't say heroic. I have been shot at, I have been stabbed." The same paramedic when describing a crane rescue, as "that's pretty cool. Heroic? No, pretty cool." The reason behind participants not viewing their actions as heroic was because of a sense of "that's what you are getting paid to do." It was believed that "on a day-to-day basis the public has no idea" what paramedics do. Relying on the media for reference, the public established an inaccurate understanding. "We see the most heroic things in the news, the most heroic things on television. That's not reality." Another participant stated, "the fact that they just see us spring into action and don't realize the hours of training, the hours of work that we have been through to get to that level." Participants thought that the public, shaped by filtered images of the profession, might hold paramedics as heroes despite disagreement on behalf of the paramedics themselves.

EMS was often grouped together in the realm of public safety, which might have an impact with the growing tension surrounding public safety across the country. One provider stated, "there have been reports around the country of different incidents, where fire and EMS are being targeted accidently." Another provider discussed that in certain communities, "EMS is public safety which means it's police. There is certainly distrust. Do I call EMS? It brings with them police and law enforcement...it's difficult to separate the two." In addition, EMS often served as a stepping-stone for law enforcement or people who wanted to be involved in law enforcement. This created a "brotherhood mentality among a lot of providers...that we stand with

law enforcement...If someone is bad mouthing the cops we tend to not tolerate that as much as a nurse or a doctor would." In order to combat this friction, one participant expressed the need to behave in a respectful way. "It's because you treat people with respect and you go in and take care of people who are injured...It's all about how you treat people...people see it and you build the reputation in the community." By doing the right thing and "being in the community" in a positive way, people began to trust a service and its providers. "It's not a one shot, EMS week...but it's every day. It's going to church events, it's going to community events, it's going to schools, it's pretty much how you have to do it." This upbeat, positive solution of building trust in a community combated potential negative discourse.

Occupational Stress

Participants reflected on the parallels they drew between patients and the providers' family members. This was particularly present when dealing with pediatric patients. One responder described this as the hardest aspect of the job. "Especially having a kid of my own, how can you tell a family that we're giving up even though we aren't really giving up? It's just that there is nothing else we can do." Personalizing the situation, as if it could be one of their own loved ones, was a point of stress on providers. "There are a lot of times when a patient could ring a bell. That could be my child, or my parent. I think when you come home that's when there are those little extra hugs and little extra sensitivities." One paramedic expressed how these types of connections impacted his life. "I lost my grandfather to a heart attack...So now all of a sudden, I was seeing his various illnesses and situation in various patients. And it got to a point where I could almost not handle it. I actually had to take a week off work because I couldn't deal with it anymore." Another provider stated the key to being a successful provider was not allowing this connection to be established and to simply not bring the work come home. "I don't humanize the people, the patients. It's a patient." However, this humanization, connection, and internalization was expressed by several participants. When responding to calls where a connection was established, especially when dealing with pediatric patients, the participants stated their care differed. "I put a lot more effort into it. I don't wanna say I don't give up but I go harder and farther…" The participants expressed that establishing connections between their personal lives and their patients provided them with additional stress.

Participants expressed the difficulties of trying to manage and create time for their family while juggling the shiftwork schedule of the profession. This balancing act appeared not as significant in the public EMS providers as the private ones. The participants in public EMS were able to work night shifts. “I worked nights so I could be the classroom mom. I was the classroom mom for years. I didn’t miss a field trip for anything.” But, just because they worked at night did not eliminate obstacles of spending time with their families. “The first 20 years I worked nights and my wife worked days. So we never saw each other.” The private providers expressed that it was much harder to work and support a family at the same time. “It’s either I am not with my family for 60-70 hours a week to provide for them or I don’t have enough finances to care for them.” Another participant commented, “people who do this for a career, work 96 hours a week...that takes a toll on their family life.” The effects on relationships were well known by providers with the popular slogan “every marriage suffers from EMS.”

Difficulty in family relations continued in the decision of participants not talking about the stressors of work with significant others. A participant when asked if he talked to his wife about work responded, “at times, yeah. But at other times she knew that I didn’t want to talk.” Other participants expressed the sentiment that “either you don’t want to tell your wife or husband about it because you don’t want to put stress on them...or you're worried that they won’t understand or they won’t be able to understand it the way you understood it.” There was a feeling that the burden of the stress of the providers would put strain on the relationship. There was a point of disagreement among participants with regard to whether the provider should discuss their stressors with their family. One side argued “if you keep bringing stuff home with you, you won’t last...The same reason you can’t go home and talk about this stuff with your wife or your girlfriend or your husband or whatever.” The other acknowledged the need for communication but did not partake in it themselves. “I don’t talk to my family as much as I should.” Participants did not communicate their feelings and stressors with their loved ones due to the belief that they would lack understanding or be a source of more harm in the relationship.

Despite these challenges, the participants prioritized their relationships with their families. One way that stress was dealt with was through spending time with those they cared about. “There are definitely days that I come home and I am just quiet...my son I will pretty much just hold and be with for a while and just not say a word.” Another paramedic reported that the way he dealt with stress was “when my kids were younger, I coached sports like crazy, I

coached all of the kids. I was involved in the other part of life." This was viewed among providers as a positive outlet, "on the more healthy side, people go spend time with their kids, spend time with their families." The significance placed on family was demonstrated in one participant's action of deferring a meeting at the White House because of his goddaughter's confirmation. The participants, through their actions, expressed value, care and involvement in their family life.

The bonds between paramedics, in particular those that worked as a team, had the ability to develop into friendships. Participants attributed this to the sheer duration of time spent with one's partner and the stressful nature of the job. "You are going to go through highs and lows that you won't with anyone else. Eventually you will run out of things to talk about so you are going to get more personal. More personal than you think you would with a coworker normally." These relationships spilled over into the personal lives of the participants at "barbecues or birthday parties for our kids." It created involvement in the personal side of life as the partnership developed into bonds of family. One participant believed that "sometimes you're closer to them than family." The extent of these bonds differed based on the duration of the partnership. This lead to stronger bonds being formed by public sector participants than private sector. In public EMS, "you might work with the same person on the ambulance for years and years. You are going to share experiences with people that no one else will understand...that definitely does not happen in private EMS because there are a lot more moving parts." These moving parts were expressed as company politics and going "through partners every 3 or 4 months, rotating, shifting things around." One private service paramedic stated, "I would say that in my personal relationships, I have 0 [friends] in EMS. Socially there is not one person in EMS that I do things with." He attributed this to "poor experiences early on" which caused him to separate his personal and professional lives. The participants demonstrated a clear division in the strength of bonds of between partners based upon their sector.

These strong bonds with partners were utilized to relieve stress. "We shoot the shit, we get mad at each other and yell at each other, and then we get better. We both know that we're stressed out. We can talk through it most of the time because we see it together." The participants relied on their partner in a way that lowered their stress level. This support system provided a mentality of "they had my back just like they had in the middle of a heart attack." Together the partners developed coping mechanisms such as making humor or using sarcasm to

lighten a situation. “We have the worst sense of humor in the world, just bad jokes.” Another participant phrased it as “for better or for worse there are some things that are said in the ambulance that I wouldn’t want to repeat, making jokes in very serious situations.” Participants used the relationships they built with their partners to cope with the stressors of the occupation.

The job responsibilities of a paramedic were incredibly stressful. “If you look at the job description itself. Take everything else out of the equation. Going to someone’s house that is having a medical emergency, assessing them, providing care for them, and taking them to the hospital. That is not a stress-free job.” Adding into this mix the changing severity of the situation, paramedics were responsible for managing and remaining calm in these situations. The shift style work of EMS was additionally noted as a stress inducer. “You get woken up in the middle of the night by the ringing of a tone for something tragic.” Not knowing when a call will come in made the participants change their behaviors, and these alterations had lasting effects. “How many meals that I bought and never got to eat over years of working, completely changed the way I eat. Not as healthy, way too fast. And my ability to sleep completely changed when I became an EMT.” These types of occupational duties provided a base level of stress for paramedics.

The participants believed that a lack of respect toward their occupation contributed to additional stress. Participants in both the private and public sectors perceived this trend of unequal recognition compared to other first responders. “People don’t treat us as equals whether it be a third service, a first service, a fire service, a private service. It doesn’t really matter where it is, it’s all about how people are treated and the respect that they get.” Even outside the realm of public safety, there was a disrespect that was perpetuated. “That attitude that you are the low rung on the totem pole in the healthcare system. It is very difficult to try to maintain an upbeat positive attitude long term, for a lot of providers.” Being at the very bottom was reinforced by “people shit[ting] on us from every direction.” The public played into this disrespect by looking at paramedics as “just an ambulance driver.” One participant reported, “the hardest part was dealing with receiving no thanks from patients over and over again. Just banging your head against the wall, why am I doing this?” This sense of disrespect was internalized in the participants who labeled themselves the “black sheep” of their family or perceived a “lack of respect” by family members due to their involvement in EMS. The lack of recognition and

appreciation compared to other first responders by the public safety community, the medical community, the public, and provider's families created added stress for paramedics.

This sense of occupational disrespect differed between public and private EMS services. Participants described a hierarchy that had been established in EMS, which placed public agencies above private companies due to their financial motivations. "There is definitely a class system in EMS today...I think that for profit, not for profit plays a role. I think that people see a private ambulance service as trying to make money." This difference played into the way the providers were perceived and treated. "I have colleagues over the years that have worked for both Boston EMS and private service. And depending literally on the color of their uniform, they get different treatment. If you are wearing Boston EMS brown... you have a much higher level of respect." Instead of coming together to try to resolve these problems, the different sectors of EMS worked separately from each other. "We tend to fight within our circles more then come together...across the spectrum and work to promote the industry." Participants believed that this lack of unity had created a sense of disorder in EMS on the national level as well. "We are not joined together because we are still fighting the internal fight...Until we fix that, there will never be a national or state voice of togetherness." The distinctions between public and private service increased the level of stress and disrespect between providers.

This divide between public and private EMS separated those who were able to work in EMS for their career and those who were not. In public EMS, participants believed a career was possible due to the ability of making a decent wage and receiving benefits. In doing so, public sector agencies were able to keep paramedics for the long term and maintain institutional knowledge. "I think that you have to realize you can't pay EMTs minimum wage. You have to give them a decent wage and good benefits, you have to treat them as professionals as you would others. That I think is just as much a contributor to burnout..." With these changes, public services had employees that rose through the ranks and "have been in service for 30 years, 40 years." However, in private EMS, which lacked these career aspects and required unrealistic hours to make a living, "not many stayed in EMS." Instead participants viewed private EMS "as that stepping stone, working its way towards other careers that are more long term and securable….long term security is why people turn out of EMS." This created an opposite effect in private EMS. "When you take all the stress that I talked about, from the job, employment, from working a lot, financial stress, stress in the home.... it makes people less happy to be at

work, run calls, or be with their partners." Participants discussed the creation of a cycle where private paramedics were phasing out and agencies "lose skills and system knowledge." EMS as a career for private and public EMS providers was explained as "two completely different worlds."

Participants further emphasized these differences when the training of public and private services were examined. One participant stated, "it all depends on where you are trained and the way you are trained and what's expected of you." The public service trained their providers to a higher level by utilizing academies beyond just the basic paramedic certification. For example, Boston EMS had a "6 month academy for new EMTs." This academy mimics the training of a police officer or firefighter in the sense that it provided in-depth, uniform training to personnel. In addition, participants noted that Boston EMS was able to provide continued training to its members, which in turn allowed for professional growth, keeping providers engaged. These opportunities involved open water rescue divers, HAZMAT technicians, and tactical EMTs. One provider stated when describing his friend, "he just tried out for the bike team. He was saying, 'some of them were faster than me but half of them, I was faster than them' and he's not a true physical specimen as I told him. But he also brings 40 plus years of experience...he has seen a lot and passing that wisdom along helps. But if you don't have that ability to make it a career, you lose that." Further, different protocols, abilities, and experience created different levels of service, even at the paramedic level of care. "I can work for a service like McCall doing BLS, dialysis runs or I can work as a paramedic for Boston Medflight doing critical care transfers...A paramedic at McCall is not at the same level of experience as a paramedic with Boston Medflight or Boston EMS." This was combined with the fact that "there's no standardization across the country as in some places EMS is treated as a sub-specialty." Participants argued that from service to service, the level of care was reflected in the training and experience of the providers.

Despite the differences between public and private services, an overall sense of brotherhood between responders was revealed. The participants expressed that the paramedic experience was unique. "If people outside [EMS] don't get it, it builds that camaraderie between people that understand it...I have been in fights and the guy who is with me was the only person there. You develop a bond with those people. Even those people that I only worked with a shift or two." Having similar shared experiences brought paramedics together. "Some people believe no one can understand them if they don't work in this field." However, the level with which the providers subscribed to this brotherhood was more strongly associated with being in the public

sector. The public providers discussed strong bonds that were formed quickly. “We are a brotherhood no matter what. You go to a different town, you are part of the family. We all look out for each other…” One public provider discussed how this camaraderie extends to all EMS providers. “An ambulance guy is an ambulance guy whether he works for Fallon or Brewster or whatever...they’ll take care of other EMS guys.” On the private side, this brotherhood was toned down. “If I am in a bar in Memphis and I happen to run into another paramedic, I might share stories with them, but it is not like the fire [service] where it is so ingrained in their culture.” The type of work that paramedics conducted established a sense of at the least association and at the most unity among providers.

The participants interviewed were majority white, all were male, had a similar income distribution, and were mostly married with children. Through the interviews, themes on personal traits revealed a very similar progression through EMS, becoming hooked on EMS, and staying on the job not for the salary received. The personality characteristics that they shared included a sense of caring. The participants revealed differences among the different first responder groups of fire, EMS and law enforcement. However, they expressed that the public did not care about these differences and simply wanted someone to answer their call for help. A general lack of understanding of EMS by the public was perceived as the reason for a heroic interpretation of their actions. Despite differences in public and private EMS, the participants worked to balance their time with their families while prioritizing these relationships. They did not share work stress with their significant others but used their partners at work to de-stress because they had developed strong bonds with them. In addition, there was significant organizational stress attributed to being a paramedic, which stemmed from low levels of respect, job responsibilities, and the inability to form a career in private EMS. Providers discussed how training opportunities, benefits, and fair pay increased retention rates and was why public service EMS was perceived as a career. The participants also agreed, in differing degrees, that there was a sense of brotherhood between providers. The participants in this study revealed trends and perceptions of paramedics for both private and public services varying in experience level.

Discussion

The Common Paramedic

Despite disagreement about the existence of an EMS identity, the participants all agreed that providers had a caring trait prominent in their personalities. The participants overall dismissed the idea of an EMS personality described by those like Donnelly and Siebert but agreed with the caregiving component. Though not all providers described themselves in such a manner, based on the descriptions of their stories, especially their most meaningful calls, a true underlying concerned and kind personality was revealed. For example, a provider shared:

"...you have little old lady who has been laying on the floor literally from 4 or 5 days and is covered in everything and you treat her with a little dignity and respect and she turns around and says feed my cats. So you feed her cats. I remember this clear as day, feed her cats, get her keys, lock the door, before you lock the door get my wallet...she really wanted her wallet so she could give us a $2 tip. And it's like this lady had nothing. It's like no, I don't need a $2 tip. And we had to fight with her to not take the $2, so finally she gave us the $2 and we stuffed it back in when she wasn't looking. But I mean treating people with respect matters."

Instead of outright stating that they themselves were caring individuals, the providers used examples like the one above. Through this humble method, their bottom line was to simply just do the right thing by helping others. Despite all the disrespect, stress, and problems inherent in EMS, the providers were there to provide care to the patients they served. This was further demonstrated in their career path to the paramedic level, which was instigated by an initial spark— be it by a specific event or an urge to make a difference in their community.

The common progression of EMS personnel served to further demonstrate how the intent of the providers revolved around having a positive impact on the lives of others. The first step was often with an introduction to the field, with a small scope of practice such as that of a lifeguard or a first aid certification. This quickly expanded into an EMT certification and volunteer position in EMS. The providers were willing to sacrifice their time and energy, at no benefit to themselves other than fulfilling their desire to help people. Even when they transferred out of volunteer EMS and began being paid for their time, the paramedics repeatedly stated that they were not in this field for financial gain. With years of experience dedicated to EMS, the financial and emotional stresses that it encompassed gave providers no other option but to stay in the field due to their strong desire to help others in times of crisis.

There was unanimous consensus of getting hooked on EMS among the participants. This addiction incorporated the adrenaline rush of driving lights and sirens and responding to the unknown. However, it was also the ability answer the call for help. This empowered the paramedics by allowing them to provide a service that had a dramatic positive impact on the lives of others. The job demands altruistic behavior from the providers and those interviewed all demonstrated these tendencies. This positive attitude towards helping others served as a protective factor for the paramedics. By focusing on the impact they had to make a difference or save a life, paramedics were able to justify their continued involvement in the field. The many reasons to be frustrated and pick a different career were clearly laid out by the participants. However, they all demonstrated a strong passion for the work that they did. This could have also been attributed to a weed out type factor in EMS. Those that stayed in EMS for an extended period of time might be more caring than those who succumbed to burnout or quit the field. Becoming a paramedic took significant time and investment, presumably completed by those who have a higher passion for making a difference. These providers were thus more driven, which enables them to maintain a more positive outlook and encouraged continued involvement in EMS.

There were many different types of people in EMS. Yet, they shared the basic characteristic of caring for others. This trait influenced their fixation on the field and served to generate resilience against the obstacles standing in front of them.

Public Perception of EMS

Paramedics perceived that the public did not differentiate between types of first responders in an emergency situation. This lack of distinction served to clump together fire, police, and EMS responders, both private and public. The participants revealed that the public just wanted someone to answer their call for help. This grouping together of first responders under one umbrella was understandable in times of crisis. However, in non-emergency situations, lumping together often lead to EMS being forgotten and left out. A repeated pattern of being the third service reinforced and generated a cycle of unimportance and disrespect of EMS.

In turn, this lead to the lack of understanding surrounding EMS and its abilities, as expressed by the participants. However, there was a division on public perception based on the amount of time spent in EMS. Those who were veterans described the understanding as an

overestimation of abilities, while those with less experience saw it as an underestimation. EMS was a relatively new service, especially compared to fire and police departments. Those that have been in EMS longer had seen the system change and develop dramatically. Thus, there was a sense of achievement by these providers because they succeeded in informing the public of their services. The public has learned to call 911 for medical emergencies and came to expect trained providers with an ambulance to respond. These providers may have seen this as an overestimation because they have watched the system evolve and understood its limitations. This was compared to newer paramedics whose reference of change in EMS was primarily though second-hand experiences. These providers were unable to fully understand the change that has occurred. When they were referred to as ambulance drivers, they perceived the public lacking understanding of their abilities. This dichotomy found the veteran providers were in disagreement with the younger generation.

Despite an overall increase of awareness of EMS by the public, there was still an exorbitant amount of misunderstanding surrounding EMS, not present around other first responders such as law enforcement and fire departments. Participants expressed that continued misjudgment and lack of public interest led to a lack of attention that caused a perceived level of disrespect, by providers. The other two branches received media attention in both positive and negative lights, but this was not present for EMS. For example, despite negative attention being given to law enforcement recently, members of the public were knowledgeable about what police do. The public had an opinion on law enforcement, whether it was a positive or negative one. Depending where one was in the country, this lack of EMS knowledge could be explained by a fire services providing EMS. In these systems, as discussed, the fire department often provided the ambulance and/or EMS personnel. Thus, when these services were combined, the public would be justified in not being privy to a separate EMS agency. However, in Boston, EMS was a separate service but often lacked differentiation by the public.

A question was therefore posed. Was the public expected to understand the EMS system and its capabilities? From a provider's perspective, the answer should be yes. EMS had responsibilities as both a public safety and public health service, where providers gave care and support in emergency situations. In order to complete both these roles, the public had to be knowledgeable and aware of the goals and purposes of EMS so that they could have called upon them appropriately in their times of need. The current literature base on public awareness was

void of studies except a 1994 study on knowledge of a rural EMS system. For EMS to provide care for the populations it serves, the community needed to be aware of their existence, abilities, and goals.

An increased understanding would merit increased respect to EMS providers. The participants described the same altruistic characteristics and actions that generated respect attributed to law enforcement and fire departments by the public. If the public was aware of the training that paramedics undergo and the abilities they have as physician extenders, their respect level would rise dramatically from that of a taxi driver. With an increased understanding, the heroic title, often attributed to paramedics for saving lives, might be reduced. However, the participants clearly reiterated that they did not consider themselves heroes. Furthermore, they believed that their actions were dictated based on their training and were simply the right thing to do at that time. Trading a decrease in the possibility of heroic status for increased respect would have been the apparent choice of paramedics.

This generated the need for a rebranding and educational campaign of EMS. As discussed by participants, initial introduction of EMS to both the public and medical community took a great deal of education, effort and time. For example, Boston EMS took the nurses from hospitals and reporters on ride along to show them what they were doing. They involved the public in constant community engagements at schools, churches and other community events. One Boston EMS participant recalled:

"...we had baseball cards of EMTs...I have my old baseball card. Not just me...but, we had all of the EMTs in the district, they all had baseball cards. It was sorta comical…That stuff, it all mattered. When you see a kid in the community saying to another EMT, "oh yea where's your baseball card? Can I have your autograph?" People asking for autographs of EMTs...that's a good thing. So, I think it's not a one shot, EMS week...but it's every day. It's going to church events, it's going to community events, it's going to school, it's pretty much how you have to do it."

Boston was not alone. A 1970s television show, Emergency!, is widely credited with the expansion of EMS and implementation of paramedic programs across the country. Following the lifesaving adventures of fictitious Los Angeles County Fire Department paramedics, viewers from across the country became knowledgeable about and demanded EMS (Berman, 2007). Recent attempts to put EMS back into TV shows were criticized by the participants as showing paramedics in a disrespectful or dramatized manner. Despite these failures, the EMS community

has and can rebrand themselves through television media in a manner that increases public awareness, knowledge, and support.

The Effects of the Job

Being a paramedic had a multitude of occupational effects, both for physical and emotional health. The participants discussed that one of the hardest aspects of the job was the stress. This stress was generated not only by day-to-day responsibilities but also a general sense of public disrespect towards the job and lack of professional unity. In order to handle the emotional toll that being a paramedic took, paramedics developed coping mechanisms that include strong partner relationships and prioritization of family life.

Paramedics worked in pairs and depending on the agency could be partnered together from days to years. Spending hours at a time together generated bonds and deep connections between partners that were further strengthened by shared experiences. Participants pontificated emotional highs such as saving lives but also dealt with the horrors of human life, including abuse and death. Informal coping mechanisms were developed between partners to address the stresses, which included yelling at each other, talking out their feelings, and a twisted sense of humor. Partners formed a subculture between themselves by sharing inside jokes, jargon, and coping mechanisms. The relationships built at work were then continued in the personal lives of the providers from birthday parties to major life events. A sense of friendship stemming from these shared experiences developed into potentially life long bonds.

Those that shared in the experience of EMS created a closed community. Due to a perceived lack of understanding from people that have not lived the experience, paramedics believed that only people in their field understood them. This generated a sense of brotherhood and served to unify EMS providers. With significant trust placed among peers, providers were able to connect with each other on a deeper level. An intervention to target the stress of paramedics should have utilized this sense of brotherhood. In Boston EMS, they had a peer support model headed by an EMT whose job it was to connect with and reach out to providers. Fellow EMS providers looked out for each other and had specific trainings on how to help one another handle and cope with stress. This empowered the paramedic community to take care of its own, already a natural tendency of brotherhood. By having an intervention that took

advantage of this closed community mentality, providers were able to use the trust already established to strengthen the health of paramedics.

This stress came home with providers and had an effect on family life. Participants did not share or talk about their stressors with their family, which could have generated negative effects. These included divorce, affairs, mood changes, lack of energy, and distancing. These negative outcomes appeared to have become expected through sayings such as "every marriage ends because of EMS." The providers in this study seemed to actively fight against the negative effects they knew existed in an effort for them to not dictate their fate. Many participants noted that the stress could be dealt with in a positive manner if channeled into spending time with their family. This was marked by increased involvement in family life, from reading with children, to being a coach of a sports team, to being a classroom parent. The caring nature that drew the providers into EMS and motivated them to stay was also revealed in their interactions with family. EMS providers placed significant effort into making sure they could be there for their family despite obstacles of the job. Often paramedics were forced to make a decision to spend less time with their family in order to generate enough income. Paramedics were resilient; they chose to work nights to be there during the day and be involved with their family's activities. Despite this effort, paramedics were hooked on a job that, especially in the private sector, was not suitable for a lifelong career.

Depending on the EMS agency, the degree to which being a paramedic was considered a career varied. If the system was run through a fire department or a municipal third service, then there were benefits, pensions, higher pay, and a level of respect. As shown by participants, Boston EMS had established career level positions through significant effort in marketing, training, and public outreach. Their academy served to strengthen the training and skills of its providers while providing continued opportunities for advancement and expanding professional capabilities. However, in the private EMS industry, these benefits were lacking. Instead, there was a lack of respect by both the public and medical establishment. This was a systematic problem that not only harmed the paramedics but EMS as a whole. One participant argued:

"...we are one of the best countries in the world, yet our [EMS] system still lags behind a bunch of other places, clinically, professional, compensation wise, and education wise. So, at the same time we need to develop our skills and be better, develop our education to be better. We need to raise requirements and we need to raise compensation to attract better, long-term candidates. There is a high turnover rate so you lose a lot of educational and time

resources into a person who is not going to be in this career long term. You lose skills and system knowledge. Over time, you need to keep people in EMS long term, the way to do this is to pay them more."

To fix this, the system needs to change. By increasing the financial incentives, people will be attracted to and remain in the EMS field. This will boost the respect attributed to providers, as family members or the public will not continually look them down upon them. In addition, this will improve EMS agencies, as they will be able to maintain providers and increase institutional knowledge. With increased interest, the quality of providers grows as companies become more selective and raise training requirements. A change to a just compensation system where providers were able to make a career out of EMS would be beneficial to both paramedics and agencies.

The aforementioned differences between public and private sector EMS were so ingrained that they could not be set aside for the betterment of EMS as a whole. In terms of regulation, this disorganization was exemplified in the multitude of municipal, state, and federal agencies that oversee EMS. With no single department controlling the training, protocols, or management of EMS, the nation turned into a patchwork of different practices. This was further demonstrated by the lack of organization on the part of providers. While a national body did exist, participants expressed a lack of satisfaction in their actions. In addition, there was no EMS union that joins together providers across the country. The International Association of Fire Fighters (IAFF), though small in size, was one of the most powerful unions in the country and had a direct impact on politics and issues affecting its members. Further, the IAFF had brought public attention to the firefighters, which was ranked one of the most respected professions in the country (Scheiber, 2015). The fire union served as an example of how a united voice can bring respect and career status to an occupation. If EMS agencies were able to set aside their differences, stop the fighting between different sectors, and come together in a united voice, they could push towards making EMS a professional and respected career path. A unified body would be able to negotiate for benefits and pensions, improve training, and instill a greater sense of pride among providers.

Limitations of the Study

There were several components of the study that served to limit the impact and conclusions of this study. The use of a qualitative research method prevented the possibility of

obtaining statistically significant data. However, as discussed in the methods section, due to a significant lack of research present in the literature on the topics covered in this study, a qualitative analysis served to provide a broader understanding of the topics.

The sample size of this study was small (n=5). Due to this small sample size, the data collected only comes from a select group of participants from a very large field. The researcher had planned to obtain between three to eight participants, due to restraints in time and resources. This small sample size also affected the generalizability of the themes revealed. However, effort was placed into interviewing participants from both public and private services. Unfortunately, those with less experience were from private EMS while those with significantly more experience were from public EMS. This might, however, be due to burnout in private EMS and the lack of career opportunities in the sector. Despite a small sample size, the study still revealed similarities among providers that have worked for varying amounts of time and in varying capacities, thus uncovering issues and themes important to paramedics.

All participants completed the demographic collection form. The form failed to collected information on the current practicing status of the providers such as those retired. In addition, it did not ask if the provider had primarily worked in the private or public sector of EMS. For both of these unanswered questions, the interview transcript was referred to in order to obtain this information. The survey asked for a generic number of years in EMS, which could be interpreted differently by the participants. In order to better gauge the experience of the participants, the question should have inquired about the number of years the provider had worked as a paramedic. This would have provided a comparable quantity instead of a number open to interpretation based on what qualifies as EMS. Further, the categories on income appeared low to the majority of providers and an additional higher answer choice should have been offered. Overall, the demographic collection form served to provide additional background on the participant and complemented the interview transcripts during analysis. With a few changes to increase specificity, the collection form would have provided additional useful information.

During the data collection, a conversation type interview was conducted with the participants. This structure allowed the researcher to dive deeper into specific topics and guide the interview based on the information being obtained. However, this caused the participants to be asked differently worded questions in varying orders or to even be asked different questions, causing not all providers to be asked questions on all the themes covered. With an already small

sample size, this further reduced the significance. This was primarily due to time constraints of the interviews and could have been mediated through stricter adherence to the interview question guide or follow-up interviews with specific participants. The conversational aspect of the interview was believed to possibly allow the participants to feel more comfortable and thus might have allowed participants to share more personal information.

As discussed in the Locating Myself and Methods sections, the researcher had a personal connection to the topics covered in this thesis. As an EMS provider himself, this created an opportunity for bias. However, by revealing and discussing his point of view, the reader can obtain an insight into the mentality of the researcher thus serving to control the bias. In addition, the EMS experience of the author was believed to allow for connections to be made quickly with participants and form a mutual feeling of trust.

Another significant limitation to this study was the manner in which the public's perception of EMS was evaluated. This theme was revealed through the provider's opinion of the way they were perceived by the public. Understanding the public's perception from the point of view of the provider was an inherently flawed process. This limited the generalities able to be made on the public's perception. However, it did provide important insight into the perspective of providers and how they viewed themselves.

Future Studies

The themes and ideas uncovered in this study brought light to issues that have not been discussed in the literature. They serve as a foundation, allowing future studies to arise from the three main themes covered in this study of the personality of EMS providers, the public's perception of EMS, and the stress caused to paramedics from their occupation. Potentially, the most significant conclusion of the study was the necessity for further information and research in this understudied field.

One of the most previously studied topics engaged within this thesis was the personality of the providers. Based in the finding that a caring nature is what links EMS personnel and not a given personality type, a larger inquiry and assessment about the traits EMS providers share is warranted. This would enable those who work with this population to have a more well rounded understanding of the character of people in this field. In addition, findings in agreement with this

study would further dispute the EMS rescue personality and show that caring was the common factor.

Further studies into public perception should incorporate the views of the public and the communities that were served. In today's political climate with increased tensions surrounding the role of public safety, understanding how the public views EMS in relation to other public safety groups and first responders is of the utmost importance. Assessing the knowledge of the public in the abilities of EMS and determining if the public is over or underestimating their capabilities is also indicated. Further inquiry into how their perception of EMS is formed, such as from peer-to-peer communication or from the media, would allow for specific future interventions. These studies could be used to inform EMS agencies and government offices on how EMS should brand itself. It would provide information on the current state of EMS and advise future outreach programs.

Additional investigation into the stressors created by EMS is vital to reducing them. In this study, EMS had an effect on the paramedics' ability to balance family life and assure strong family bonds. A study on the relationship between significant others incorporating both EMS providers and their significant others would provide information in how to combat family stressors created by EMS. The study could also focus on ways to increase communication and openness with significant others. Further research is required to deal with the stress experienced not only in specific incidents, but also, as shown in this study, the buildup of day-to-day job responsibilities. Looking into the peer-to-peer model discussed by participants and evaluating the feasibility and effectiveness of such programs should be conducted. Lastly, attention should be placed towards finding a way to make EMS a viable career. To help obtain this goal, studies incorporating providers and agency management need to be conducted on ways to create incentives and benefits within different companies and agencies. Private and public EMS providers need to be studied on job satisfaction and system improvements in large, quantitative studies. The field lacks a considerable amount of research that is needed to generate change within EMS.

Conclusion

EMS personnel worked tirelessly to provide the public with the highest quality care possible, but when it came to institutional knowledge about these responders themselves, information was lacking. The study targeted the themes of paramedic identity, finding that what links providers was a caring personality, which motivated them to become involved and then hooked to the field of EMS. In fact, providers tended to follow the same trajectory through their career, making a transition from volunteer EMS to paid EMS while maintaining the desire to help those that they serve. The study also worked to uncover how EMS providers interpreted the public's perception of their service. It was found that providers believed that the public does not understand their capabilities; it was still unclear whether that lack of understanding leads to an under- or over-estimation of their abilities. In addition, public respect was also believed to be below that of other first responders such as law enforcement and the fire service. Lastly, the study focused on the aspects of the job that created stress for the provider and how that stress impacted the family and life of the paramedic. It was found that family relations may suffer due to the job, but paramedics tend to be incredibly family-oriented and make time for and value family bonds. Though paramedics typically did not discuss their stressors with their family, their work partner was believed to be understanding of the emotions they felt and served as a coping mechanism. The overall lack of respect associated with EMS, the low pay, and, in private sector, minimal benefits, led to additional stress being created by the job. The paramedics noted that there was an overall need for EMS to improve these components and become a viable career path so that it could attract and maintain quality providers.

Despite a lack statistical significance, this study revealed common themes among paramedics. The concepts proposed in this study were meant to serve as a base to be built upon. With limited formal literature existing regarding EMS providers themselves, this study strived to argue the importance of understanding this complex population. Further insight will allow for appropriate adaptation of occupational health components, public awareness initiatives and institution wide changes. There's a wealth of knowledge yet to be uncovered that would benefit not only the EMS personnel but also the public, which they serve.

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Appendix

Appendix 1 – Recruiting Material

PI: Montane Silverman
Study Advisor: Francie Chew
Study: Emergency Medical Services - a Provider's Perspective

Tufts University
Departments of American Studies and Community Health

Email Script

Dear _____.

I hope this email finds you well. I was referred to you *by* _____ because of your experience in EMS.

My name is Montane Silverman and I am a senior at Tufts University. I am currently completing a research study on providers' views on EMS, in which I interview EMS personnel who have more then five years of experience. I am writing to ask if you would be willing to participate in a 45 minute to an hour interview on your experience in EMS. This interview would take place at a time and place of your choosing. This study is completely confidential; your data will not be linked to your name and your participation will not be revealed.

This is a topic I am incredibly passionate about. As an EMT myself, I have worked in a variety of settings. Regardless of the location or type of service, the EMS personnel I have worked with have made a lasting impression on me.

The Tufts University Institutional Review Board has approved this project. I have attached a project consent form, which doubles as a description, for your reference. If you are interested in taking part in this study, have any questions, or would like more information, please do not hesitate to contact me.

Thank you for considering participating in my project.

Best,
Montane

Montane Silverman
Montane.silverman@tufts.edu
(323) 683-3010

Italic text indicates permission of reference to use their name

Tufts SBER IRB #1510005
Approved: 10/20/2015
Valid Until: 10/19/2016

PI: Montane Silverman
Study Advisor: Francie Chew
Study: Emergency Medical Services - a Provider's Perspective

Tufts University
Departments of American Studies and Community Health

Phone Script

Hello _____,

My name is Montane Silverman and I was referred to you *by* _____ because of your experience in EMS.

I am a senior at Tufts University and an EMT myself. I am currently completing a research study on providers' views on EMS, in which I interview EMS personnel who have more then five years of experience. These interviews would take about 45 minutes to an hour and take place at a time and place of your choosing. I am calling to ask if you would consider participating in my study. This study is completely confidential; your data will not be linked to your name and your participation will not be revealed.

The Tufts University Institutional Review Board has approved this project. I can send you the project consent form, which doubles as the project description. I am happy to answer any questions or concerns you may have now or in the future.

Thank you very much for your time.

Italic text indicates permission of reference to use their name

Because of the nature of a phone call, this script may not followed verbatim but the concepts in the above script will be communicated*

Tufts SBER IRB #1510005
Approved: 10/20/2015
Valid Until: 10/19/2016

Appendix 2 – Consent From/Study Description

PI: Montane Silverman
Study Advisory: Francie Chew
Study: Emergency Medical Services – a Provider's Perspective

Tufts University
Departments of American Studies and Community Health

Consent to Participate in Research Study

Principal Investigator: Montane Silverman

Study Title: Emergency Medical Services - A Provider's Perspective

Purpose: You are invited to take part in a research study investigating perspective of emergency medical service (EMS) providers. The themes covered will include the provider's reason for joining this occupation, perception of how their patients react towards their presence, and the impact of the job on the provider.

Procedures: If you agree to take part in this study, you will be asked to give verbal consent after reading this consent form. Then an in-person interview will take place at a time and place convenient for you. During this interview you will be asked about your experiences in EMS, the relationships you have with your patients, and effects that your occupation has on your life. The interview will be audio recorded but no identifying information will be in or attached to this recording. The original audio recording will be erased within three weeks of the interview after transcription of the file can be completed. This way, only written transcripts of your statements without any identifying information will exist. In addition, you will be asked to fill out a demographics sheet.

Duration: Participation will take approximately 45 minutes to one hour to complete. If the participant is willing, a secondary interview may take place.be scheduled to be in the same format as the initial interview. This follow up email will expand upon the themes covered in the first session and will be completed after verbal consent is obtained

Risks and Discomfort: There are no physical or known economic risks associated with participating in this study. Based on the tight knit community of EMS, the researchers acknowledge that there might be social risks associated with participation. There is the potential of the loss of your confidentiality by participating in this study; however no identifying information will be collected and only a verbal consent (that is not recorded) will exist linking you to this study. Some of the questions may make you feel uncomfortable or address sensitive issues; you may take a break, skip a question or end the interview at anytime.

Benefits: There is no direct benefit to you from this study. However, this study will give you the opportunity to talk about your experiences as an EMS provider and share your stories. Your participation may help others in the future by contributing to a field that has only limited amounts of research.

Confidentiality: Your participation in the study will remain confidential, and no identifying information will be collected or stored. Participants will not be referred to by name in any material produced from this interview. All research records will be kept on a secured protected

Tufts SBER IRB #1510005
Approved: 10/20/2015
Valid Until: 10/19/2016

drive. The researchers acknowledge the potential for incriminating information to be uncovered during the interview and advise the participant to refrain from sharing any incriminating information.

Compensation: There is no composition associated with this study.

Withdrawal of Participation: Participating in this study is voluntary. You may withdraw at anytime without penalty by informing the researcher that you no longer with to participate. No questions will be asked.

Request for More Information: If you have any questions about this study or experience any problems, please contact Montane Silverman at (323) 683-3010 or Montane.silverman@tufts.edu.

Whom to contact about your rights in this research, for questions, concerns, suggestions, or complaints that are not being addressed by the researcher, or research-related harm: Institutional Review Board: Social, Behavioral, and Educational Research, 20 Professors Row, Medford, MA 02155. Phone: 617-627-3417. E-mail: sber@tufts.edu

Agreement: By giving your verbal consent to participate in this study, you are stating that the study has been sufficiently explained, that you agree to participate, and that you understand that you are free to withdraw from the study at anytime without penalty.

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Valid Until: 10/19/2016

Appendix 3 – Demographic Form

PI: Montane Silverman
Study Advisory: Francie Chew
Study: Emergency Medical Services – a Provider's Perspective

Interview #____

Tufts University
Departments of American Studies and Community Health

Demographic Collection Form

Please answer the following questions to the best of your ability:

- **How old are you?** _____
- **What is your gender?** *(circle)* Male Female Other
- **What is your highest level of education?** _____
- **What race do you consider yourself?** _____
- **What is your marital status?** *(circle)*

Single, never married Married/Domestic Partnership Widowed Divorced Separated

- **Do you have children? If yes, how many?** _____
- **What was your personal income last year?** *(circle)*

$0-25,999 $26,000-51,999 $52,000-$74,999 More than $75,000 Don't Know/Decline

- **How many years have you worked in emergency medical services?** _____

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Appendix 4 – Interview Guide

PI: Montane Silverman
Study Advisor: Francie Chew
Study: Emergency Medical Services - a Provider's Perspective

Interview #____

Tufts University
Departments of American Studies and Community Health

Interview Guide

Introductions
What has been your career trajectory?

Occupational Choice
Why did you choose to enter into the emergency medical service field?

How would you describe your personality? How does this effect your involvement in EMS?

Based on your experience working with other EMS providers, what type of people work in EMS? What makes these providers different from other occupations? What makes these providers different from other first responders?

There is the saying that goes "while most people run away from chaos, some run towards it." Which way do you run? Why do you run that way?

Perceived
What does being a first responder mean to you?

What characterizes EMS as an organization? Is this different than other first responders such as police or fire?

In your experience, how is EMS perceived by the people and communities it serves?

Do your patients respond differently to you as compared to other first responders? How is this interaction different?

Occupational effects
What is the hardest part of your job? What as a Paramedic/EMT is your biggest occupational health hazard?

What are the other stressors of your occupation? How do you deal or cope with these stressors?

How do these stressors manifest? Physically? Emotionally?

How would you describe EMS burnout? Why is it so prevalent?

What is your most memorable call?

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