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## Job Stress Effects on Job Satisfaction and Attrition in 9-1-1 Call Centers

Damarys Jaile Gilligan

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Job Stress Effects on Job Satisfaction and Attrition in 9-1-1 Call Centers

by  
Damarys Jaile Gilligan

An Applied Dissertation Submitted to the  
Abraham S. Fischler College of Education  
and School of Criminal Justice in Partial  
Fulfillment of the Requirements for the  
Degree of Doctor of Education

Nova Southeastern University  
2020

## Approval Page

This applied dissertation was submitted by Damarys Jaile Gilligan under the direction of the persons listed below. It was submitted to the Abraham S. Fischler College of Education and School of Criminal Justice and approved in partial fulfillment of the requirements for the degree of Doctor of Education at Nova Southeastern University.

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## Statement of Original Work

I declare the following:

I have read the Code of Student Conduct and Academic Responsibility as described in the *Student Handbook* of Nova Southeastern University. This applied dissertation represents my original work, except where I have acknowledged the ideas, words, or material of other authors.

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Damarys Jaile Gilligan

Name

July 26, 2020

Date

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## Abstract

Job Stress Effects on Job Satisfaction and Attrition in 9-1-1 Call Centers. Damaris Jaile Gilligan, 2020: Applied Dissertation, Nova Southeastern University, Abraham S. Fischler College of Education and School of Criminal Justice. Keywords: law enforcement, 9-1-1 telecommunicators, police dispatchers, fire dispatchers, 9-1-1 call takers, 9-1-1 call centers, attrition, job stress, shiftwork, burnout, job satisfaction, mental health, emergency services, correlations

In 9-1-1 call centers across the nation the personnel shortage has become a crisis. The nature of the job of a 9-1-1 telecommunicator is stressful due to the high volume of emergency calls. This applied dissertation was designed to learn if there is a relationship between job stress, burnout levels, and job satisfaction in 9-1-1 telecommunicators. This was a nonexperimental quantitative survey research with a correlational approach. The population was a nonprobability convenience sample recruited through the Survey Monkey Audience platform. Data was collected at one point in time. A total of 37 participants took part in the study. All participants adults in the United States who are currently classified as 9-1-1 telecommunicators (police dispatchers, fire dispatchers, 9-1-1 call takers, or a combination of any of these classifications).

The results of this study showed there is a positive correlation among the variables job stress, burnout levels, and job satisfaction. The participants completed the Job Stress Scale, the Oldenburg Burnout Inventory (OLBI) and the Job Satisfaction Scale. The mean score of each instrument suggests that the levels reported for the three variables; stress, burnout, and job satisfaction, were moderate on the scales. There was a positive correlation between job stress and employee job satisfaction ( $r=.51$ ,  $N=38$ ,  $p<.001$ ). Job stress and employees' burnout levels results showed a positive correlation between the variables ( $r=.68$ ,  $N=37$  for burnout,  $p<.001$ ). Employees' burnout levels and employee job satisfaction variables results showed a positive significant correlation ( $r=.67$ ,  $N=38$ ,  $p<.001$ ).

There were a few limitations to this study. These limitations include the study data was collected via surveys, the way the participants were recruited to take part in the study, the data collected was based on self-reports, and the anonymity of the participants which did not allow for follow-up questions. Therefore, future studies should focus in studying this population, the nature of the relationship between stress, burnout, and job satisfaction, and how best to assist 9-1-1 telecommunicators in dealing with these issues. Organizational support, coping skills, and stress reduction techniques should be considered as potential intervention strategies in future studies. More information is needed about 9-1-1 telecommunicators as this population has not been studied in depth as their other counterparts in the emergency services field such as police officers and firefighters have been.

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## Chapter 1: Introduction

### Statement of the Problem

Law enforcement is known to be a profession where police officers are exposed to dangerous situations when they respond to emergency calls received via 9-1-1 call centers. The intricacies of how a 9-1-1 call center works is not well known to the public that uses its services. The contact with the person who answers a citizen's emergency call can change lives. A *telecommunicator* is a person who works at a 9-1-1 call center and performs tasks such as call taking, emergency medical dispatch, and/or police dispatch. Each of these positions has different responsibilities, yet they fall under the 'telecommunications' umbrella. In some departments, the telecommunicator performs multiple tasks; it is contingent on the size of the call center and the community served. The telecommunicator term encompasses what it is to work at a 9-1-1 call center where employees are exposed to stress and highly demanding tasks daily (Mann, 2016).

The problem to be addressed in this applied dissertation is that, as a result of the stressful nature of the job and the high volume of calls and demands from the community, challenges arise in the provision of services and the well-being of the employees (Rigden, 2017). Taking this into consideration, employees at a 9-1-1 call center may benefit from having access to resources to help them perform their job better as well as services where they can learn and practice self-care.

**The topic.** The proposed area of study is the effects of job stress on job satisfaction as well as attrition in 9-1-1 call centers, also known as 9-1-1 communications centers. The nature of the job has a significant influence on how employees perceive their roles in the organization and how this affects their satisfaction in their current positions.

All these factors together could be linked to the personnel shortage crisis the 9-1-1 call centers are facing nationwide.

**The research problem.** The research problem that will be investigated in this study is the personnel shortage crisis in 9-1-1 call centers across the United States and how this crisis may have roots in how job stress, burnout, and job satisfaction are experienced by the employees. Employees at a 9-1-1 call center sometimes must extend their shifts at the last minute to cover the next shift's shortage (Baseman et al., 2018). This change may include working double shifts back-to-back with little time off in between, as well as not having days off. Overworking employees can affect their performance in many ways, which can in turn affect the community and how it receives the services from the first responders (Miller, Unruh, Zhang, Liu, & Wharton, 2017).

**Background and justification.** Krouse (2018) emphasized how the personnel shortage in 9-1-1 call centers affects those dependent upon the work of the telecommunicator. Police officers, firefighters, and even the citizens in the community are affected by this shortage because it delays services. When a call center is experiencing a staff shortage and the telecommunicators are working extra hours, they could make mistakes as they rush through the call-taking process. It is the telecommunicator's job to make the best decisions possible in every situation in a short period of time.

Davidson (2018) explained how 9-1-1 employees are working many hours of overtime to cover for the shift shortages to avoid delaying services to the people who call 9-1-1 for help. By nature, 9-1-1 telecommunicators must deal with high stress situations where it is essential to make life or death decisions in seconds. In addition, Davidson

(2018) notes this problem has been present for many years, but there is no official data to keep track of the number of employees and shortages in 9-1-1 call centers on a local level (Veiga, 2014) or across the nation.

**Deficiencies in the evidence.** There is a lack of evidence in the literature about police and fire emergency personnel assigned to work in 9-1-1 call centers in general, but especially the personnel crisis due to staff shortages. Most studies focus on those employees who are categorized as first responders, such as police officers, firefighters, and emergency medical technicians (EMTs; Shakespeare-Finch, Rees, & Armstrong, 2015; Miller et al., 2017). Few studies exist on telecommunicators and they mainly address the mental health of telecommunicators (Allen, Mercer, & Lilly, 2016; Lilly & Allen, 2015; Lilly & Pierce, 2013; Steinkopf, Reddin, Black, van Hasselt, & Couwels, 2018) as they are exposed to emergency situations continuously. More studies that address the relationship between job stress, job dissatisfaction, and employee retention among telecommunicators are needed to create a solid literature background on this topic (Miller et al., 2017).

**Audience.** Current 9-1-1 telecommunicators will benefit from a study that investigates why it is difficult to maintain fully staffed call centers. When call centers' administrators learn how to implement changes that improve staffing, the current employees may benefit as extra shifts could decrease, time off may be granted, and the employees' morale may increase. If these changes were to be the result, by default, all future employees may benefit from the change as well since they will be working at a center that no longer has to deal with extreme staff shortages. By studying the main reason why this problem seems to be so prevalent, current and future 9-1-1 call center

employees, the call center's administration, and the community served could benefit from addressing this problem and implementing solutions. Although telecommunicators are not considered first responders, they are the ones who make the first contact with citizens when they need help.

### **Setting of the Study**

The setting of the study was the Survey Monkey Audience platform. This platform has access to participants across the nation. Participants have to be classified as a 9-1-1 telecommunicator (police dispatcher, fire dispatcher, 9-1-1 call taker, and/or any combination of these).

### **Researcher's Role**

The researcher's role in this study was that of a 9-1-1 telecommunicator classified as a police dispatcher. The researcher developed the study based on the literature of previous studies in order to explore the relationship between job stress, burnout, and job satisfaction for 9-1-1 telecommunicators. The researcher chose the instruments utilized during the research process, analyzed the data collected, and presented the results.

### **Purpose of the Study**

The work environment in a 9-1-1 call center is hectic and is characterized by high stress daily. Employees in the call center are trained to respond quickly to emergency situations and usually have little time in between calls or transmissions to recover and continue their shift. The purpose of this study is to analyze the relationship of job stress experienced by 9-1-1 telecommunicators and the employees' perceived job satisfaction and burnout levels in the 9-1-1 call center.

## **Definition of Terms**

Terms may have different meanings depending on the context in which they are used. For clarification purposes, the following terms will be use throughout this study with the definition provided.

**9-1-1 telecommunicator.** This term is used to identify a person who works at a 9-1-1 call center where the primary role is to answer 9-1-1 calls from the community and/or dispatch calls for service to first responders.

**Burnout.** This term is defined as exhaustion of physical or emotional strength or motivation, usually as a result of prolonged stress or frustration, which affects efficacy in different scenarios (Burnout, n.d.; Montero-Marín et al., 2016).

**Compassion satisfaction.** This term explains how a person is able to create a sense of purpose when providing services to others; empathy towards those receiving services is a key component of this feeling (Stamm, 2002).

**First responder.** A first responder is a person who has the proper training to respond to emergencies and render aid and be the first one on-scene. These personnel include police officers, firefighters, paramedics, and/or emergency medical technicians.

**Job wornout.** Those employees who have a high exhaustion-cynicism state, affected by work conditions (Hallsten, Voss, Stark, Josephson, & Vingård, 2011).

**Mindfulness.** Treatment approach utilized to deal with stress, depression, and anxiety. This intervention helps the person be present in the moment while acknowledging feelings and reflecting on how to respond to uncomfortable situations (Mindfulness, n.d.).

**Posttraumatic Stress Disorder.** This disorder is diagnosed when a person has

been exposed to trauma such as threats, injury, and/or sexual violence, whether it is experienced first-hand or as a witness. The person experiences intrusion symptoms as well as avoidance of situations associated with the traumatic events. Symptoms may include: distressing memories, recurrent distressing dreams, dissociative reactions, prolonged psychological distress, and/or physical reactions to triggers (American Psychiatric Association, 2013).

**Stress.** A physical, chemical, or emotional factor that causes bodily or mental tension and may be a factor in disease causation (Stress, n.d.).

## **Chapter 2: Literature Review**

### **Introduction**

Telecommunicators at 9-1-1 call centers deal with emergencies in a matter of seconds. The telecommunicators' training prepares them to handle situations most people cannot imagine. In this line of work, telecommunicators are call takers, emergency medical dispatchers, fire dispatchers, and police dispatchers; they come together to form a cohesive group of people whose main goal is to provide assistance to the public and first responders alike (Regehr, LeBlanc, Barath, Balch, & Birze, 2013).

The purpose of this literature review is to assess factors, such as the stressful nature of the job, that affect 9-1-1 employees when performing their tasks, as well as to study the ramifications of this stress when it comes to employee burnout and job satisfaction from the employees' perspective. A careful examination of the literature has shown the lack of studies addressing this population and the factors affecting job satisfaction and employee retention such as stress, mental illness, quality of life and employee well-being, including the effects of shiftwork, and job burnout. The limited amount of information on studies about 9-1-1 telecommunicators guided this study to include careers that have similar characteristics, such as shiftwork schedules and exposure to trauma, to learn more about how these elements affect employees.

### **Theoretical Perspective**

The problem of employee retention at a 9-1-1 call center is grounded in the Job Demand-Control (JDC) theory (Karasek, 1979). This theory was originally developed by Robert Karasek in 1979 and was primarily used to study the effect of job demands on the employee as well as how much discretion the employee has and how these two elements

correlate. This is a good theoretical framework to address the needs of a 9-1-1 call center when focusing on the requirements of staffing enough personnel on a continuous basis. Job Demand-Control theory is more in harmony with how research can be conducted to learn about the needs of employees in a 9-1-1 call center and how its needs are addressed. This theory works better than B. F. Skinner's behavioral theory which explains how behavior is dictated by the results or consequences of a person's behavior as it will predict if the behavior will occur again or not (Morris, Smith, & Altus, 2005). Behavioral theory is about learning what type of behavior conditions make the employee act a certain way while JDC goes in depth to learn exactly what demands are in place that affect the employees. Also, Lazarus' (1990) Stress theory can be applied to the work setting and it determines which stressful situations affect the person's behavior, however, it is not inclusive enough for the job demands and job control needs found in a 9-1-1 call center. While Stress theory focuses on the stress the employee is exposed to and the employee's reaction to the stress, JDC includes the decision-making freedom that employees may or may not have (Lazarus, 1990). Karasek (1979) explains that under this theory, the job strain model

postulates that psychological strain results not from a single aspect of the work environment, but from the joint effects of the demands of a work situation and the range of decision-making freedom (discretion) available to the worker facing those demands. (p. 287)

In this case it is important to look at the employees' needs as a whole instead of individually so as not to treat them separately.

The work environment in a 9-1-1 call center provides several reasons for employees to have to address psychological strains as a result of emergency situations. At the same time, employees do not have much discretion when handling calls because there is usually a Standard Operating Procedures (SOP) manual that protects the call center from liability. The SOP dictates what the employee must do in every instance, which covers every emergency medical dispatch protocol as well as police chases and perimeters, among other emergency events.

Under the JDC theory, research should concentrate on the job demands first. When the job demands are identified it makes easier for the administration in charge to decide the level of discretion needed where employee can choose how to meet the demands of the job without additional stress to the employee (Karasek, 1979). There are 2 terms use in the JDC theory model to depict the relationship among job demands and the control the employees have: *strain hypothesis* and *buffer hypothesis* (Häusser, Mojzisch, Niesel, & Schulz-Hardt, 2010). The strain hypothesis is when a person is exposed to high demands in the work environment and it affects mental/physical health. When the mental strain required for a job is not as high, then employees' job dissatisfaction decreases while increasing employee retention. This is termed *buffer hypothesis*, where there is consideration that if the employee has a higher amount of control over tasks (discretion), then the control acts as a buffer, and the level of strain is lowered for the employee.

## **Stress**

There are few studies on the effect of stress among 9-1-1 telecommunicators, and therefore, an in-depth analysis is not possible (Boothroyd, Green, & Dougherty, 2018;

Lilly & Pierce, 2013). Most studies that cover the law enforcement community primarily includes law enforcement officers or other first responders such as firefighters and paramedics (Greco & Fischetti, 2018; Shakespeare-Finch et al., 2015); consequently, these sources will be cross-analyzed to compare first responders and 9-1-1 telecommunicators. Limited studies address the effects of stress in telecommunicators although exposure to traumatic events on the job is a common occurrence (Lilly & Pierce, 2013; Miller et al., 2017; Ramey, Perkhounkova, Hein, Chung, & Anderson, 2017; Regehr et al., 2013; Steinkopf et al., 2018; Tentner et al., 2019).

Even fewer studies are available that address the nature of the work 9-1-1 telecommunicators perform (Klimley, van Hasselt, & Stripling, 2018; Lilly & Pierce, 2013; Miller et al., 2017, Reckdenwald, Nordham, Pritchard, & Francis, 2017; Steinkopf et al., 2018; Tentner et al., 2019). Miller et al. (2017) conducted a study that included 186 dispatch personnel participants who completed a series of surveys to explore secondary traumatic stress and burnout. The demographics included gender (75.3% female), race/ethnicity (Caucasian 81.2%), ages between 20 and 74 years old, tenure in their current position, had a mean of 11.4 years of experience, and 96.2% of participants were full time employees (Miller et al., 2017). These surveys were administered electronically and included studying quality of life, compassion satisfaction, compassion fatigue, perceived organizational support, and perceived coworker support. The results of this study showed that when the levels of perceived organizational support and perceived coworker support were high among the participants, there was a positive correlation with compassion satisfaction. However, the study did not show any relationship between the employee having received any type of support from colleagues and symptoms of

employee burnout and/or secondary traumatic stress or how the resiliency of the participants was a factor to doing their job (Miller et al., 2017; Steinkopf et al., 2018).

In addition to the *nature of the job* of a telecommunicator, (i.e., the exposure to high stress calls), telecommunicators also deal with organizational stressors. These organizational stressors include work overload, as the 9-1-1 call centers are short staffed and lack guidance from immediate supervisors (Miller et al., 2017; Steinkopf et al., 2018). In addition to this, the telecommunicators deal with continuous performance monitoring for quality assurance and conflict with family time due to shiftwork hours (Mellor, Moore, & Benjamin-Siong, 2015).

In one of the few studies involving 9-1-1 telecommunicators, Regehr et al. (2013) conducted a study to measure the level of stress experienced by police communicators on physical and psychological levels. The study was conducted with 113 volunteer participants, and the demographics included participants aged between 24 and 61 years old; years working as a police communicator were between 1 – 35 years on the job; the majority were women, approximately 86.7%; and 59.3% of the participants were married (Regehr et al., 2013). The instruments utilized in the study were questionnaires that collected the demographics information, the Coping Inventory for Stressful Situations (CISS), perceived control was measured by the Internal Control Index (ICI), and social support was assessed using the Social Provisions Scale (SPS; Regehr et al., 2013).

The results of the study showed that 31% of the participants reported symptoms that can be attributed to posttraumatic stress disorder; also, the level of stress and trauma was positively correlated with the number of years employed as a police communicator (Regehr et al., 2013). However, perceived control was not related to posttraumatic stress

disorder and neither was social support. The researchers recommended that coping skills, learned based on Cognitive Behavioral Therapy (CBT), could lower the levels of posttraumatic stress disorder symptoms among the participants (Haugen, Evces, & Weiss, 2012; Regehr et al., 2013).

Mellor et al. (2015) conducted a study to assess to what extent stress has a role in the well-being of employees at a customer service call center. While the job tasks were different from what a 9-1-1 telecommunicator performs, the level of stress for the employees at the call center was described as high due to customers' demands and management expectations making this study relevant to assess how these stressful variables affect the employees' intentions to quit. To assess organizational stressors, the researchers focused on measuring role ambiguity, role conflict, and work overload (Mellor et al., 2015). Other factors measured included: anxiety and somatic complaints, turnover intent, specific stressors attributed to a call center, performance monitoring, and burnout (Mellor et al., 2015). The return rate for the questionnaires was 45%. The data supported previous studies, showing that stressors at call centers were positively related to employee burnout and turnover intent among employees who also reported somatic symptoms due to the stressors (Greco & Fischetti, 2018; Mellor et al., 2015; Ramey et al., 2017; Steinkopf et al., 2018). Most participants were female thus creating a gender gap in the results that limited interpretation of the results. This factor, along with the self-report nature of the study, were limitations of the study (Mellor et al., 2015).

Another study involving 9-1-1 telecommunicators, analyzed stress as part of the job and how it relates to turnover. The participants were asked to complete five questionnaires to measure personal stress, fatigue, organizational stress, and resilience on

the job (Ramey et al., 2017). The results indicated that 9-1-1 telecommunicators had a higher amount of stress than police officers. The results also presented data about a higher turnover rate of 9-1-1 telecommunicators and linked the turnover rate to posttraumatic stress disorder reports which was correlated with the symptoms presented by the participants (Lilly & Allen, 2015; Lilly & Pierce, 2013; Klimley et al., 2018; Ramey et al., 2017) even though the results of the study showed that telecommunicators had a higher resilience level than their law enforcement counterparts. This information, along with other studies, confirmed that the level of employee turnover was affected by the job stress employees encountered in their daily job duties, despite the resiliency level of the participants (Ramey et al., 2017; Regehr et al., 2013; Steinkopf et al., 2018).

Greco and Fischetti (2018) studied police officers and compared them with a sample of the general population. Police officers are exposed to a comparable work environment like 9-1-1 telecommunicators even though they do not get to experience the 9-1-1 calls in the same way. The sample of police officers included 101 male officers who volunteered for the study. The researchers mainly studied: intrinsic factors of the job, management role, relationships with others, career and achievement, organizational structure and climate, and home/work interface (Greco & Fischetti, 2018). The results of the study showed significant differences between the participants (officers) and the general population sample when it compared how each group dealt with different sources of stress and how these situations were managed. The results displayed the officers gained more understanding about the use of coping mechanisms, such as utilizing resources during their off-duty hours, time management, and social support (Greco & Fischetti, 2018; Russell, Cole, & Jones III, 2014). The Greco and Fischetti (2018)

outcomes supported findings by Mellor et al. (2015) concerning the relationship between family support and symptoms of emotional exhaustion and how it affects the person's interpersonal relationships during on-duty and off-duty hours.

### **Mental Illness**

In addition to stress, 9-1-1 telecommunicators may be affected by a range of symptoms that could fit the criteria for the diagnosis of a mental illness. A few studies have compared mental health amongst sworn personnel (law enforcement officers) and non-sworn personnel (civilians) in law enforcement agencies (Carleton et al., 2018; Klimley et al., 2018). Disorders such as posttraumatic stress disorder, depression, social anxiety disorder, panic disorder, alcohol use disorder, and anxiety amongst law enforcement personnel and other first responders have been studied (Carleton et al., 2018; Hegg-Deloye et al., 2013; Lilly & Allen, 2015; Lilly, London, & Mercer, 2016; Lilly & Pierce, 2013). Studies in this area have created awareness of how law enforcement personnel are affected by the day-to-day cases they encounter and how these affect the employees' efficiency in the performance of their tasks (Carleton et al., 2018; Lilly & Allen, 2015; Lilly & Pierce, 2013; Mellor et al., 2015; Ramey et al., 2017).

Lilly and Pierce (2013) conducted one of the few studies involving 9-1-1 telecommunicators that addressed posttraumatic stress disorder and depression symptoms in this population. This study aimed to assess symptoms of posttraumatic stress disorder experienced during the month before the survey was given to the participants (Lilly & Pierce, 2013). The study showed that the telecommunicators who had reported symptoms of distress and depression had a negative view of the world as well as of themselves, with

a low sense of self-worth and a high level of distress. These results were similar to the findings of other studies (Allen et al., 2016; Haugen et al., 2012; Lilly & Pierce, 2013).

The results of the study by Lilly and Pierce (2013) were a first for the 9-1-1 telecommunicator population as this was the first time a study was conducted where symptoms of depression and posttraumatic stress disorder were the focus (Lilly & Pierce, 2013; Lilly & Allen, 2015). According to the researchers, the 9-1-1 population is exposed to trauma daily due to the nature of their work. The study supported evidence from other studies that there is a positive relationship between exposure to trauma and posttraumatic stress disorder and depression among 9-1-1 telecommunicators (Allen et al., 2016; Lilly & Allen, 2015). The researchers reported that a limitation of the study was that this was the first of its kind and a longitudinal study following this study could help identify how this population could be further helped to avoid developing symptoms of posttraumatic stress disorder and depression.

Haugen et al. (2012) conducted a review of literature about the treatment of posttraumatic stress disorder in first responders focusing on the job duties that included high work demands such as long shifts and exposure to traumatic events. The study required that the participants had received prior psychological treatment for a posttraumatic stress disorder diagnosis, were first responders, and they had been diagnosed with posttraumatic stress disorder as the main mental health complaint (Haugen et al., 2012). The results showed that treatment such as cognitive behavioral therapy and rational-emotive therapy were most effective in treating posttraumatic stress disorder. Studies have shown that job duties and the prevalence of posttraumatic stress disorder symptoms in first responders is highly correlated (Allen et al., 2016).

In another study where the main goal was to identify physiological stress and psychological distress amongst telecommunicators, a strong association between anxiety and depression was reported (Regehr et al., 2013). This study served as a foundation for the Allen et al. (2016) study as it stressed the significance of the work telecommunicators perform and how the high stress affects them. The PTSD rate among employees during this study was 31%; telecommunicators reported symptoms at a rate four times higher than the symptoms reported by sworn personnel (Regehr et al., 2013). This information concurs with several studies analyzed by Hegg-Deloye et al. (2013) where paramedics showed a high incidence of symptoms related to stress such as: posttraumatic stress disorder, sleeping problems, increased obesity, and cardiovascular disease. Since paramedics are first responders, they are exposed to the same shiftwork schedules and emergency services work setting as police officers, firefighters, and 9-1-1 telecommunicators.

The Allen et al. (2016) study, measured the effects of coping skills of 9-1-1 telecommunicators when they had been victims of childhood trauma and then worked in a 9-1-1 call center where they were exposed to stressful situations. The nature of the job included the need to work varied hours with overtime and shift schedules. In this particular study, the researchers studied 808 participants who were classified as 9-1-1 telecommunicators. The results showed that 9-1-1 telecommunicators had different coping strategies that assisted them in dealing with traumatic events regardless of their previous exposure to traumatic events (Allen et al., 2016). The strategies the telecommunicators used more frequently included: attempting to alter the current situation, distancing themselves from the situation, self-controlling, seeking social

support via colleagues or supervisors, accepting responsibility for the status of the situation, escape-avoidance coping mechanism, problem solving, and/or positive reappraisal (Allen et al., 2016; Regehr et al., 2013).

Carleton et al. (2018) analyzed symptoms of mental disorders in public personnel (correctional workers, dispatchers, firefighters, paramedics, and police officers). The results showed a high correlation between the duties of each position, such as responding to emergency calls, providing emergency medical assistance, and de-escalating volatile situations, and the symptoms reported by the participants. The results showed that the civilian participants reported a higher rate of symptoms than sworn personnel in every scale except the alcohol use scale (Carleton et al., 2018). These results are in accordance with other studies where the civilian population in emergency services reported higher rates of symptoms of mental distress and worse mental health (Boothroyd et al., 2018; Klimley et al., 2018; Regehr et al., 2013).

### **Interventions**

The need to study situations where 9-1-1 telecommunicators report symptoms of trauma has led researchers to study interventions that can help them overcome their symptoms. Haugen et al. (2012) compiled a list of interventions used to treat posttraumatic stress disorder in first responders. Due to the high level of exposure to traumatic events, the researchers concentrated their search on previously successful techniques used to treat others suffering from trauma such as cognitive behavioral therapy (CBT), rational-emotive therapy, and eye movement desensitization and reprocessing (EMDR) therapy. The participants utilized these interventions and learned how to address their symptoms and use problem-solving skills to deal with them, as well

as techniques based on CBT, rational-emotive therapy, and EMDR (Haugen et al., 2012). Based on the list compiled by the researchers for the review, there is a lack of studies on the effective treatment of posttraumatic stress disorder among law enforcement personnel, however, the use of CBT was one of the most effective form of therapy for the few participants who did not drop out of the studies (Haugen et al., 2012).

In searching for answers about how to help first responders manage the daily stresses of their duties, Lilly et al. (2016) studied 9-1-1 telecommunicators and predictors of obesity among this population, finding a connection between their physical and mental health. The researchers recommended interventions using mindfulness to reduce stress and Acceptance and Commitment Therapy (ACT) when targeting their emotions. These types of therapy have been found to be effective to manage stress.

Boothroyd et al. (2018) conducted a study to explore how to aid first responders who have been exposed to traumatic events by utilizing brief interventions that would treat them in a timely manner. The study was comprised of police officers, firefighters, and dispatchers; this latter group was only represented by 4% of the sample population of 207 participants (Boothroyd et al., 2018). The approach to treat the participants was designed to have them open up about their traumatic experiences they were exposed to at work. This treatment was done in a safe environment where everyone was able to participate by sharing his or her experiences. As part of the treatment, the participants also took part in physical events such as yoga and fitness sessions and grief therapy. The positive results showed that these interventions may help first responders who are continuously exposed to traumatic events by promoting personal strength, appreciation for life, and spirituality and the use of EMDR for those with symptoms of PTSD was

successful. All of these practices could be ways of coping with the stressful nature of participants' jobs. This study showed little information had been gathered throughout the years on 9-1-1 telecommunicators and it stressed the need for research in this field to help those performing this type of work.

Meischke et al.'s (2018) multi-level intervention program to reduce stress in 9-1-1 telecommunicators backs up the data collected by the Boothroyd et al. (2018) study. Common stressors that affect the mental well-being of a telecommunicator include traumatic experiences the telecommunicators dealt with in the course of their workday as well as interpersonal problems that arise when working in a fast-paced environment where life or death decisions are made under time pressure (Meischke et al., 2018). This longitudinal study proposed to learn how effective mindfulness-based interventions are in the treatment of stress among 9-1-1 telecommunicators. The qualitative data collected during a follow up study by Kerr, Ornelas, Lilly, Calhoun, and Meischke (2019) revealed that the stressful nature of the work performed in a 9-1-1 call center made it difficult for the participants to use mindfulness as a grounding intervention where the participants were able to be present in the moment and attend to their emotional needs. However, the results did show that the participants were willing to try the intervention and viewed it as a positive coping skill that could help them improve their job performance and decrease their stress (Kerr et al., 2019).

### **Quality of Life and Employee Well-Being**

Miller, Unruh, Liu, Wharton, and Zhang (2018) conducted a study where the focus was the quality of life of emergency medical services (EMS) personnel. As with most first responders, this population works shiftwork hours, is exposed to secondary

traumatic stress, and predisposed to job burnout (Allen et al., 2016; Boothroyd et al., 2014; Lilly & Allen, 2015; Lilly & Pierce, 2013; Regehr et al., 2013). There is a need to address the quality of life and the well-being of 9-1-1 telecommunicators since they represent an important component of the first responder community. The results of the study showed a strong association between psychological resilience and compassion satisfaction which can lead to more balance between work life and personal life and supported a previous study about the importance of addressing the management of work stressors (Boothroyd et al., 2018; Miller et al., 2017).

In another group of first responders, Adams, Shakespeare-Finch, and Armstrong (2015) studied the role of emergency medical dispatchers (EMDs) to learn how to improve the well-being of this population. EMDs have similar work characteristics as 9-1-1 telecommunicators, such as shift hours and exposure to stressful and traumatic events. The researchers concluded that based on exposure to traumatic calls (murder, robberies, assaults, etc.) received during their shifts, EMDs' quality of life and well-being were affected; they displayed symptoms such as avoidance, physical signs of stress, flashbacks, and a hyperarousal state (Adams et al., 2015). This study confirms data collected from other studies (Meischke et al., 2018; Miller et al., 2018) that found high organizational support has a direct positive relationship with lower levels of burnout, therefore, making support a priority for administrators to take into consideration to improve employees' work environment and quality of life.

**Shiftwork.** It is important for a 9-1-1 telecommunicator to be able to handle organization stress and life stress in a way that disrupts his or her performance as little as possible. The 9-1-1 telecommunicators in a call center need to have resources to help

them deal with the more negative aspects of their profession. As part of the law enforcement work community, 9-1-1 telecommunicators are exposed to the same shiftwork hours as first responders. These shifts are usually divided into morning or day shifts, afternoon shifts, and night or midnight shifts. A midnight shift is when the telecommunicator works overnight, and this shift seems to have the most effect overall on his or her well-being (Fekedulegn et al., 2013; Kurtz, 2012; Ramey et al., 2012; Shakespeare-Finch et al., 2015; Violanti et al., 2013; Wong, Ostry, Demers, & Davies, 2012).

Throughout time, studies have shown a direct link between shiftwork and the stress it causes employees who work in different settings, such as nurses in hospitals and first responders in emergency services (Fekedulegn et al., 2013; Harrington, 2001; Kurtz, 2012; Richter, Acker, Adam, & Niklewski, 2016). Early studies have linked shiftwork with biological and social effects such as disruption of the circadian rhythm, decline of performance efficiency, and disruption of the employees' socialization with family and friends that could lead to symptoms of depression and isolation (Harrington, 2001; Rameshbabu, Reddy, & Fleming, 2013; Richter et al., 2016).

**Shiftwork and employee health.** There are certain health effects taken into consideration when studying how shiftwork affects employees. Several problems can be linked to working this type of schedule where the body does not follow a normal circadian rhythm. Problems that have been linked to shiftwork hours include obesity, auditory fatigue, insomnia, fatigue, mental health, cardiovascular disorders, gastrointestinal disorders, and reproductive effects (Harrington, 2001; Lilly et al., 2016;

Rameshbabu et al., 2013; Venet et al., 2018; Wisetborisut, Angkurawaranon, Jiraporncharoen, Uaphanthasath, & Wiwatanadate, 2014).

In the study by Lilly et al. (2016), the rate of obesity among 9-1-1 telecommunicators was about 50% higher than the general population. The participants listed a total of 17 health complaints; in addition, this study found a positive correlation between the mental health of the participants and their physical health. Kurtz (2012) conducted a survey study with 1,104 police officer participants. The results of the study showed that officers who worked the later shifts, afternoon and midnight shifts, reported levels of psychological stress, physical stress, and risk of injury higher than their counterpart officers who worked the day shift (Kurtz, 2012; Shakespeare-Finch et al., 2015; Violanti et al., 2013).

Ramey et al. (2012) conducted a study about the effect of shiftwork and the sleep patterns of police officers. The study included data from three police departments; the data collected were from male police officers between the ages of 22 and 63 years old. The results indicated the officers reported the work hours as the main reason why they had sleep disturbances; the majority of the participants who worked the evening and midnight shifts reported less than 6 hours of sleep per day and higher levels of exhaustion (Ramey et al., 2012). Sleep problems and disruption to a person's circadian rhythm have been linked to cardiovascular disease (Richter et al., 2016) therefore posing an additional negative factor as an effect of shiftwork for 9-1-1 telecommunicators and first responders to deal with in their field. The researchers in the Ramey et al. (2012) study reported self-reported data and voluntary participation as limitations of the study as the information collected may not be accurate.

Shakespeare-Finch et al. (2015) conducted a study where emergency medical dispatchers (EMDs) completed several questionnaires to assess social support, psychological well-being, and the impact of the events witnessed during work hours. Their findings were in accordance with those from Kurtz (2012), Ramey et al. (2012), and Violanti et al. (2013) where shiftwork has a negative effect on the well-being of emergency personnel. The hypotheses formulated by the researchers predicted that shiftwork would have a negative effect on EMDs' psychological well-being while predicting posttraumatic stress disorder. The results of the study concluded with mixed data when it came to supporting the hypotheses. Nevertheless, one significant predictor for posttraumatic stress disorder was the fact that the EMDs did not have a normal schedule because of the shiftwork hours. However, having social support related positively to employee well-being and to lower levels of posttraumatic stress disorder (Shakespeare-Finch et al., 2015). These results are important in understanding how shift work affects the well-being of EMDs and how this information can be linked to other first responders who have similar job characteristics.

In a study conducted by Rameshbabu et al. (2013) the researchers attempted to correlate the hours of shiftwork with the physical health of employees at a call center. Any prospective participant who reported sleep problems before his or her current work position was excluded from the study to avoid having a pre-existing reason for the sleep problems (Rameshbabu et al., 2013). The participants were asked to complete scales that were taken from the Standard Shiftwork Index which measured participants' perceptions about training in the call center, and how shiftwork affected their personal lives at home including socialization, sleep problems, and perception of levels of fatigue, and negative

physical outcomes. The results showed a positive correlation between time on the job and negative physical outcomes; also, inadequate sleep was associated with negative health outcomes and was linked to interpersonal problems, which confirmed data gathered in other studies (Rameshbabu et al., 2013; Ramey et al., 2012; Violanti et al., 2013).

Rameshbabu et al. (2013) reported that the results of this study showed a correlation between the length of time employed at the call center and problems related to the health of the shiftwork employees. In the discussion, the researchers explained how as little as 2 years working at a call center can affect employees' health, linking it to gastrointestinal problems as well as sleep problems, as has been shown in previous studies (Lilly et al., 2016; Rameshbabu et al., 2013; Ramey et al., 2012; Shakespeare-Finch et al., 2015; Violanti et al., 2013). However, based on this information, one of the limitations of this study was that the employees had only been working at the call center for a short period of time, just over a year; it was difficult to link the health and sleep problems with the nature of the job as well as the work hours to determine a significant relationship among the variables.

Another study by Wisetborisut et al. (2014) analyzed the relationship between shiftwork and burnout in the medical field. The participants included physicians and nurses that reported they worked shiftwork hours; they completed an electronic self-report questionnaire (Wisetborisut et al., 2014). This study was a cross-sectional analytical survey where the results indicated there was a correlation between the effects of shiftwork and burnout. The researchers reported that participants who had been employed longer than 5 years in a shiftwork environment had higher levels of burnout than those who had less than 5 years on the job, which supports data collected by the

Rameshbabu et al. (2013) study about the length of employment and physical and mental problems. This study also confirmed data found in other studies where participants reported trouble sleeping due to the nature of shiftwork (Rameshbabu et al., 2013; Ramey et al., 2012; Richter et al., 2016; Violanti et al., 2013).

**Shiftwork and work performance.** The effects of shiftwork can be seen with the occurrence of accidents at work and absenteeism (Richter et al., 2016). Predicting absenteeism can be difficult since many aspects have to be taken into consideration, however, Fekedulegn et al. (2013) described an association between shiftwork and employees reporting being sick enough to be absent from work. This study was longitudinal in design and included 464 police officers from the Buffalo (NY) Police Department. Data collected was based on the participants' daily work activities that involved work hours and the type of leave used by the participants when they were absent from work (Fekedulegn et al., 2013). Among the parameters discussed in the study, the researchers included the type of occupation exposed to shiftwork as well as gender and the risk factors for the employees to call in sick (Fekedulegn et al., 2013). The results indicated the participants on the night shift had a higher risk of being absent from work due to sickness. These results support data of previous studies that list shiftwork as a negative characteristic of working emergency services jobs (Fekedulegn et al. 2013; Ramey et al., 2012; Violanti et al., 2013).

Social support has been shown to improve well-being and help telecommunicators deal with the more difficult aspects of their profession (Shakespeare-Finch et al., 2015). Psychological resilience, together with reducing the negative effect of the job via support from colleagues, has shown a positive correlation with compassion satisfaction which

helps the telecommunicator perform better in the workplace (Miller et al., 2017).

Compassion satisfaction allows the employee to develop a sense of accomplishment while helping others, despite the negativity the job brings, therefore helping the employee deal with compassion fatigue (Stamm, 2002). Ultimately, the administrators at call centers have the power to make changes that will aid employees have a better quality of life in the workplace by managing organizational stressors; this change can help staff improve their quality of life outside the workplace as well (Mellor et al., 2015; Miller et al., 2017)

### **Job Burnout/Job Dissatisfaction**

Job burnout is defined as prolonged response to work stressors where the employee may face not only stressors, but lack of control, exhaustion, and feelings of inefficacy (Cieslak et al., 2014; Maslach, Schaufeli, & Leiter, 2001). Telecommunicators are exposed to high stress daily because of the nature of the calls received and dispatched. Moreover, the requests they handle from the officers in the field can add to the stress when the officers are working high profile cases such as domestic violence disputes, sexual assaults, shootings, chases, and perimeters. In these cases, the telecommunicators experience secondary traumatic stress situations.

Job burnout can lead to callouts, long-term sickness, and resignations affecting the staffing of the call center. There is a higher incidence of sick absenteeism for employees who report job burnout (Hallsten et al., 2011; Mellor et al., 2015) compared to those who present symptoms of job wornout. Hallsten et al. (2011) define *job wornout* as those employees who have a high exhaustion-cynicism state, affected by work conditions. This information is based on a small number of studies addressing the

relationship between job burnout and job wornout and how it affects employees' short-term or long-term sick absenteeism (Bakker, Demerouti, de Boer, & Schaufeli, 2003; Hallsten et al., 2011; McCarty & Skogan, 2012; Maslach et al., 2001).

McCarty and Skogan (2012) studied the differences between civilian and sworn personnel and how they are affected by burnout due to job stress and work environment. To find out if any differences reflected on the employees' performance and health as well as to measure the effects of these variables, a study was conducted to assess burnout, health, and job satisfaction (McCarty & Skogan, 2012). Employees who experience secondary traumatic stress situations have displayed symptoms of job burnout (Cieslak et al., 2014; Miller et al., 2017) as well as job dissatisfaction (Ramey et al., 2017). The results of the McCarty and Skogan (2012) study indicated that although the differences between civilians and sworn personnel were not statistically significant, civilians rated a bit higher than sworn personnel in terms of reporting levels of burnout on the job. Also, civilian law enforcement employees, when compared with sworn officers, showed little difference in their feelings of burnout (McCarty & Skogan, 2012). This finding means that even though the telecommunicators are not working the field and in direct contact with the scenarios police officers face, they show the same levels of stress as the police officers. More importantly, this study found a relationship between job stressors and job burnout among employees in law enforcement; burnout had an effect on job performance, supervisory support perception, and turnover (Cieslak et al., 2014; Mellor et al., 2015).

Cieslak et al. (2014) conducted a meta-analysis to show the relationship between job burnout and stress. In their research, the authors explored the literature to determine the consequences of being exposed to trauma indirectly and how employees dealt with it.

The researchers used the term *secondary traumatic stress* to search for previous studies that dealt with participants whose job description included dealing with clients who had been victims of trauma (Cieslak et al., 2014). Secondary traumatic stress was used as a variable to measure posttraumatic stress disorder symptoms and compassion fatigue in participants to measure job burnout levels. The results of the study showed a high correlation between stress, job burnout, and persons being exposed to others' traumatic events, which confirmed data collected by other studies (Cieslak et al., 2014; Hallsten et al., 2011; McCarty & Skogan, 2012).

Russell et al. (2014) administered a paper-based survey measuring variables of transformational leadership, burnout, stress, and coping strategies among 482 police officers. The results showed that officers who were able to distance themselves from traumatic events, witnessed or worked, had higher levels of burnout and stress.

The officers distancing themselves from the situation could have been classified as a coping skill the participants possessed if the results had not been high levels of depersonalization. In addition, the results showed that transformational leadership by supportive administrators had a large influence on how the participants performed on the job which reinforced data from other studies where organizational support is highlighted as important (Miller et al., 2017; Russell et al., 2014). Bolman and Deal (2017) define transformational leadership as a type of leadership that inspires followers to trust the leader who encourages the followers to aim to do their best while working together and creating a positive change.

### **Employee Retention**

Nine-one-one (9-1-1) call centers are dealing with a nationwide crisis due to

personnel shortage (Davidson, 2018; Krouse, 2018; Veiga, 2014). Due to this fact, it is imperative for 9-1-1 call centers to identify the main reasons why employees quit.

Coetzee and Stoltz (2015) explored how career adaptability is associated with employees' job satisfaction and employee retention. This study follows the work by Savickas and Porfeli (2012) where career adaptability is described as having four key elements: career concern, career control, career curiosity, and career confidence. The results showed that career concern was highly related to employee satisfaction and to the employee's perception of his or her future within the company as well as having work-life balance is influential on how the employee perceived the future in the workplace (Coetzee & Stoltz, 2015). The researchers' recommendation was that employees should be involved in decisions that affect their future with the company and for the employees to consider how their current position aligns with the needs of the company and their own needs (Coetzee & Stoltz, 2015).

Benton (2016) analyzed the different reasons why employees choose to stay or leave an organization. The goal of this study was to learn about those who work in child welfare agencies, as these employees are sometimes exposed to traumatic events others experience. The results of the study provided mixed information. While salary was important to retain employees, it was not enough, unless it was linked to having supervisory support and not having to work an excessive number of hours (Benton, 2016). However, identifying and understanding which factors are important to employees can help an organization decrease attrition rates and improve the work environment.

Schuck and Rabe-Hemp (2018) studied the rate of turnover in policing and the correlation with salary and benefits the employee receives. The study used data collected

from three different sources: the 2013 Law Enforcement Management and Administrative Statistics (LEMAS) survey, the 2012 Uniform Crime Reporting (UCR) Program, and the 2013 American Community Survey (ACS), to assess the influence that salary, incentives, benefits, and freedom to pursue work outside the field of law enforcement (Schuck & Rabe-Hemp, 2018). Based on the data, approximately five officers out of 100 left their police department voluntarily and one officer in 100 was terminated (Schuck & Rabe-Hemp, 2018). The researchers found out that salary was directly related to employee turnover, however, other benefits such as a good retirement plan and other financial incentives helped lower the turnover rate for police officers (Schuck & Rabe-Hemp, 2018).

Lee (2018) stated that an organization that has a turnover problem creates a morale problem among its employees. This study included data collected from the U. S. Office of Personnel Management's Fedscope and Federal Employee Viewpoint Survey (FEVS) which provided information about U. S. federal agencies and employees' performance and turnover rates (Lee, 2018). The results of this study concluded that those in supervisory positions should be aware of how to manage the turnover intentions of those employees seeking transfers to other agencies or intentions to quit altogether (Lee, 2018). Recommendations to deal with employee turnover were to create a positive environment where employees feel satisfied with their job assignments and to also eliminate sources of negativity that would affect the agency, such as laying off employees who underperform (Lee, 2018).

In order to assess what makes police officer recruits complete the police academy portion of their training, Nevers (2018) conducted a study assessing the predictors for

success. This research focused on two sets of participants, all recruits (n=662) and those who did not finish the police academy (n=178), separating the two sets of data that would yield the predictors (Nevers, 2018). The researcher identified characteristics that separated both groups when it came to either successfully completing the academy or quitting the academy. The majority of the recruits who chose to withdraw from training, did so for reasons other than those related to performance, citing personal reasons, such as family, health, career, etc. (Nevers, 2018). However, participants who chose to withdraw from the police academy reported that policework was not what they expected. Administrators at a 9-1-1 call center could potentially apply this study to the hiring process which could help improve the training curriculum. The process to become a fully trained 9-1-1 telecommunicator may not be exactly the same as the police recruits, but learning the job, dealing with stress, learning and applying department policies, and following the chain of command when dealing with negative situations are the same as what police officers are exposed to during and after training.

The administration of a 9-1-1 call center needs to study how job stressors are affecting the current employees as well as address the needs of the employees in order to attempt to decrease the number of employees who could have intentions to quit (Firth, Mellor, Moore, & Loquet, 2004). There is a positive aspect of employee turnover which occurs when employees are not performing optimally and it is better for the agency to lose the employee (Lee, 2018). This loss helps the call center financially as it can redirect its efforts to new employees who may be better suited for the profession.

### **Summary**

In conclusion, 9-1-1 telecommunicators face emergency situations daily. A

telecommunicator is the first person the public makes contact with when it needs the assistance of first responders. The nature of the job throws the telecommunicator into situations where decisions are made within seconds. The factors discussed: (a) stress, (b) mental health, (c) quality of life, (d) employee well-being, (e) job burnout, (f) job satisfaction, and (g) supervisory support, should be taken into consideration when seeking to improve the quality of the workplace, and encouragement should be given to employees to seek help when they determine it is needed. The JDC model could explain the relationship between high job demands and low decision-making freedom (Karasek, 1979) in a 9-1-1 call center.

### **Research Questions**

The following questions will guide this study.

1. Is job stress in a 9-1-1 call center related to employee job satisfaction?
2. Is job stress in a 9-1-1 call center related to employees' burnout levels?
3. Is burnout related to 9-1-1 telecommunicators' job satisfaction?

## **Chapter 3: Methodology**

### **Introduction**

This chapter includes the methodology that was used for this quantitative study. The purpose of this study is to gain an understanding if job stress is linked to job satisfaction and burnout levels in 9-1-1 call centers and the correlations among these variables. The data collected includes information about job stress, burnout levels, and job satisfaction. The data collection for the study commenced once Institutional Review Board approval was obtained from Nova Southeastern University. As 9-1-1 call centers are known for having a high level of stress among its employees, it was beneficial to this field what was learned about how these variables interact and how the end results can be utilized to help improve the work life quality of 9-1-1 telecommunicators.

### **Participants**

This study surveyed the population of 9-1-1 telecommunicators across the United States. The participants were 9-1-1 telecommunicators classified as police dispatchers, fire dispatchers, and 9-1-1 call takers who had the opportunity to participate in the study through Survey Monkey. Each position at a 9-1-1 call center has task specific jobs that allow the people who call in to receive the type of emergency services required at the time. During this study, demographics data from the telecommunicators were collected and included age, gender, and their 9-1-1 classification within the 9-1-1 call center.

Participation in the study was voluntary. Since participation was voluntary, it was difficult to predict the return rate for the surveys that were distributed to the participants. However, a request for at least 100 surveys to be distributed was

requested through the Survey Monkey Audience platform.

The administrators of Survey Monkey disseminated emails to the participants which had a link to access the surveys on the Survey Monkey website. The link provided directed the participants to a webpage where they found information about the study including: an explanation that participating in the study is voluntary via the consent form, instructions for completing the surveys, and a statement explaining that their answers on the surveys and the results were confidential.

### **Instruments**

**Introduction.** The instruments chosen for this study are based on surveys that have been used in the workplace previously to measure the variables of job stress, burnout, and job satisfaction. These instruments have good reliability and validity. The questions on the surveys can be applied to the 9-1-1 telecommunicators without making changes to the wording or eliminating/creating questions.

**Job Stress Scale.** Lambert, Hogan, and Griffin (2007) developed the Job Stress Scale (Appendix A) to measure job stress, job satisfaction, and organizational commitment. The participants answered this scale based on perception, rather than using physical measures such as blood pressure and heart rate (Lambert et al., 2007). This scale is a 5-item scale with a 5-point Likert scale that ranges from strongly disagree (1) to strongly agree (5), with a minimum score of 5 and a maximum score of 25. One item on the scale is reverse coded. Items on this scale include: “A lot of time my job makes me very frustrated or angry” and “When I’m at work I often feel tense or uptight” (Lambert et al., 2007). Higher scores indicate higher levels of job stress. The validity of the instrument was not indicated by the authors; however, the internal consistency, measured

using Cronbach's alpha, was .82. Authorization from the authors to utilize this scale was not required as it can be used for educational purposes without permission.

**Oldenburg Burnout Inventory (OLBI).** The participants answered questions to measure employee burnout by completing the Oldenburg Burnout Inventory (Appendix B) by Demerouti (1999). The burnout inventory consists of 16 items that are measured using a 4-point Likert scale ranging from strongly agree (1) to strongly disagree (4), with a minimum score of 16 and a maximum score of 64. Nine items on the scale are reverse coded. Higher scores reflect higher levels of burnout, exhaustion, and disengagement. The Oldenburg Burnout Inventory has two subscales, with eight items in each subscale, that measure employee disengagement from the job and exhaustion in the workplace (Demerouti, Veldhuis, Coombes, & Hunter, 2018). The disengagement items measure cynical attitudes towards to job. The exhaustion measure indicates overworking and exhaustion as a result of work (Demerouti, Bakker, Vardakou, & Kantas, 2003). Examples of the items in this inventory include: "There are days when I feel tired before I arrive at work" (reverse coded) and "After working, I have enough energy for my leisure activities." In previous studies, reliability, based on alpha coefficients, were .73 for the exhaustion subscale and .83 for the disengagement subscale. The validity was compared against another burnout inventory, the Maslach Burnout Inventory – General Survey (MBI-GS) with a correlation of .74 between the instruments. Permission was obtained from the author to utilize the instrument for this study via email.

**Job Satisfaction Scale.** The Job Satisfaction Scale (Appendix C) by Iverson, Olekalns, and Erwin (1998) measures a person's job satisfaction using six items that are answered on a 5-point Likert scale ranging from strongly disagree (1) to strongly agree

(5) with a minimum score of 6 and a maximum score of 30. A high score reflects a high level of satisfaction in the workplace. This scale is a shortened version of the Job Satisfaction Scale by Brayfield and Rothe (1951). Examples of the items on this scale include: “I find real enjoyment in my job” and “Most days I am enthusiastic about my job” (Iverson et al., 1998). This scale has a coefficient alpha of .85 and the validity was acceptable (Iverson et al., 1998). This instrument does not require permission from the authors when it is used for educational purposes.

### **Procedures**

**Design.** The research design for the study was a nonexperimental, quantitative survey research with a correlational approach and explanatory design. The data was correlational in nature; due to time constraints, a longitudinal study was not feasible. A correlational study allowed the researcher to describe and measure whether there are relationships among the variables (Creswell & Guetterman, 2019). The sampling procedure included nonprobability convenience sampling.

**Data collection.** The participants completed surveys that yielded information about job stress, burnout, and job satisfaction. The data were collected in a 1-day period. This timeframe was established by the Survey Monkey administration based on the algorithms used by Survey Monkey to allow for participants to have a chance to take part in the study. The surveys were administered at one time point only.

Participants received the surveys electronically once approval from the Institutional Review Board (IRB) at Nova Southeastern University (NSU) was received to conduct the study. The administrators at Survey Monkey were in charge of the dissemination of the surveys by a mass email to all the participants in their audience

population. The email contained a link that took the participants to the Survey Monkey website where they answered a screening question: Are you a 9-1-1 telecommunicator (police dispatcher, fire dispatcher, and/or 9-1-1 call taker)? Upon a positive answer to the screening question, the participants were presented with the consent form; they received study information, acknowledged participation is voluntary, and completed the surveys anonymously. The participants had as much time as needed to complete the surveys, nevertheless, it was estimated that completion of all surveys would not take the participants more than 10 minutes. This data collection method was the most efficient way to collect the data from 9-1-1 telecommunicators from call centers across the United States.

**Data analysis.** Descriptive analysis was used with the demographic data. Based on the utilization of multiple continuous variables and the use of Likert scales to rate each item in the surveys, the researcher used the Pearson correlation coefficient to analyze the data. The researcher utilized the results obtained via Survey Monkey and ran the results through the Statistical Package for the Social Services (SPSS) software to analyze the complex statistical data (Version 25). The researcher analyzed ranked values and evaluated the relationship among the job stress, job satisfaction, and employee burnout variables to establish if there are statistically significant relationships among the variables. This type of statistical analysis is most useful for addressing the hypotheses presented by the research questions (Creswell & Guetterman, 2019).

### **Hypotheses**

1. Is job stress in a 9-1-1 call center related to employee job satisfaction?

H<sub>0</sub>: Job stress is not related to employee satisfaction in a 9-1-1 call center.

H<sub>a</sub>: Job stress is related to employee satisfaction in a 9-1-1 call center.

2. Is job stress in a 9-1-1 call center related to employees' burnout levels?

H<sub>0</sub>: Job stress in a 9-1-1 call center is not related to employees' burnout levels.

H<sub>a</sub>: Job stress in a 9-1-1 call center is related to employees' burnout levels.

3. Is burnout related to 9-1-1 telecommunicators' job satisfaction?

H<sub>0</sub>: Burnout is not related to 9-1-1 telecommunicators' job satisfaction.

H<sub>a</sub>: Burnout is related to 9-1-1 telecommunicators' job satisfaction.

## Chapter 4: Results

### Introduction

This study was conducted utilizing the Survey Monkey Audience platform. A total of 312 surveys were disseminated via Survey Monkey to their audience where a response rate of 13% was obtained. Only 39 participants met the sole criterion of being currently employed as a 9-1-1 telecommunicator (police dispatcher, fire dispatcher, and/or 9-1-1 call taker) by answering the screening question positively. However, 38 participants completed the sections about job stress and burnout, and 39 participants completed the job satisfaction section. The total number of valid observations for the variables (valid N) was 37 participants for the survey (males  $n=22$ , females  $n=15$ , Tables 1 and 2).

Table 1

*Descriptive Statistics – Gender*

|       | Gender | Frequency | Percent |
|-------|--------|-----------|---------|
| Valid | Male   | 22        | 59      |
|       | Female | 15        | 41      |
|       | Total  | 37        | 100     |

### Questionnaire Results

The total number of participants that completed the Job Stress Scale was 38. The minimum possible score for this scale was 5 and the maximum possible score was 25. The participants reported a minimum score of 5 and a maximum scored of 18. The mean score suggests that for this variable the job stress levels reported by the participants were moderate on the scale. The Oldenburg Burnout Inventory (OLBI) was completed by 38 participants. A mean of 33.18 suggests that the burnout rate was moderate for the

participants. The Job Satisfaction Scale was completed by a total of 39 participants. The lowest possible score for this scale was 6 with a possible maximum of 30. The mean score suggests that the participants' job satisfaction was moderate on the scale.

Table 2

*Descriptive Statistics*

| Variable         | Minimum | Maximum | Mean    | Std. Deviation |
|------------------|---------|---------|---------|----------------|
| Job Stress       | 5.00    | 18.00   | 11.9474 | 2.82792        |
| Burnout Levels   | 16.00   | 46.00   | 33.1842 | 5.93594        |
| Job Satisfaction | 6.00    | 23.00   | 13.5897 | 4.10851        |

**Demographic Characteristics**

The ages of the participants reported were: 18-29 years old, 43.6%; 30-44 years old, 28.2%; 45-60 years old, 25.6%; and 60 and older, 2.6%. The classification of 9-1-1 telecommunicators is based on the employees' job duties in the 9-1-1 call center. The participants in this study were able to choose their classification from a list that included police dispatcher, fire dispatcher, 9-1-1 telecommunicator, or a combination of all three previous classifications. The 37 participants who answered all the questions on the instruments reported that six were classified as police dispatchers, 14 were classified as fire dispatchers, 12 were classified as 9-1-1 call takers, and five performed a combination of the three classifications (Table 3). The participants' work experience in the field ranged from less than 1 year (17.9%) as a 9-1-1 telecommunicator to over 20 years (2.1%) of experience (Table 4).

Table 3

*Participants' Classification in a 9-1-1 Call Center*

|       | Classification                    | Frequency | Percent |
|-------|-----------------------------------|-----------|---------|
| Valid | Police Dispatcher                 | 6         | 16.2    |
|       | Fire Dispatcher                   | 14        | 37.8    |
|       | 9-1-1 Call Taker                  | 12        | 32.4    |
|       | Combination above classifications | 5         | 13.5    |
|       | Total                             | 37        | 100     |

Table 4

*How Long a Participant Has Been a 9-1-1 Telecommunicator*

|       | Years            | Frequency | Percent |
|-------|------------------|-----------|---------|
| Valid | Less than 1 year | 7         | 17.9    |
|       | 1-5 years        | 14        | 35.9    |
|       | 6-10 years       | 12        | 30.8    |
|       | 11-15 years      | 4         | 10.3    |
|       | 16-20 years      | 1         | 2.6     |
|       | 20+ years        | 1         | 2.6     |

**Data Analysis**

**Research Question 1.** Is job stress in a 9-1-1 call center related to employee job satisfaction? The null hypothesis stated that there is no relationship among the variables, job stress and employee job satisfaction, while the alternative hypothesis stated that there is a relationship among the variables. A Pearson correlation was run to assess the relationship between the job stress variable and employee job satisfaction variable. The results showed a positive correlation between job stress and employee job satisfaction

( $r=.51$ ,  $N=38$ ,  $p<.001$ ). The correlation is significant ( $p<.001$ ), therefore, the null hypothesis is rejected and the alternative hypothesis is accepted. The scatterplot summarizes the results and suggests a definite positive relationship between the variables (Figure 1). Higher levels of job stress are associated with higher levels of job satisfaction. These findings were unexpected as employees with higher levels of job stress were anticipated to have lower job satisfaction levels.

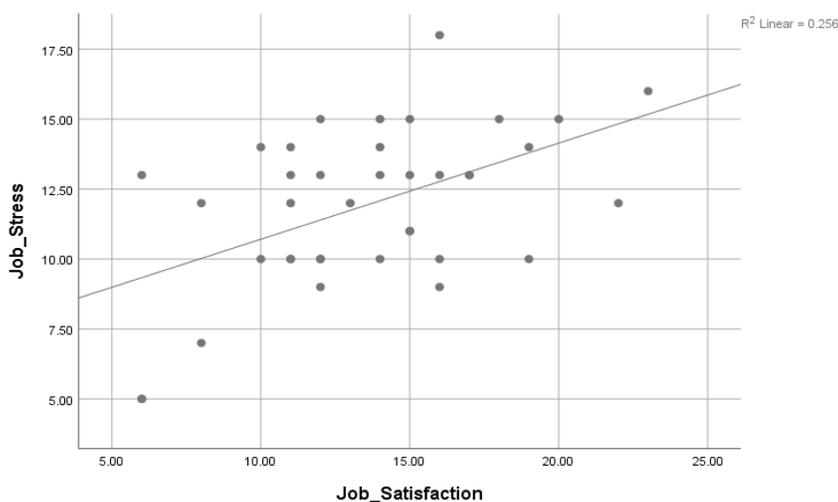


Figure 1. Job stress and job satisfaction scatterplot.

The data collected for the job stress variable were also correlated with the amount of years the participants have worked as 9-1-1 telecommunicators. A Pearson correlation coefficient was calculated to determine the relationship between the job stress variable and the years worked at a 9-1-1 call center. There was no significant relationship between the two variables ( $r=-.17$ ,  $N=38$ ,  $p>.05$ , Table 5). The results showed that the longer participants worked at the 9-1-1 call center, the job stress symptoms were fewer, however this relationship was not significant.

**Research Question 2.** Is job stress in a 9-1-1 call center related to employees' burnout levels? The null hypothesis stated that there is no relationship among the

variables, job stress and employees' burnout levels, while the alternative hypothesis stated that there is a relationship among the variables. A Pearson correlation was computed to determine the relationship between the job stress and employees' burnout levels variables. The results showed a positive correlation between the variables ( $r=.68$ ,  $N=37$  for burnout,  $p<.001$ ). The correlation is significant, therefore, the null hypothesis is rejected and the alternative hypothesis is accepted. The scatterplot shows there is a positive relationship between the variables as well. Higher levels of job stress are associated with higher levels of employee burnout (Figure 2).

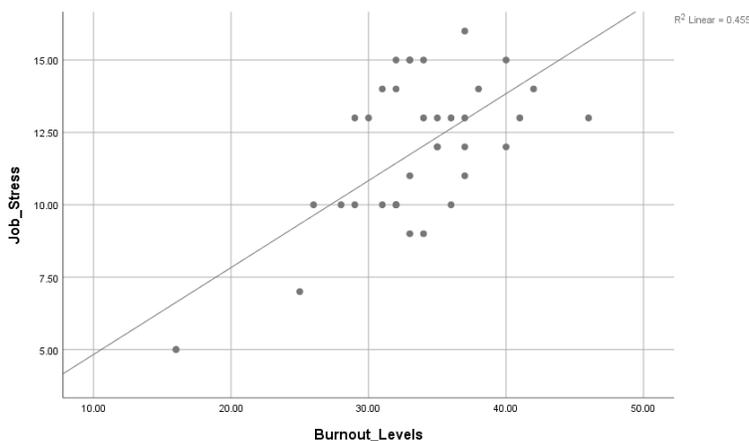


Figure 2. Job stress and burnout scatterplot.

The subscales of the Oldenburg Burnout Inventory (OLBI), disengagement and exhaustion, were also correlated with the stress variable. A Pearson correlation coefficient was run to analyze any possible correlations between the variables. The results showed there is a relationship. Stress and disengagement were positively correlated ( $r=.70$ ,  $N=38$ ,  $p<.001$ ). The scatterplot for these variables supports the results with a strong positive relationship (Figure 3).

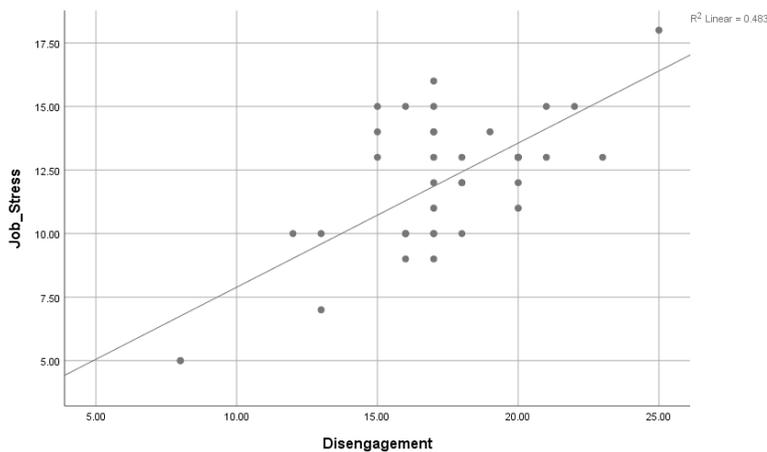


Figure 3. Job stress and disengagement scatterplot.

The exhaustion subscale also correlated positively with the stress variable. A Pearson correlation showed a correlation of  $r=.56$  and  $p<.001$ . The scatterplot for stress and exhaustion demonstrates the Pearson correlation coefficient with a strong positive relationship (Figure 4).

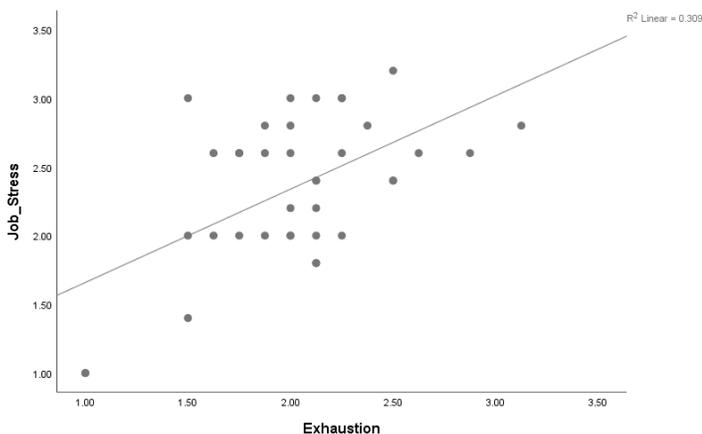


Figure 4. Job stress and exhaustion scatterplot.

**Research Question 3.** Is burnout related to 9-1-1 telecommunicators' job satisfaction? The null hypothesis stated that there is no relationship among the variables, employees' burnout levels and employee job satisfaction, while the alternative hypothesis stated that there is a relationship among the variables. A Pearson correlation was run to

determine the relationship between the employees' burnout levels and employee job satisfaction variables. The results showed a positive significant correlation between burnout and employee job satisfaction ( $r=.67$ ,  $N=38$ ,  $p<.001$ ). The null hypothesis is then rejected and the alternative hypothesis is accepted. The scatterplot suggests a positive relationship between the variables as well where higher levels of employee's burnout levels are associated with higher levels of job satisfaction (Figure 5). While these results were unexpected as well, they could be correlated with employees working long hours (burnout) and having feelings of satisfaction while performing well.

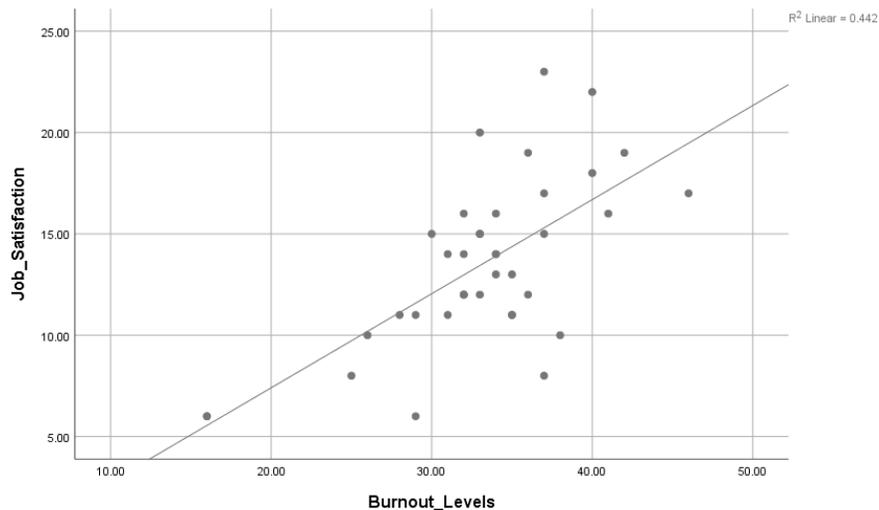


Figure 5. Job satisfaction and burnout scatterplot.

## **Chapter 5: Discussion**

### **Introduction**

The problem addressed in this study is the personnel crisis 9-1-1 call centers are experiencing across the nation (Davidson, 2018; Veiga, 2014). The purpose of this study was to learn if there is a relationship among job stress, employee job satisfaction, and burnout levels in 9-1-1 telecommunicators, as they may be contributing factors for the attrition in the 9-1-1 call centers. The research questions addressed the variables job stress, burnout, and job satisfaction and sought to learn if there was any type of correlation among them.

The methodology utilized in this study was a nonexperimental quantitative survey research with a correlational approach and explanatory design. The data were collected at one point in time as a longitudinal study was not viable. Surveys were disseminated via the Survey Monkey Audience platform where participants had to answer a screening question in order to continue the survey. The participants who qualified to continue the survey were those who are currently 9-1-1 telecommunicators (police dispatcher, fire dispatcher, and/or 9-1-1 call taker).

### **Summary of Findings**

The Survey Monkey administrators disseminated a total of 312 surveys to their audience platform. A screening question yielded a total of 39 participants who are 9-1-1 telecommunicators and they were allowed to continue with the survey. Not all 39 participants completed all the sections of the survey, and therefore, the valid number for the survey was 37 participants: 22 males and 15 females.

The demographic data collected showed that the majority of the participants were

classified as fire dispatchers (37.8%) followed by 9-1-1 call takers (32.4%), police dispatchers (16.2%), and those who performed the job duties that fell under more than one classification (13.5%). The age groups among the participants included 9-1-1 telecommunicators that were 18-29 years old (43.6%); this group represented the largest group that answered the surveys. Most of the participants (35.9%) had been working as a 9-1-1 telecommunicator between 1 and 5 years, followed by those who had worked for 6-10 years (30.8%), less than 1 year of service (17.9%), between 11 and 15 years (10.3%), and those who worked between 16 and 20 and over 20 years tied at 2.3% each.

The first research question addressed the possible relationship between job stress and job satisfaction. The results showed that there was a positive correlation among the variables job stress and job satisfaction ( $r=.51, p<.001$ ). The participants reported that as job stress levels increase, job satisfaction increases as well. The Pearson correlation confirmed that the null hypothesis, job stress is not related to employee job satisfaction in a 9-1-1 call center, is then rejected and the alternative hypothesis is accepted.

The second research question asked if job stress in a 9-1-1 call center is related to employees' burnout levels. The results gathered showed that there was a positive correlation among these two variables also. The Pearson correlation coefficient showed there was a significant correlation between the variables ( $r=.68, p<.001$ ). The scatterplot showed the positive relationship between job stress and burnout. Hence, as job stress levels increase, the employees' burnout levels increase as well. Based on these results, the null hypothesis is rejected and the alternative hypothesis, that job stress in a 9-1-1 call center is related to employees' burnout levels, is accepted.

The subscales of the OLBI were also correlated with the stress variable and the

results showed a positive relationship between stress and both subscales, disengagement and exhaustion. A Pearson correlation coefficient demonstrated these correlations were significant. Disengagement and stress had a correlation of  $r=.70$  ( $p<.001$ ) and exhaustion and stress had a correlation of  $r=.56$  ( $p<.001$ ). The analyses found that as stress levels increased, both disengagement and exhaustion feelings increased as well.

The last research question asked if burnout is related to 9-1-1 telecommunicators' job satisfaction. The results showed there was a positive relationship between the variables. The relationship between burnout and job satisfaction was significant,  $r=.67$  ( $p<.001$ ). The alternative hypothesis, burnout is related to 9-1-1 telecommunicators' job satisfaction, was supported and the null hypothesis was rejected.

### **Interpretation of Findings**

This study aimed to find if there were any type of relationships among job stress, burnout, and job satisfaction that affect 9-1-1 telecommunicators based on their exposure to these variables in the workplace. The results of the study revealed there were positive relationships between these variables. Based on the description of the variables, the nature of the job as a 9-1-1 telecommunicator, and previous studies (Adams et al., 2015; Miller et al., 2017; Ramey et al., 2017; Regehr et al., 2013) it was expected for the variables to correlate. However, it was not expected that job stress and job satisfaction were to be positively correlated, as the expectation was that if job stress levels were high, the job satisfaction would be low. Instead, the participants reported that as their as job stress level increased, their sense of satisfaction in the workplace increased as well. Likewise, burnout levels and job satisfaction were positively correlated where the participants reported their job satisfaction increased when their burnout symptoms were

high. These results suggest that a follow up study should be performed to discover why these variables correlated the way they did. A possible answer to these results is that when a 9-1-1 telecommunicator handles a high stress call in a successful manner, the person experiences satisfaction for doing their job well.

### **Context of Findings**

The findings of this study are linked to relevant research about signs of job stress, burnout, and job satisfaction that affect 9-1-1 telecommunicators (Lilly & Pierce, 2013; Ramey et al., 2017; Regehr et al., 2013; Steinkopf et al., 2018). Regehr et al. (2013) studied factors that could be linked to the stress 9-1-1 telecommunicators are exposed to in the course of their workday. In their study, they found PTSD symptoms such as intrusive memories, avoidance changes, sleeping problems, and irritability that were associated to the trauma symptoms, i.e., flashbacks of events. The results of the Regehr et al. (2013) study found that 9-1-1 telecommunicators reported high levels of stress. More importantly, unlike the results of the current study, Regehr et al.'s (2013) study linked the severity of the participants' job stress symptoms directly to how many years the participants had been employed as 9-1-1 telecommunicators.

The mean job stress levels in 9-1-1 telecommunicators in this study was 11.95 out of a maximum score of 25. This mean represents a moderate level of stress. These results contrast with those in the study by Ramey et al. (2017) where emergency telecommunications personnel reported a higher level of job stress when they were compared with police officers, although their job duties are different within the emergency services field. While this current study focused on 9-1-1 telecommunicators only, it is important to note that 9-1-1 telecommunicators can experience a fair amount of

stress even though they work in a controlled environment in comparison with first responders.

The findings of this study support other studies about 9-1-1 telecommunicators and their work in a stressful environment (Adams et al., 2015; Ramey et al., 2017; Steinkopf et al., 2018). Adams et al. (2015) stated that their participants reported physical stress symptoms and their mental health was affected due to their workplace. Steinkopf et al. (2018) found that 9-1-1 telecommunicators reported higher levels of stress compared to the general population and they linked the results to symptoms of anxiety and depression.

### **Implications of Findings**

Research for this population is limited; however, these findings can be used to further the education of researchers who seek to broaden the research in this field. The results showed job stress levels and burnout levels reported by the participants were positively correlated. Burnout symptoms are present when the 9-1-1 telecommunicators experience job stress. Stress is known to affect different aspects of a person's life and has been linked to feelings of isolation and powerlessness in the workplace (Regehr et al., 2013) as well as physical problems such as cardiovascular disease, obesity, and sleeping problems (Lilly et al., 2016; Lilly & Pierce, 2013; Meischke et al., 2018; Regehr et al., 2013; Ramey et al., 2017).

The high amount of job stress 9-1-1 telecommunicators are exposed to in the course of their workday is a matter that should be taken seriously. It is important to identify ways to decrease job stress levels as stress predisposes 9-1-1 telecommunicators to experience burnout symptoms (Meischke et al., 2018). In a 9-1-1 call center the

employees can benefit from training that teaches them how to cope with the job stress and possible burnout they could experience. The use of positive coping skills, such as peer consultation and supervisor support, can be used to the everyday situations they encounter when dealing with emergencies.

### **Limitations of the Study**

There were a few limitations in this study. The survey format was a limitation as surveys tend to yield a low response rate. The recruiting method utilized to gather participants was another limitation. Participants were recruited from the Survey Monkey Audience platform. The participants had to answer a screening question that verified the person is a 9-1-1 telecommunicator.

An additional limitation was that the data was self-reported; therefore, relying on the accuracy of the responses may have been a problem. The application of the Survey Monkey Audience platform was a matter of convenience due to the current global pandemic, COVID-19, and the limitations of accessing participants face-to-face. The small sample size of this study was a result of the lack of 9-1-1 telecommunicators reached via the Survey Monkey Audience platform.

### **Future Research Directions**

The future of 9-1-1 telecommunications depends largely on new technology that can aid them. The role of the telecommunicator is unique. When a citizen calls 9-1-1 to report a crime or a medical emergency, the 9-1-1 call taker needs to be ready to assess the situation as quickly as possible (Lilly & Allen, 2015; Narikawa et al., 2014; Regehr et al., 2013).

In a study proposed by Baseman et al. (2018), the impact of new technology is

thought to be able to affect the way telecommunicators deal with their well-being and how the call center deals with attrition. The researchers proposed a study that analyzes the effect of utilizing the NextGeneration 9-1-1 (NG911) system. As 9-1-1 call centers move forward to improve their technology to better serve the community and first responders, NG911 requires wireless carriers to provide the proper applications for their customers to contact 9-1-1 in different ways besides the usual way of dialing the number. NG911 proposes that citizens should be able to contact 9-1-1 via text message which will impact, as well as improve, the way people with hearing problems communicate in emergencies. Therefore, helping the 9-1-1 telecommunicator will save valuable time when taking these types of calls (Baseman et al., 2018). This study proposed to examine before and after levels of job stress and job satisfaction among 9-1-1 telecommunicators (Baseman et al., 2018). This data could provide new information on how to address the levels of job stress experienced by 9-1-1 telecommunicators when utilizing new technology and how the utilization of such technology could improve their job satisfaction.

This is a population that has been understudied when compared to other classifications within the emergency services field. Only a handful of studies have focused their attention on 9-1-1 telecommunicators (Allen et al., 2016; Lilly & Allen, 2015; Lilly & Pierce, 2013; Steinkopf et al., 2018). Future studies should focus on this population as the sole participants in their studies in order to learn more about how their job duties affect them and how it affects their 9-1-1 call center in terms of absenteeism and attrition. By having a better understanding of the factors that affect this population, recommendations can be made to improve their workplace while addressing the negative

aspects of the job duties.

Future studies could benefit from a longitudinal nature that would allow researchers to gather data that could be correlated and analyzed over time. Based on the results of this study, a qualitative study could broaden the understanding of how the variables studied—job stress, burnout, and job satisfaction—affect the individual in the workplace. Moreover, information about these variables can be cross analyzed to learn if their effects spill over into their family lives as well.

Researchers in the future should also aim to learn which coping skills are more efficient when treating symptoms of job stress and burnout in 9-1-1 telecommunicators. Allen et al. (2016) reported that participants who had high levels of PTSD also used coping strategies more than those with lower PTSD levels. Therefore, learning which coping skills to teach the 9-1-1 telecommunicators and integrating them as part of their training could be beneficial overall. Problem-solving processes can be very effective when dealing with stress and feelings of burnout (Allen et al., 2016). In addition, 9-1-1 telecommunicators can learn how to cope with incidents when they have to continue their shift and cannot take a break from the calls they handle.

In addition to the stress experienced due to the nature of the job, 9-1-1 telecommunicators also may be exposed to organizational stress. Organizational stress can be experienced when there is lack of positive feedback, feelings of being undervalued in the workplace, and exclusion from training and promotions (Adams et al., 2015). Researchers could focus their attention on this area as well in the future as it can help to find ways to reduce the exposure to job stress in 9-1-1 telecommunicators. Improving the well-being of the employees in a 9-1-1 call center should be a priority as it could have a

direct link to the attrition in the call center.

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Appendix A  
Job Stress Scale

## **Job Stress Scale**

### Items

1. A lot of times my job makes me very frustrated or angry.
2. I am usually under a lot of pressure when I am at work.
3. When I'm at work I often feel tense or uptight.
4. I am usually calm and at ease when I'm working. (reverse coded)
5. There are a lot of aspects of my job that make me upset

Rating scale – 5-point Likert response scale of (1) strongly disagree, (2) disagree, (3) uncertain, (4) agree and (5) strongly agree. Item 4 reverse coded.

Appendix B  
Oldenburg Burnout Inventory  
(OLBI)

### **Oldenburg Burnout Inventory (OLBI)**

#### Items

1. I always find new and interesting aspects in my work.
2. There are days when I feel tired before I arrive at work.
3. It happens more and more often that I talk about my work in a negative way.
4. After work, I tend to need more time than in the past in order to relax and feel better.
5. I can tolerate the pressure of my work very well.
6. Lately, I tend to think less at work and do my job almost mechanically.
7. I find my work to be a positive challenge.
8. During my work, I often feel emotionally drained.
9. Over time, one can become disconnected from this type of work.
10. After working, I have enough energy for my leisure activities.
11. Sometimes I feel sickened by my work tasks.
12. After my work, I usually feel worn out and weary.
13. This is the only type of work that I can imagine myself doing.
14. Usually, I can manage the amount of my work well.
15. I feel more and more engaged in my work.
16. When I work, I usually feel energized.

Rating scale – 4-point Likert scale range (1) strongly agree, (2) agree, (3) disagree, and (4) strongly disagree. Reverse code for items 2, 3, 4, 6, 8, 9, 11, and 12.

Appendix C  
Job Satisfaction Scale

## **Job Satisfaction Scale**

### Items

1. I find real enjoyment in my job.
2. I like my job better than the average person does.
3. I am seldom bored with my job.
4. I would not consider taking another kind of job.
5. Most days I am enthusiastic about my job.
6. I feel well satisfied with my job.

Rating scale – 5-point Likert response scale (1) strongly disagree, (2) disagree, (3) uncertain, (4) agree, and (5) strongly agree.