Emergency Medical Dispatchers:

PTSD and Preventing It

by

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Abstract. This research focused on the potential for and existence of post-traumatic stress disorder (PTSD) in Emergency Medical Dispatchers (EMDs) and ways to prevent it. There was a lack of research concerning how PTSD affects EMDs and if it could be prevented. The question aimed to be answered is what can organizations do to support these professionals more and can this disorder be prevented by taking precautionary measures. The purpose of this qualitative study was to determine the answer to these challenges and gain further insight based on the theoretical foundations of the study. The study population for this research was EMDs from a local dispatch center. Sampling procedures include purposive sampling. This was determined because only certain participants meet the criteria. A survey created through Survey Monkey was emailed to participants from their supervisor and used to gauge the risk of these EMDs having a stress related disorder and also their familiarity with and use of assistance programs. The independent variables of capacity/ability to handle stress of the job and level of support systems were compared with qualitative analysis to determine which could be effective in these environments at reducing stress and PTSD, which is the dependent variable. The theoretical framework of this study focused on social cognitive theory and the social buffering hypothesis and how those play a role in regard to this topic. A major conclusion found is that even those with the strongest support systems and belief in their ability to handle the stress of the job still experience negative stress related effects. Recommendations for further research include a qualitative study in a larger center and with other dispatch populations (fire, police, etc.) to compare for similarities to EMDs.

Keywords: Emergency Medical Dispatchers (EMDs), post-traumatic stress disorder (PTSD), critical incident stress management (CISM), peer support, dispatcher stress

Introduction

There is lack of research regarding Emergency Medical Dispatchers' (EMDs) stress levels and what can be done to reduce them (Oldenburg et al. 2014). Furthermore, it is noted that some programs exist to help with this problem but how an organization portrays that program plays a role in whether or not it is successful (Adams et al. 2015). There is limited information about dispatcher risk to depression, post-traumatic stress disorder (PTSD), and similar problems because dispatchers come from varied backgrounds themselves (Lilly & Pierce, 2012). More research not only needs to be done regarding risk assessment of dispatchers for these disorders but also what can be done to prevent them (if possible) (Oldenburg, et al. 2014).

The purpose of this study is to close the gap by examining the risk of PTSD on EMDs and if there are viable ways to prevent the stress associated with this profession. It addresses how EMDs can de-stress so that it does not compound into a larger issue. This study includes asking those in this role what tools they would like to see used to combat this problem. There is a strong need for some sort of assistance to be available to personnel in this field because of the nature of their work. The research discusses and proves why the need is so strong in this area especially in regard to prevention.

This research illustrates the need for more attention to be brought to this subject, including the need for the stigma against these feelings to change. There is a stigma in all public safety fields against asking for help. Dispatchers are a vital aspect of the

criminal justice system and it is time that they start getting the attention/recognition deserved.

There are several research design issues with this topic. For example, EMDs and 911 dispatchers are often talked about interchangeably. While many of these professionals are cross trained, not all are. Therefore, it is important to keep this in mind when reviewing the literature and focus solely on literature involving EMDs and their roles.

Another term that may cause confusion is critical incident stress debriefing (CISD). This is sometimes used interchangeably with CISM. While this research is looking at CISM, Peer Support Programs and EAPs, it may also be necessary to include CISD in search parameters.

To recap, the independent variables of this research are capacity/ability to handle stress of the job, and level of support systems were compared with qualitative analysis to determine which could be effective in these environments at reducing stress and PTSD, which is the dependent variable. The main goal is to close the gap by figuring out how susceptible EMDs are to developing PTSD, but more importantly what can be done to prevent it from reaching that level. Stress will never be completely eliminated in this field, but there must be ways to reduce it to a more tolerable level.

Literature Review

Introduction to the Literature Review

The majority of research found focuses on EMDs and stress, particularly PTSD. Many aspects of this argument are analyzed including risk, workload, responsibilities, support, intervention, and post-trauma reactions. It is important to understand the background to this issue, including what leads to the development of PTSD, in order to be able to calculate and recommend viable solutions to this problem. In other words, researchers cannot attempt to fix this problem without a full understanding of what causes it to occur in the first place. As important as this topic is, there are many gaps in the research concerning it. For example, it was out of the scope of prior research to actually diagnose PTSD in this setting (Adams et al., 2015). Evans et al. (2013) also highlight the importance of further research that needs to be done to compare the experiences of those with good support systems versus those without, in relation to this field and PTSD. Most importantly, Lilly and Allen (2015) point out that mental health in emergency dispatchers has been grossly understudied compared to other public safety professions.

Review of the Literature

The first aspect of this argument that is highlighted by the research is risk. EMDs are automatically at risk to experience PTSD because of the nature of their job. This has a lot to do with what types of content they are exposed to through emergency calls. It's not entirely about what they are exposed to, but also *how* they are exposed that plays a large role. McCann and Pearlman (1990) state that the constant exposure or, "the witnessing of trauma or repeated exposure to others' trauma has been more commonly referred to in the literature as vicarious trauma, which differentiates the position of the person from the stressor" (as cited in Adams et al., 2015, p. 431). This means that the constant exposure builds up the EMD to the risk of developing future problems. Just simply witnessing someone else's trauma is a criterion for PTSD according to the Diagnostic and Statistical Manual of Mental Disorders (5th edition; American Psychiatric Association [APA], 2013) (as cited in Adams, et al., 2015). The issue here for EMDs is that they don't just witness one event. Instead, they witness several in compressed periods of time, which is abnormal to how we are taught to deal with normal, everyday stressors. First responders who actually go to the scene are vulnerable to both direct and vicarious trauma, but EMDs are thought to only be affected by vicarious trauma related to what they hear during the call; however no solid research has been done to prove this theory (Adams, et al., 2015).

Lilly and Pierce (2012) agree that continued exposure to traumatic calls not only increases one's chance of developing PTSD but also depression. They conducted a survey with 171 dispatchers to explore these concepts further. It was found that dispatchers do experience symptoms related to PTSD and depression, but they have a lot to do with how the dispatcher looks at the world. In other words, the dispatchers that had developed a more negative viewpoint of the world tended to show more symptoms of depression and PTSD (Lilly & Pierce, 2012). Those who managed to maintain a more positive outlook had fewer symptoms.

Likewise, in a follow up study, it was concluded that physical exposure is not necessary for PTSD to occur in this population (Pierce & Lilly, 2012). The gap in this research deals with how emotions and cognitions can play a role in predicting the development of PTSD and similar disorders (Pierce & Lilly, 2012). This limited information makes it hard to determine whether these changes are directly related to this field or come from an outside source. Whatever the case may be, further research needs to be done in regard to training and prevention because this is becoming a clear problem for EMDs and other professionals who work in this field (Pierce & Lilly, 2012).

As a result of Lilly and Allen's (2015) revelation that more research needs to be conducted on emergency dispatchers, combined with the study conducted by Pierce and Lilly, another short study was conducted to look more closely at a few of these aspects. This study included dispatchers from across the United States and asked them to analyze their own symptoms compared to a presentation of PTSD symptoms (Lilly & Allen, 2015). Based on how these dispatchers self-reported it was determined that 17.6% to 24.6% had PTSD symptoms and 23.9% had symptoms of major depression (Lilly & Allen, 2015). This confirms how much of a problem this issue is in this particular population. However, the gap still exists in how to combat this issue, whether it can be prevented or what ways are the best and most successful for intervention.

The workload that EMDs are expected to handle further complicates this situation. The workload is not just as simple as handling calls and other related operational tasks. Rather, handling calls is complex, involving exposure, visualizing the event, and only seeing what is referred to as the dark side of human nature (Adams, et al., 2015). Likewise, the operational factors of shift work and responsibility for making sure everyone on the shift goes home, make the workload extremely unbearable at times. It was concluded by Adams et al. (2015) that how an organization introduces and promotes a program is directly related to its success or failure. Therefore, when it comes to implementing a program regarding PTSD prevention in the workplace, organizations will need to do their research as well as make sure that everyone is supporting the program from the top down for maximum results.

A small study conducted in England interviewed nine dispatchers from one particular center. This study used a qualitative approach to interpreting the data gained from the interviews ("Ambulance call dispatchers," 2016). Based on their responses, it was found that they felt overlooked and undervalued in their roles ("Ambulance call dispatchers," 2016). The largest conclusion drawn from this study was that more positive interaction needs to occur with dispatchers, which includes the implementation of coping strategies to help with extremely stressful shifts ("Ambulance call dispatchers," 2016). Even though this strong conclusion was drawn, there was a gap in this research because it did not specify the specific coping strategies that could be implemented. Likewise, positive interaction is left open to interpretation.

Support, social support in particular, plays a big role in this topic. Everyone needs someone to talk to at some point in their life. For EMDs having someone to relate to is extremely important, because it helps them process what they have dealt with on the job. In the study performed by Adams, Shakespeare-Finch and Armstrong, many EMDs noted "using informal peer supports and family and friends" (p.441). While it is important to have someone to talk to, EMDs still must be careful in how much information they share with these individuals because of privacy laws. This, along with the stigma that EMDs should be tough-skinned and not need help are major reasons why more and more problems of this nature exist. The more EMDs try to compress this issue, the worse it will get. It was concluded by Shakespeare-Finch et al., (2015) that receiving good social support was linked with better well-being and a lesser chance of developing PTSD. However, even with that strong conclusion, it was noted that these factors (self-efficacy and social support) need to be changed and analyzed further in future research in order to find the best possible solutions for EMDs (Shakespeare-Finch et al., 2015).

There are several options for interventions. Even though a lot of negative consequences were found from Adams, Shakespeare-Finch, and Armstrong's (2015) study, there is a positive: "that work-related trauma can become a catalyst for EMDs to experience posttraumatic growth" (p.445). This means that EMDs can be successful in dealing with these situations if given the right tools. It was concluded that support, humor and acceptance were the main tools that helped EMDs work through the stressors associated with this profession (Adams et al., 2015).

One intervention that has been successful in Cleveland is training those in leadership positions to recognize and address stress related to operational issues. A community-based agency in Cleveland is responsible for this initiative, as they took the lead on training those in supervisor roles within the police department (Chapin et al., 2008). After meeting with supervisors in focus groups, it was determined that a way to encourage seeking help was needed. An incentive program was developed to meet this need and eliminate this barrier to the success of the new program (Chapin et al., 2008). There is a gap in this research as it pertains to those working in law enforcement roles instead of dispatch settings. However, the ideas and stressors that this is created to combat are universal and this technique could be adapted to apply in a dispatch setting.

Post-trauma reactions have been found to be directly related to other factors, such as receiving social support. In fact, in a study conducted by Shakespeare-Finch et al. (2015) it was concluded that self-efficacy impacted positive well-being, which also correlated with social support contributing to this success. The combination of these two factors was determined to be vital in the importance of EMDs having positive post-trauma reactions.

Building on the importance of self-efficacy, Liu et al. (2011) analyzed how this factor affected flight dispatchers and their relationships, particularly with stress and strain of the job. This study included 309 flight dispatchers from two airlines and used statistics to compare self-efficacy to physical strain, psychological strain, and job satisfaction (Liu et al., 2011). The research showed that there was significant conflict or inconsistency in regard to physical and psychological strains (Liu et al., 2011). This means that stressors existed because of unclear direction or communication in this aspect. On a similar note, it was determined that these employees did not feel like they had the tools or resources available to be successful, which is why their job satisfaction levels were low. Although these items were clearly defined, the gap in this research was defining how to correct these issues in the dispatch environment.

Oldenburg et al. (2014) did a study on dispatchers and stress in a metropolitan fire department. They particularly wanted to look at the stress put on dispatchers during the responsibility of giving medical instructions by phone, which is the main job responsibility of those given the title EMD. Although it was found that the dispatchers heart rate increased in certain situations, meaning their stress level was up, there are still more questions to be answered by future research (Oldenburg et al., 2014). For example, a gap still exists in what can be done to effectively reduce this stress load and intervene with stress becoming an overbearing issue in this field (Oldenburg et al. 2014).

Looking at this topic from a broader perspective, Plat et al. (2011) analyzed the activities of first responders in various roles. Although dispatchers were not one of the primary roles mentioned in their research, this information still applies because of the similarities in the fields. Furthermore, this demonstrates that gap that exists as dispatchers often get left out of important research related to public safety fields. More specifically, it was determined by this research that a gap exists in what makes/keeps workers in these fields healthy, both mentally and physically (Plat et al., 2011).

Scully (2011) stays very focused with research on paramedics and emergency medical dispatchers. This research centered in on what can be done to take care of those professionals working in these fields. Many options are explored in this study including Employee Assistance Programs (EAPs), CISM, and peer support. While it was determined that peer support is a better option when compared to CISM and EAPs, there are still situations where this may not be the case (Scully, 2011). Additionally, if this is determined to be the best model, the gap exists in how

to transition and implement programs of this nature to organizations (Scully, 2011).

Another option to consider is on-scene mental health counseling for first responders. This option was explored by a study conducted by Young et al. (2008) but it utilized volunteers as the sample population. As a result, a gap existed in the background information about the volunteers. It was concluded that those differences in background may be an important variable that needs to be analyzed more in future research (Young et al., 2008). Future studies should consider abilities, personality, and experience level as variables because they could affect the research outcome (Young et al., 2008). One study attempted to fill this gap slightly by looking at how earlier traumatic or unresolved issues affects the way one responds to stress in the first place. Fay et al. (2006) point out that many first responders have these types of experiences and in order to help them in the present, they must acknowledge how these elements contribute to their ways of coping.

Fay et al., (2006) include dispatchers in their research of first responders that may need in-depth assistance after critical incidents. As part of their research, they worked with emergency responders who were part of a residential program at West Coast Post-Trauma Retreat (WCPR) and concluded that this was an effective treatment option for these individuals (Fay et al., 2006). Even though this program is only five days in length, it provides a great deal of structure and peer support, which is cited as crucial to participants' success (Fay et al., 2006). The peer support aspect of this treatment is designed to make participants realize they are not alone, which helps them to open up, build trust, and accept the help being given to them. This research demonstrates how important peer support is in recovery to critical incidents, meaning that if these concepts could be replicated within individual departments, it would be a step in the right direction to combat the stressors of the job.

Kleim and Westphal (2011) looked at mental health in various types of first responders including items that may be important to preventing or intervening with it. It was found that those who had prior training related to PTSD and traumatic events often have fewer negative impacts from them. Likewise, it was pointed out that peer support is a major factor in this equation. In fact, it was stated that "it may be a primary factor within the individual's personal as well as organizational network, particularly when there is social support from superiors" (Leffler & Dembert, 1998; Regehr et al., 2000; Weiss, Marmar, Metzler, & Ronfeldt, 1995 as cited in Kleim & Westphal 2011, p.20). This further supports the importance of peer support, especially

from management. The gaps in this research are that emergency medical dispatchers were not analyzed in this aspect; the focus of the research was police officers, fire fighters, and ambulance workers.

To conclude, there are various gaps in many aspects of finding a viable solution to PTSD and preventing it in this population. The gaps are found in what type of program is most effective, what other factors influence stress, and most importantly what factors play a role in decreasing stress and/or possibly preventing PTSD all together. EMDs or dispatchers are sometimes not even considered in these studies or conversations even though they are a vital form of first responder. Further research is vital in the areas of how individuals view their ability to handle stress and social support. Social support is deemed to be a major factor by various studies, but this aspect needs to be particularly tied to emergency medical dispatchers and how it can be the most successful to these individuals. These factors will help determine the need for either more attention to be focused on the prevention of PTSD or after it has developed. Future research should be tailored to determine which avenue is more important for organizations to focus on.

Conceptual/Theoretical Framework

The theoretical framework of this study will focus on social cognitive theory and the social buffering hypothesis. The social cognitive theory was developed by Bandura and states that a person's reaction to stress depends on their level of self-efficacy (Shakespeare-Finch et al., 2015). For purposes of this study, self-efficacy is defined as how one believes they are capable of performing the task at hand. Furthermore, this theory stresses that those with higher self-efficacy tend to have better outcomes, while those with lower self-efficacy have less desired outcomes. This relates directly to this topic because in a previous study, hurricane survivors with low efficacy had higher occurrences of PTSD (Shakespeare-Finch et al., 2015). Therefore, it is likely that EMDs with low efficacy are at a higher risk of developing PTSD. The question then becomes how do we as researchers effectively measure efficacy in EMDs?

Next, the social buffering hypothesis is analyzed in regard to this topic. This is relevant to this study because social support plays a role in how one maintains well-being and recovers from traumatic events (Shakespeare-Finch et al., 2015). In other words, those with strong social support are able to combat the issues associated with stress better. In particular, the social buffering hypothesis states that having strong social support helps individuals from seeing a particular situation as stressful or helps them

to see it in a different light (Shakespeare-Finch, et al., 2015).

Along these same lines, by having a strong support system, individuals are able to process their feelings, sorting items out for better outcomes when compared to those with lower levels of support (Shakespeare-Finch et al., 2015). In previous literature there has been a gap in determining how helping others or giving support plays a crucial role. This means that it is particularly important for EMDs and those in similar roles to not only reach out for help from their support systems but also be prepared to help others in similar situations.

Gaps in the Knowledge Base

As previously stated, there has been a gap in the past concerning the importance of giving support in addition to reaching out for help from support systems based on the social buffering theory. Another gap exists in the context of how we effectively measure the risk of EMDs to developing PTSD based on self-efficacy. In addition to filling these gaps, it is vital that research analyze what other options EMDs have to combat the issue of PTSD because it is not one hundred percent preventable. While strong support systems may help in this matter, light needs to be shed on other programs that are available to those currently working in this role. By measuring EMDs familiarity with the existence of these programs, future recommendations and research can be made concerning what needs to be done to make these programs more readily available/accessible to those who need them most.

Research Design/Methodology

The approach of the study was a qualitative methodology analyzing, interpreting surveys, and compiling the results to formulate an answer to whether the capacity/ability to handle stress of the job and level of support systems could be effective in these environments at reducing stress and PTSD, which is the dependent variable. The purpose of this qualitative study was to determine through surveying current 911 dispatchers who handle medical calls (also known as EMDs) and who have dealt with these types of emotions/stress what the best solution for them and their organizations would be. For example, the population study was selected through personal contacts of the author that work for the local dispatch center in Luray, Virginia. The population study selectees are all emergency dispatchers that are familiar with these concepts, understand the need for prevention/debriefings related to PTSD, and want to make a difference in this field by participating in this study.

Research Design

The approach of this study is a qualitative research design because it is best suited to answer the research question through a survey which will seek data to fill the gap through personal experiences of current EMDs. The rationale for using this approach is that the qualitative study seeks meaning and reports results based on the interpretation of that meaning.

Shakespeare-Finch et al., (2015) acknowledged that more research was needed within this particular population. Additionally, the factors of identifying self-efficacy and receiving support need to be analyzed in future studies (Shakespeare-Finch, et al. 2015).

Surveying current, experienced EMDs supports the basis that this study relies on human understanding and their knowledge in a professional capacity, which is gained from the combination of experience, education, and working in the emergency dispatch field. As a result, they have become experts at helping others through medical emergencies. However, there is little information available to determine whether EMDs are at risk for depression and PTSD (Lilly & Pierce, 2012). As a result, more data needs to be gathered to determine not only this risk, but training and prevention methods that may help with this situation (Lilly & Pierce, 2012).

Theory concepts to be measured are the experiences of those who agree to participate in the survey. Using the social cognitive theory and the social buffering hypothesis, survey questions were created. The social cognitive theory deals with how a person responds to stress based on their level of self-efficacy (Shakespeare-Finch et al., 2015). Therefore, questions pertaining to how well participants feel they respond to stress will be included in the survey. The social buffering hypothesis will also be used to examine these concepts. This is relevant to this study because social support plays a role in how one maintains well-being and recovers from traumatic events (Shakespeare-Finch et al., 2015). In other words, those with strong social support are able to combat the issues associated with stress better when compared to those with less social support. For those reasons, questions were included to gauge each participant's social support and how well they utilize it to combat stress related to the job.

Population/Sample

The sample population selected for this study was employees from a local emergency communications center located in Luray, Virginia. This center is a 911 center that is governed by the local sheriff's office and answers all emergency and non-emergency calls for the entire county of Page, Virginia. The study aimed to specifically evaluate those employees who work in this center that are designated as dispatchers. This population was selected because they dispatch medical calls on a routine basis and will have experiences that are pertinent to the research desired.

The participants were not compensated for their participation. The sample size was 14 participants determined using purposive sampling. This sample includes 10 full-time employees, two part-time employees, and two trainees. Out of the 10 full-time employees, two of those are supervisors. There are seven females and seven males in this sample.

The first step in this study was to gain IRB approval from American Public University. To do this, an IRB application was submitted with a detailed methodology and includes all pertinent documentation. As part of the IRB application, a site permission letter from the setting of the study was needed. (See Appendix A for text version of the site permission letter that was obtained.) Once permission was received from American Public University IRB and the supervisor at the emergency communications center, the researcher emailed the link to the survey to the supervisor to then be distributed to the participants. A consent disclaimer was included at the beginning of the survey. This step ensured that informed consent was received from all participants involved in the study. (See Appendix B for a copy of the email sent to the supervisor.) (See Appendix C for the informed consent agreement that was included at the beginning of the survey.)

Setting

The survey website called Survey Monkey was used to gather this data. The questions were loaded into the survey by the researcher and double checked for accuracy. A test of the link to ensure it was working properly was conducted prior to sending it to the supervisor for distribution to the participants. The link was sent to the supervisor in an email with detailed instructions on how to participate in the survey for recruitment purposes. The Survey Monkey website gathered the data in real time as participants completed the survey in their spare time. Due to the nature of using open ended questions, it was recommended that participants complete this task when they can dedicate a half hour to an hour to it without distractions. The participants were given a deadline by which the survey needed to be completed in order for their answers to be included in the study. After this deadline passed, the researcher logged onto the website and viewed the data that was reported by participants.

Instrumentation/Measures

Fifteen open-ended survey questions created by the researcher were used to collect data for this study.

This survey was created with the online website Survey Monkey. All information gathered did not contain names or any other personal information. By using open ended questions, the goals of the research can be better met because this topic affects everyone differently. It has been noted that differences in abilities, personalities, and experience could affect research outcomes (Young et al., 2008). These survey questions were designed to look specifically at how the concepts of self-efficacy and social support play a role in the prevention of PTSD and similar disorders for EMDs.

Research Instrument

The questions asked in the survey were:

1. How many years have you been a dispatcher?

2. Approximately what percentage of the calls that you handle are medical or EMD related?

3. Explain any physical or emotional pain you experience that you believe is linked to workplace stress?

4. Explain how you feel when you are stressed?

5. Do you participate in any activities to reduce stress? If so, what are they?

6. How well would you say you handle stress related to the job?

7. How well do you handle stress in general?

8. Explain how you feel about your ability/capacity to handle the stress of this job?

9. Explain in depth how strong your support system is?

10. How many people do you have that you can turn to for social support? Who are they in relation to you and how often do you reach out to them for support?

11. Out of those people, explain how many relate to/understand your stress and how many do you use as more of just a sounding board?

12. Provide examples of when you have provided social support to your co-workers? Friends? Family? Others?

13. How often do you find yourself in this role?

14. Explain whether you feel like you provide more social support to others, receive more social support or if it is about equal?

15. Provide details of any other options/tools you would like to see used in your organization to combat against the development of PTSD and similar problems?

Validity

Validity refers to how accurate the research is. In regard to this study, the researcher had to strengthen the validity by removing personal opinions and descriptions of this line of work. The researcher remained objective and also refrained from showing bias to survey answers that align/support her own feelings.

Reliability

In order to maintain reliability of the data, the researcher depended on Survey Monkey to gather the data. After the data was gathered by that means, a backup copy of results was downloaded in Microsoft Excel. When analyzing and coding the data, the researcher was careful not to mix up any of the answers or show favoritism to one or the other. In addition, the fact that differences in abilities, personalities, and experience could affect research outcomes, how an organization supports a program greatly influences its success (Young et al., 2008; Adams et al., 2015). This means that if this study were replicated, the outcome would likely be different based on the individuals and organization used. This is not a problem for this study because it is still reliable as long as it follows the goals defined in the study and does not lead or show favoritism to one particular solution.

Data Collection

To ensure compliance with data collection, the researcher received approval from a supervisor before contacting employees at the local emergency communication center. Furthermore, it was agreed upon that the information would be emailed to the supervisor and then she would distribute it to her employees. This way, the researcher does not have access to the employee's email addresses or any other personnel information. This helped to ensure the data gathered would remain confidential. Fourteen participants were planned to be used. Once permission was received from American Public University IRB, the researcher initiated contact with the supervisor at the communication center. The survey link was emailed to the supervisor to be distributed to employees. The survey had a consent page prior the questions being asked. This step ensured that informed consent was received from all participants involved.

The instrumentation from which data was collected was in the form of an online survey created by the researcher on Survey Monkey. The method of collecting data was based on 15 open ended questions

created by the researcher. The setting was left up to the participants, but it was recommended that they take a half hour to an hour in a quiet location with minimal distractions to complete the survey.

Measures were taken to ensure reliability and validity. The researcher removed personal opinions, descriptions and bias from the data and interpretations of it. Even though this study would likely yield different results if replicated based on abilities, personalities, and experience, the study is still reliable because it focuses on the goals at hand (Young et al., 2008; Adams et al., 2015).

Data Analysis

The method used to analyze data in this study was a qualitative descriptive study. The goal was to interpret the answers from current EMDs in regard to how self-efficacy and social support affect PTSD and its prevention in this field. Another goal involved analyzing the data for additional options that EMDs are familiar with or would like to see implemented in their center. There are no specific statistical calculations that were needed to be done but rather the data involved simple math actions to calculate amounts and percentages of similar answers.

Ethical Considerations

Informed consent was received from all participants involved in this study. Those surveyed will not have their names used in any way. When they took the survey through the online link, the data could not be linked to them, but rather it remained anonymous. Therefore, the researcher did not even know which participant's answers belong to whom. The participants were advised not to disclose any information that may link them to it.

The data gathered from this survey is safeguarded on the researcher's computer with a password. Additionally, the data obtained for use in this study will only be kept for 5 years. (See Appendix D for a copy of the data usage, storage and destruction agreement,)See Appendix E for the Data Set Collection

Limitations

There are several limitations with this study. For example, EMDs and 911 dispatchers are often talked about interchangeably. While many of these professionals are cross trained, not all are. Therefore, it is important to keep this in mind when reviewing the literature and focusing solely on literature involving EMDs and their roles.

Another term that may cause confusion is Critical Incident Stress Debriefing (CISD). This is sometimes used interchangeably with CISM. While this research is looking at CISM, Peer Support Programs and EAPs, it may also be necessary to include CISD in search parameters.

Lastly, time constraints were an issue within this study. The researcher needed to give a date that the survey must be completed by. Ideally, this would have been enough time that all participants will find time to participate. However, there was always the possibility that some may not participate for various reasons. On a similar note, some of the employees at the center decided that they do not wish to participate, making the sample size smaller than intended.

Findings/Results

Out of the 14 participants selected for this survey, seven responded. This means there was a 50 percent response rate overall. Of the surveys that were completed, there was an 86 percent completion rate. This is because five of the surveys were completed in their entirety; however, the sixth was only partially completed, and a few questions were skipped on various surveys. All survey respondents accepted the embedded consent form prior to answering any questions. A breakdown of each survey response follows.

Interviewee number one reported being a dispatcher for 25 years. This respondent reported that only about 25 percent of calls he/she takes are EMD related. This respondent experiences excessive weight gain, depression and anxiety that he/she believes is related to the nature of the job. When asked how the respondent felt when stressed, he/she reported, "very agitated and snap at everyone." To reduce stress, this respondent exercises, but only when time permits. In response to the question about how well the respondent feels he/she handles stress, the answer was "sometimes very good, other times not so good." As a follow up, regarding how well the respondent handles stress in general, it was stated that it "depends on the situation."

In regard to the question about ability/capacity to handle stress of the job, Interviewee number one answered that it was getting worse as the number of calls increase and because of his/her amount of time accumulated on the job. This interviewee explains that a co-worker and a friend who is a former dispatcher are the backbone of his/her support system. Additionally, on this question, the interviewee noted that it was easier to go into detail about calls with co-workers because with friends outside of work, confidentiality plays a factor. On a similar note, this respondent has one best friend that he/she turns to for social support several times a week. This friend relates to the respondent's stress well because she was once in the same profession.

When asked for specific examples of providing social support others, the respondent reported several

items. One example was offering debriefing to employees after they experienced a high stress call. Another work-related example was giving out small gifts to co-workers as a way of boosting morale in the call center. This respondent is also a good listener for family and friends, offering "advice if they ask for it and at times even if they don't ask for it." The respondent reported being in this position of providing support to others, numerous times each week. However, stated it was about equal in regard to how much social support he/she gives compared to how much he/she receives.

Lastly, when asked what options he/she would like to see used in their organization to combat PTSD and similar problems, this respondent would like to see dispatchers included more in debriefings. This respondent goes into detail about how debriefings are often offered to fire, rescue, and police personnel but "dispatchers are forgot about." This respondent would also like to see dispatchers "not looked down on from administration if they have problems with depression/anxiety, which in a lot of cases was caused by this job in the first place." The respondent points out that help should be offered to these individuals instead.

The second interviewee reported being a dispatcher for approximately 10 years. This respondent states that 45 percent of the calls he/she handles are EMD related. When asked about any physical or emotional pain the respondent believes is related to workplace stress, the response was high blood pressure and trouble sleeping. This respondent feels "worried" when experiencing stress. Reading and spending time with family are items that this respondent participates in as a way to reduce stress. In response to how well this respondent handles stress related to the job, he/she simply stated, "good." In response to how well do you handle stress in general, the respondent replied, "very good."

When asked about the ability/capacity of the respondent to handle stress of the job, the response was, "I feel I am able to handle the stress of the job." This respondent reported having a very strong support system and being able to talk things out with them, resulting in "the stress of the job not to bother me as much." This respondent reported having one person that he/she mainly reaches out to for support, which is a wife. The respondent also states that this person relates to the respondent's stress.

An example that interviewee number two points out as when he/she provided support to others is taking a call from a family member who found their partner in cardiac arrest. This respondent reports being in a role that provides support to others "a lot." When asked whether the respondent felt like he/she provided more support to others or received more, the answer

was that it is "somewhat equal." Lastly, when this interviewee was asked about future recommendations for the organization to combat against PTSD and similar issues, the response was that there needs to be "someone in place for dispatchers to talk to if needed."

The third interviewee reported being a dispatcher for less than one year. Forty percent of the calls he/she handles are EMD related. This respondent skipped the question about physical or emotional pain that is linked to workplace stress. When asked how he/she felt when stressed, the respondent reported that "I feel like nothing will change." Activities this respondent participates in to reduce stress are volunteering with fire department, volunteering with rescue squad, and reading.

When asked how well do you handle stress related to the job, this respondent stated, "fairly well." When asked how well he/she handled stress in general, the response was "fairly." This interviewee feels "fairly comfortable" in his/her abilities to handle the stress of the job. In response to the question about how strong his/her support system is, the respondent pointed out that "inside work could use improving" and outside of work his/her support system was "good."

This respondent has a few co-workers and family that he/she reaches out to for support. Out of those people, the respondent highlighted "most" relate to his/her stress. This interviewee reported an example of supporting family during a hard time. He/she reported being in this role some of the time. When asked if he/she provides or receives more support, the response was "equal." Lastly, this respondent cited "more support" as the answer to options the organization needs to combat against PTSD and similar issues.

The fourth interviewee reported being a dispatcher for almost two years. Approximately 25 percent of the calls he/she handles are EMD related. When asked about any mental or physical pain he/she experiences that is linked to the job, the reply was, "disturbing images or thoughts that can be difficult to forget once the work shift is over." In response to the question about how you feel when you are stressed, the respondent replied that he/she was frightened, worried that he/she could not do it anymore, and at times alone.

This interviewee plays video games, attends concerts and spends time with those he/she loves as ways to attempt to reduce stress. When asked how well do you handle stress related to the job, the reply was:

"During the shift I handle stress well, 9/10 as far as how well I handle it. Before a shift however, the weight of not knowing how busy or chaotic a shift may he can create a much higher stress

level, where I would rate my handling of that stress a 2/10."

On a similar note, when asked how the respondent handles stress in general, the reply indicated somewhat well. Additional comments noted that the respondent tries "to have a good perspective on things where others at least do not know that I am stressed."

In regard to the question about ability/capacity to handle the stress of the job, this interviewee stated: "I still doubt myself, but others seem to think I do a good job, I let other people's confidence in myself raise myself up." This interviewee reported having a very strong support system both in and outside of work. When asked about whom the interviewee turns to for support, the answer was: "I have my mother, father, brother, sister, girlfriend, and about 5 close friends that I can turn to for support. A total of 9 people." Furthermore, the interviewee indicated that he/she reaches out to a girlfriend the most, venting every other day, and also talks with his/her mother a lot. Specific comments were made regarding the detail of this support, such as:

> "My mother and my girlfriend do their best to relate and understand how difficult the job can be, both stating that there is no way they could do it, which helps me feel better sometimes. I would say my father and at least two of my friends are always there for me to at least vent to as well, they'll always at least hear me out and respond."

When asked about specific examples of support given to others, the respondent describes a hanging call that recently happened on his/her shift. The answer included how this individual explained to a co-worker the importance of not dwelling on calls like this and that he/she was available if the other co-worker needed to talk to someone about it. Following up on this question, the interviewee commented that he/she is not often in this role because "I'd like to say I'm uplifting but the majority of my coworkers are either well experienced to not get upset over calls or hide it well."

In response to the question about providing or receiving more support, this interviewee responded that he/she feels like they provide more support to others when combining all groups together (family, friends and co-workers). Lastly, in response to what options/tools this interviewee would like to see used by the organization to combat PTSD and similar issues, the response included references to optional monthly meetings to discuss work related stress incidents. This interviewee also sees the importance of "more coworker gatherings in relation to dinners or

more public activities that include dispatchers." He/she stresses that "having the public know how stressful and demanding the job is or can be is a big step."

The fifth interviewee reported being a dispatcher for seven years. This respondent reported 85-90 percent of calls handled are EMD related. This respondent did not complete the survey, skipping the remainder of the questions.

The sixth interviewee has been a dispatcher for three years and handles approximately 30 percent EMD related calls. This interviewee responded with "n/a" in regard to the question about experiencing any mental or physical stress that is believed to be linked to the workplace. However, this subject did report feeling "tired, on edge, [and] sometimes angry" when stressed in general.

Like several of the other interviewees, this one participates in activities to reduce stress such as spending time with friends/family, listening to music and sports. When asked about how this interviewee handles stress related to the job and stress in general, the term "well" was in both responses. This interviewee also reported, "I feel good about how I'm able to handle the stress of my job."

On the questions pertaining to social support, the sixth interviewee described a "strong" support system consisting of friends, family, and co-workers. This interviewee discussed social support specifically in the context of his/her job, explaining that, "When it comes to my job, I mainly reach out to my coworkers, roughly 5-7 people. When I feel like I'm stressed, I go to them about once every 2 weeks." Likewise, this interviewee reported that many of his/her support system can relate because they all work in the same environment.

Interviewee number six gave specific examples of providing social support to others, such as about calls taken with co-workers and relationship problems with friends. This interviewee finds him or herself helping someone else in this capacity "multiple times a week." This interviewee would also like to see "occasional counseling for stress relief" offered by the organization as a way to combat PTSD and similar problems.

The seventh and final respondent reported being a dispatcher for seven years. This interviewee stated that 40 percent of the calls he/she handled were EMD related. This individual experiences high blood pressure and weight gain that he/she believes is related to the stress of the job. When stressed, this person feels a rise in blood pressure and worries that he/she might make a mistake.

Like many other interviewees, interviewee number seven participates in activities to reduce stress, such as reading and spending time with family. He/she reports handling stress related to the job "fairly well"

and "good" in general. When asked about his/her ability/capacity to handle the stress of the job, the interviewee responded good with mention of having a thick skin to not let things bother him/her.

On the topic of support systems, interviewee number seven feels his/her support system "outside of work is very strong." This individual has a couple of people to turn to for support, most of them family members. However, this individual also pointed out that only one of those people in the support system really relates to his/her stress.

This interviewee skipped the question pertaining to providing social support to others. Even after not answering that question, the interviewee stated, he/she found themselves in that role often (of providing support to others). Likewise, in regard to co-workers, it was highlighted that this individual feels they give more support than is received. When asked what tools/options he/she would like to see used in the organization, the response was "I feel that they need to have someone in place that we can talk to when need. They need to show support for the dispatchers instead of us feeling like we are left alone."

Discussion/Analysis

To review, the social cognitive theory was developed by Bandura and states that a person's reaction to stress depends on their level of self-efficacy (Shakespeare-Finch, 2015, Rees, & Armstrong, 2015). For purposes of this study, self-efficacy is defined as how one believes they are capable of performing the task at hand. Furthermore, this theory stresses that those with higher self-efficacy tend to have better outcomes, while those with lower self-efficacy have less desired outcomes.

To test this theory in this context, the specific question of: Explain how you feel about your ability/capacity to handle the stress of this job was asked. The answer to that question was then compared with answers to previous questions about stress related feelings and symptoms. For interviewee number one, the answer to that particular question was that he/she felt it was getting worse, or harder to handle, as time goes by and call volume increases. Based on this theory, it is no surprise that this interviewee is experiencing mental and physical pain related to the job, because the level of self-efficacy is low creating a less desired outcome.

Interviewee number two showed more confidence in the answer to the question about ability/capacity to handle the stress of the job. This interviewee stated specifically that he/she was able to handle the stress of the job. Applying the social cognitive theory to this individual should indicate good outcomes based on that answer alone. This is not the case. The outcomes are not as good based on other

answers, because this interviewee admitted to having high blood pressure and trouble sleeping in other questions. Likewise, this interviewee also emphasized feelings of worry when stressed, which could be good, but could also be bad depending on the situation, the amount of worry and how it affects this individual's actions at work.

The third interviewee indicated feeling fairly comfortable with his/her ability to handle stress of the job. Analyzing this interviewee's other answers indicated positive outcomes, however, the interviewee did skip the question about mental and physical pain. This could mean that none exists or that this individual did not feel comfortable disclosing it on the survey. Also, looking at the amount of time on the job, this interviewee is fairly new, being in the role for less than a year. This could indicate that the interviewee has not been in the job long enough to feel the stressful effects of it yet.

The fourth interviewee showed doubt in his/her ability to handle the stress of the job but because others showed support, it helped with the confidence to do so. This interviewee also gave very specific details about handling stress on the job, indicating that it was easier to do while on shift, compared to thinking about it before coming on shift. Likewise, in regard to handling stress in general, this interviewee stated, "I try to have a good perspective on things where others at least do not know that I am stressed." In other words, this individual is not trying to cover things up, but look at situations, particularly difficult ones, from a better point of view. Based on the social cognitive theory and this individual's answers, his/her outcomes should be good. This is not entirely the case. This individual experiences disturbing images and thoughts even after the work shifts are over and admits to feeling frightened, worried, and alone when he/she experiences stress.

All four of these interviewees expressed activities that they participate in as a way to try to reduce stress. However, based on these answers, either those activities are not enough, or the stress of the job is just too much to be balanced out in that way. Three out of four of these individuals gave answers to the ability/capacity question that should have indicated positive outcomes. However, based on other related answers, it is obvious that their outcomes are not positive.

The fifth interviewee skipped all questions pertinent to this analysis, so the researcher is unable to draw any valid conclusions from that survey.

The sixth interviewee showed confidence in his/her ability to handle the stress of the job and stress in general. By leaving the question about physical or emotional pain unanswered using "n/a," it is concluded that the interviewee does not experience

any of these symptoms at this point in time. Like the other respondents, this interviewee does participate in activities in an effort to reduce stress.

The seventh interviewee also showed confidence in his/her ability to handle the stress of the job and in general. However, this interviewee does still experience negative effects related to stress. It should be noted that this individual does participate in activities in an effort to reduce stress, but stress related effects are still present.

The social buffering hypothesis is also used to analyze the results of this study. This is relevant to this study because social support plays a role in how one maintains well-being and recovers from traumatic events (Shakespeare-Finch et al., 2015). In other words, those with strong social support are able to combat the issues associated with stress better. In particular, the social buffering hypothesis states that having strong social support helps individuals from seeing a particular situation as stressful or helps them to see it in a different light (Shakespeare-Finch et al., 2015). Along these same lines, by having a strong support system, individuals are able to process their feelings, sorting items out for better outcomes when compared to those with lower levels of support (Shakespeare-Finch et al., 2015). To measure the social buffering hypothesis in this study, questions were asked about support systems, their strength, examples of giving and receiving support, and if those support systems could relate to the individual and their stress in this type of job.

Interviewee number one described a support system consisting of co-workers and a good friend who was a former dispatcher. This interviewee went on to explain that the support system was better with co-workers because they can discuss items related to the job in more detail compared to not being able to do so with the best friend because of confidentiality reasons. This is bad because this interviewee also expressed that the best friend is the main person he/she turns to for support several times a week. This makes it difficult for the best friend to fully understand this person's stressors without knowing all the details. However, because the best friend is a former dispatcher, he/she may understand some of the stress without needing to know all the details. The interviewee confirms this by saying that "My friend can relate very well; she was also once in this position."

This interviewee not only reaches out for support but provides it to others. This interviewee provided specific examples regarding this, such as:

"I have offered debriefing for employees after they have a high stress call. Periodically give out small gifts to boost morale and to let them know they are appreciated. I am a listening ear for friends and family members and offer my advice if they ask for it and at times even if they don't ask for it."

This individual finds themselves in the role of providing social support to others several times a week. However, when asked if he/she provided more support or received more support, the answer was about equal. Collectively looking at these answers, it can be concluded that this individual has a good support system, which is important being in this line of work for 25 years. Although this interviewee doesn't have the strongest positive outcomes, he/she has been successful in the long run because of the longevity of the career and this can be partially attributed to the strength/amount of the support system.

Tying the results of the social cognitive theory and the social buffering theory together, it can be concluded that interviewee number one has been successful in regards to time spend on the job, but still suffered from severe stress symptoms, even though he/she has a strong support system, partakes in activities to combat stress and is capable of performing the job. His/her belief in that ability has diminished over time, which could be related to overall stress on the job.

Interviewee number two also reported having a "very strong" support system. This interviewee stressed that he/she is able to talk things out with their support system, which in turn "allows the stress of the job not to bother me as much." This interviewee cited having one particular person, a wife, that he/she reaches out to the most and that that person can relate to the stress.

This interviewee, like interviewee one, also finds his or her self in a social support role "a lot." This is confirmed by the discussion of taking a call from a family member whose partner was in cardiac arrest. However, when asked if this individual gives or receives more social support, the response indicated that it is "somewhat equal."

It could be said that this interviewee has also been successful in the long run, because he/she has been a dispatcher for approximately 10 years. However, that doesn't mean that stress has not played a role. Although this interviewee has a strong support system and still believes in their ability to perform the duties of the job, stress has taken a toll physically on this person. This is not good and still needs to be addressed before any other problems occur.

The third interviewee is the newest to this profession, with less than a year on the job. This interviewee described having a "good" support system outside of work, but that inside of work "could use

improving." This is eye-opening regarding how new employees in this field feel about the support they are receiving related to the job. Another reason this is important is because this interviewee cited "a few co-workers and family" as those he/she turns to for support. The good news is that "most" of those people relate to this individual's stress.

Like the other two interviewees, this individual also has provided social support to others by means of "supporting family during hard times." Although this only happens some, it is important, as this is a common theme between all of the interviewees so far. Also, like the other two interviewees, this respondent feels that he/she gives and receives support equally.

Therefore, looking at both the social cognitive theory and the social buffering hypothesis, interviewee number three has a good support system and feels capable of doing this job, but time is of vital importance here. The lack of time spent in the job so far has not shown any negative results. Therefore, at this point in time, this individual has been extremely successful, but as time builds this has a strong potential to change.

Interviewee number four indicated a "very strong" support system as well, consisting of co-workers, friends and family. This individual also noted that each person fills a unique role in his/her support system. This interviewee listed specific family members and five friends that he/she considers those they can turn to for support. All together this person has nine people that he/she can depend on. It was noted that this person vents to a girlfriend on a frequent basis, "once every other day" and also talks with his/her mom "a lot." Building on that answer, this person's girlfriend and mother do their best to relate to what he/she is going through, but both have expressed concerns to the individual that they could not do this job. This interviewee stresses that he/she vents to other family and friends that respond but not may relate as well.

Like the other respondents, this interviewee also provides social support others, specifically one co-worker. The example was given of a recent hanging call and how this individual talked with a new co-worker about it, telling him/her not to dwell on the big calls like that. Another item that should be eye-opening for organizations is that this individual felt like he/she is not in a position to provide social support to co-workers very much because "the majority of my coworkers are either well experienced to not get upset over calls or hide it well." However, when looking at friends, family, and co-workers collectively, this interviewee feels like he/she gives more social support than receives.

Therefore, looking at the social cognitive theory and social buffering hypothesis, this interviewee

combined items related to both in his/her answers. For example, citing other's beliefs in their ability to perform the job as a reason for their own confidence to perform the job. This shows that his/her support system is not only very strong but very influential in his/her decisions, abilities and successes. That does not mean that this individual is without stress or stress related symptoms. The other answers indicated that those do exist even with optimal circumstances otherwise.

The fifth interviewee skipped all questions pertinent to this analysis, so the researcher is unable to draw any valid conclusions from that survey.

The sixth interviewee indicated a "strong" support system and focused on that support system within the work environment. Based on his/her answers, it can be concluded that this individual is extremely comfortable with their "strong" support system within the work environment and reaches out to them when needed. Likewise, evidence of a strong support system outside of work was indicated by comments about family and friends. Like the other respondents, the theme of helping others was also carried out by this interviewee who finds his or herself in that role multiple times a week. In correlation to many of the other respondents, this interviewee also used the word "equal" to describe the give and take of social support.

Therefore, looking at both theories to analyze this interviewee's answers, the conclusion is that this individual is successful and both the confidence in his/her ability to perform the job, along with a strong support system exists. Furthermore, based on the answers given, no negative consequences have occurred up to this point in time.

The seventh interviewee indicated a "very strong" support system outside of the workplace. The interviewee confirmed this type of support system by indicating mainly family were the primary support system but only one of those could relate to his/her stress well. This interviewee commented that he/she provides support to others more than receiving it but did not go into detail with any specific examples of those actions. The only comment made was that the interviewee finds him or herself in this role "often."

Using both theories to analyze interviewee number seven's answers, the conclusion is that this individual is successful and both the confidence in his/her ability to perform the job, along with a strong support system exists. However, this person has still experienced negative stress related consequences even after participating in activities to try to reduce stress levels.

There were several main highlights from the survey data that should be addressed by the organization. One interviewee described having a

"good" support system outside of work, but that inside of work "could use improving." This is eye-opening regarding how new employees in this field feel about the support they are receiving related to the job. Another reason this is important is because this interviewee cited "a few co-workers and family" as those he/she turns to for support. The good news is that "most" of those people relate to this individual's stress. However, the organization should strive to create support systems within the workplace that are better than "could use improving."

Another item that should be eye-opening for the organization is that one individual felt like he/she is not in a position to provide social support to co-workers very much because "the majority of my coworkers are either well experienced to not get upset over calls or hide it well." Based on other survey answers, it is true that three of the respondents are more experienced than this individual. However, their other answers indicated they do experience stress or upsets from calls that have created other issues in their lives. The organization needs to address this and stop the bias that these items do not exist or that people feel like they need to hide their feelings.

Building on these issues, there was a constant theme among survey respondents that dispatchers needed and wanted more things related to the prevention of stress. For example, one interviewee wanted to see dispatchers included more in debriefings that are provided to on-scene personnel. This same respondent discussed dispatchers being "forgot about." Another recommendation concerned dispatchers not being looked down on from administration if they have "problems with depression/anxiety, which in a lot of cases was caused by this job in the first place." Although this respondent didn't specify a certain remedy, and it may be different for each case, it was stressed that "help should at least be offered."

Interviewee number two expressed a similar concern, stating that it would be a good idea "for the sheriff's office to have someone in place for dispatchers to talk to if needed." Even interviewee number three, who is the newest to this profession, stressed that "more support" is needed. Interviewee number four echoed these thoughts by adding,

"I wouldn't mind optional monthly meetings or briefings not to discuss policy changes but to discuss any work-related stress incidents or more coworker gatherings in relation to dinners or more

public activities that include dispatchers. Having the public know how stressful and demanding the job is or can be is a big step."

Interviewee number six added that "occasional counseling for stress relief" would be an option he/she would like to see used. Interviewee number seven agreed, stating that someone should be in place that dispatchers could talk to when needed. This interviewee summed it up by saying that showing support for dispatchers is important instead of them "feeling like we are left alone."

Recommendations for Future Research

A consideration for future research would be to replicate this study in a larger center with a larger sample size and compare the results to those of this study. The response level in this survey was not optimum for making recommendations at larger centers. A larger center would hopefully have a better response rate that could be analyzed and applied to the field better. Likewise, including all types of emergency dispatchers, not just EMDs, or those who dispatch some medical calls would be valuable because police dispatchers also experience calls that could create cumulative stress.

Conclusion

To conclude, there are three major themes found in the answers to this study. For example, all interviewees that completed the survey in its' entirety expressed positive remarks about ability/capacity to perform the job, good/strong support systems, and providing social support to others. However, this does not mean that these individuals do not struggle with stress and stress related symptoms, nor does it mean that they do not wish to have more support. In fact, the opposite is true. All but two of the respondents who completed the survey in its entirety experience mental and physical stress related to the job that lasts long past their shift of duty. Likewise, all respondents made recommendations for items they would like to see implemented or changed, with the common theme that dispatchers need more support and to be included. Dispatchers are a vital part of emergency response and need to be taken care of; these individuals should never feel alone or forgotten.

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Appendix A

American Public University System (APUS)
Institutional Review Board, IRB Chair
111 W. Congress Street
Charles Town, WV 25414

Dear APUS IRB Chair:

I, XXX, Dispatch Supervisor, grant permission for XXX to conduct human subject research at Page County Emergency Communication's Center (ECC) by sending out a survey link to employees at our organization. Further, Page County Sheriff's Office acknowledges that the results of this research will be used to fulfill the requirements for the master's thesis at American Public University System.

Sincerely,

XXX
Page County Sheriff's Office/Page County ECC
103 S. Court St. Luray, VA 22835
540-743-6571

Appendix B

XXX,
Per our agreement, please forward the following information to your staff.

Dear Employee at Page County Emergency Communication's Center:

I, XXX, am a graduate student at American Public University System, (APUS) and with the guidance of my instructor, XXX, I have been approved by the APUS Institutional Review Board to conduct research on Emergency Medical Dispatchers, their risk of developing PTSD and what can be done to prevent it. No deception is involved, and the study involves no more than minimal risk to participants (i.e., the level of risk encountered in daily life).

You are invited to participate in this research project because you are an employee of Page County Sheriff's Office with the title of dispatcher.

Your participation in this research study is voluntary. If you decide not to participate, you will not be penalized. However, if you decide to participate, you may withdraw from the study at any time without penalty. You may choose to skip any questions you do not wish to answer. Your supervisors will not know who did or did not participate. Again, receiving this message does not imply that you must participate. Your participation is completely voluntary.

Participation in the study typically takes 30 minutes to an hour and is anonymous.

The link for the survey is: https://www.surveymonkey.com/r/MNW7XR5. The survey needs to be completed within the next two weeks. It will close after that time frame. If you have any questions, feel free to contact me at the email or number below.

Due to the nature of these questions, if you feel emotionally or physically distraught and need assistance, contact the Crisis Help Line, which is available 24/7, at 615-373-8000.

Sincerely,
XXX

Appendix C

Consent Form

Emergency Medical Dispatchers: PTSD and Preventing It

I, XXX, am a graduate student at American Public University System, (APUS) and with the guidance of my instructor, XXX, I have been approved by the APUS Institutional Review Board to conduct research on Emergency Medical Dispatchers, their risk of developing PTSD and what can be done to prevent it. No deception is involved, and the study involves no more than minimal risk to participants (i.e., the level of risk encountered in daily life).

You are invited to participate in this research project because you are an employee of Page County Sheriff's Office with the title of dispatcher.

Your participation in this research study is voluntary. If you decide not to participate, you will not be penalized. However, if you decide to participate, you may withdraw from the study at any time without penalty. You may choose to skip any questions you do not wish to answer.

Participation in the study typically takes 30 minutes to an hour and is anonymous. Participants will complete an online survey. When data is reported, responses from individual participants will not be identified. Data will be reported by indicating trends.

Due to the nature of these questions, if you feel emotionally or physically distraught and need assistance, contact the Crisis Help Line, which is available 24/7, at 615-373-8000.

All data is stored in a password protected Microsoft Word format. The data may be shared with my instructor, XXX.

This research has been reviewed according to American Public University System IRB procedures for research involving human subjects. If you have any questions about the research study, please contact: the IRB Chair at American Public University System, apus-irb@apus.edu.

Electronic Consent

By selecting **DISAGREE**, you do not wish to participate in the research study and may exit your browser.
By selecting **AGREE**, you consent that:
- You have read and understand the information above regarding this study;
- You are voluntarily agreeing to participate in this study and understand that you can opt out at any time without penalty; and
- You are at least 18 years of age.

Please select your choice below:
- ○ AGREE
- ○ DISAGREE

Thank you for your time and participation.

Appendix D

APUS IRB Data Usage, Storage, and Destruction Agreement

I___XXX___, agree to keep the collected data as part of my research for a period of **5 years**. *(Please make sure this timeframe is consistent throughout your research design plan.)*

1. The following people will have *access* to this data. **NOTE:** If you are a graduate student, include both yours and your Instructors name as he/she should also have access to the data.

    Principal Investigator

    XXX, Instructor

2. The data will only be *used* by the following people:

    Principal Investigator

    XXX, Instructor

3. The data will be stored and safeguarded by: *(i.e., password protected, locked within a secure drawer/cabinet, etc. at the following residence/business location)*:

    The data downloaded for use in this research will be password protected on the PI's personal computer.

4. The data will be used for the following purpose:

    Research for graduate capstone course in Criminal Justice.

5. I will destroy the data in the following manner after the agreed upon timeframe of 5 years:

    After 5 years, PI will delete all downloaded data from computer and computer hard drive by deleting it from storage folder and also emptying out the recycle bin to confirm that all copies of it are removed.

    I agree to limit the data usage to the purposes indicated on the application. If, after the one-year IRB approval has expired, I intend to use the data again, I agree to seek additional IRB approval. Further, if my future use of the data departs significantly from the purposes indicated on my IRB approved application, I agree to seek new consent from participants.

If you have further questions or concerns about your rights as a participant in this study, contact the IRB Chair at: apus-IRB@apus.edu.

By signing below, I verify that I agree to the conditions listed above. ***This document must be signed and dated.***

_____   _June 29, 2017__
Signature   Date

Appendix E

Data Set

How many years have you been a dispatcher?	Approximately what percentage of the calls that you handle are medical or EMD related?
Open-Ended Response	Open-Ended Response
3	30
Almost 2 years.	25%
Less than one year	40
7	85-90%
10 year's	45 percent
25	25%
7	40 percent

Explain any physical or emotional pain you experience that you believe is linked to workplace stress?	Explain how you feel when you are stressed?	Do you participate in any activities to reduce stress? If so, what are they?
Open-Ended Response	Open-Ended Response	Open-Ended Response
n/a Disturbing images or thoughts that can be difficult to forget once the work shift is over.	Tired, on edge, sometimes angry Frightened, worried that I cannot do it anymore, alone I feel like nothing will change	Going out with friends/family, listening to music, sports Play video games, go to concerts, spend time with the ones I love Vol with fire rescue read
High blood pressure, trouble sleeping excessive weight gain, depression and anxiety high blood pressure and weight gain	Worried very agitated and snap at everyone rise in blood pressure. worried that I might make an mistake	Yes reading, spending time with family exercise when time permits yes, read and spend time with family

How well would you say you handle stress related to the job?	How well do you handle stress in general?	Explain how you feel about your ability/capacity to handle the stress of this job?
Open-Ended Response	Open-Ended Response	Open-Ended Response
I think I handle stress well.	I believe I handle stress well	I feel good about how I'm able to handle the stress of my job.
During the shift I handle stress well, 9/10 as far as how well I handle it. Before a shift however, the weight of not knowing how busy or chaotic a shift may he can create a much higher stress level, where I would rate my handling of that stress a 2/10	Somewhat handle it well. I try to have a good perspective on things where others at least do not know that I am stressed	I still doubt myself, but others seem to think I do a good job, I let other people's confidence in myself raise myself up.
Fairly well	Fairly	I feel fairly comfortable

Good	Very good	I feel that I am able too handle stress of the job
sometimes very good other times not so good	depends on the situation	I feel its getting worse to handle as time goes by and calls increase
I think I handle it fairly well	good for the most part	I feel very good about my ability to handle the stress of the job. by developing a tick skin and try not to let things bother me

Explain in depth how strong your support system is?	How many people do you have that you can turn to for social support? Who are they in relation to you and how often do you reach out to them for support?	Out of those people, explain how many relate to/understand your stress and how many do you use as more of just a sounding board?
Open-Ended Response	Open-Ended Response	Open-Ended Response
I think my support system is strong; consisting of my coworkers, friends, and family.	When it comes to my job, I mainly reach out to my coworkers, roughly 5-7 people. When I feel like I'm stressed, I go to them about once every 2 weeks.	Most of them can relate to the stress, because we all work together.
The support from my coworkers' friends and family is very strong. Each person is there for me for whatever gap in my life I need filled at the time	I have my mother, father, brother, sister, girlfriend, and about 5 close friends that I can turn to for support. A total of 9 people. I reach out to my girlfriend the most often, probably vent to her once every other day, my mother as well I speak to a lot	My mother and my girlfriend do their best to relate and understand how difficult the job can be, both stating that there is no way they could do it, which helps me feel better sometimes. I would say my father and at least two of my friends are always there for me to at least vent to as well, they'll always at least hear me out and respond
Inside work could use improving outside is good	Several a few coworkers and family	Most
My support system I feel is very strong. I am able to talk things out with my support system. This allows the stress of the job not to bother me as much	1 person to reach out to Relation is wife	1 relates
Basically, coworkers and a good friend who is a former dispatcher. Can go into detail with co workers about calls so with them its much better. Can't really go into any detail such as names etc. with a friend to to everything being confidential	Only one, best friend several times a week	My friend can relate very well, she was also once in this position.
I feel that my support system outside of work is very strong	couple of people mainly family.	just one can relate to the stress that I sometimes feel

Provide examples of when you have provided social support to your co-workers? Friends? Family? Others? Open-Ended Response	How often do you find yourself in this role? Open-Ended Response	Explain whether you feel like you provide more social support to others, receive more social support or if it is about equal? Open-Ended Response
Difficult calls taken in the dispatch center to a coworker. Relationship problems to friends/family.	I find myself helping someone multiple times a week	I believe it's equal. Friends, family, and coworkers of mine tend to support me as much as I support them.
During a recent hanging call, I explained to a new coworker that it's important not to dwell on big calls like that and that if she needed someone to talk to I'd be available	Not very often, I'd like to say I'm uplifting but the majority of my coworkers are either well experienced to not get upset over calls or hide it well	I feel like I do provide more social support to others overall if you include friends, family, and coworkers all together
Support family in hard time	Some	Equal
During a call I took from a family member that found her partner in cardiac arrest.	A lot	If feel that it is somewhat equal
I have offered debriefing for employees after they have a high stress call. Periodically give out small gifts to boost morale and to let them know they are appreciated. I am a listening ear for friends and family members and offer my advice if they ask for it and at times even if they don't ask for it.	numerous times a week	It is about equal
	I find my self in this role often	when it comes to co workers I feel that I provide more support them that is given.

Provide details of any other options/tools you would like to see used in your organization to combat against the development of PTSD and similar problems?
Open-Ended Response
Occasional counseling for stress relief
I wouldn't mind optional monthly meetings or briefings not to discuss policy changes but to discuss any work-related stress incidents or more coworker gatherings in relation to dinners or more public activities that include dispatchers. Having the public know how stressful and demanding the job is or can be is a big step
More support
For the sheriff's office to have someone in place for dispatchers to talk to if needed.
would like to see dispatchers included more often when debriefing is offered to fire/rescue/law enforcement. debriefing is often done for them when they have had a high stress call and the dispatchers are forgot about.

would also like it if dispatchers were not looked down on from administration if they have problems with depression/anxiety, which in a lot of cases was caused by this job in the first place. Instead of looking down on the ones that do help should at least be offered.

I feel that they need to have someone in place that we can talk to when need. they need to show support for the dispatchers instead of us feeling like we are left alone

ACKNOWLEDGMENTS

List of Acronyms

PTSD-Post Traumatic Stress Disorder   EAP-Employee Assistance Programs

CISM-Critical Incident Stress Management   EMS-Emergency Medical Services

CISD-Critical Incident Stress Debriefing   EMDs-Emergency Medical Dispatcher

ASD-Acute Stress Disorder