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Risk Factors Contributing to Higher Levels of Burnout and Stress in the Emergency Department

Jerrod Tynes, Adrian Adan, Ramsha Khan, Sarah Nolan & Katie Parmley

West Coast University – Texas, Master of Physician Assistant Program. 2323 North Central Exp. Way, Richardson, Tx, 75080
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A B S T R A C T

The emergency department, often characterized by its fast-paced and unpredictable environment, is at the forefront of patient care, making it susceptible to workforce burnout and stress-related consequences. Stress experienced by healthcare professionals not only impacts their well-being but also has significant implications for patient care quality and safety. As future physician assistants we must be adequately prepared for the stressors we will experience as being a new graduate as well as different workplace stressors that may lead to burnout. This study aims to identify and understand the intricate risk factors that elevate the prevalence of these concerning issues among healthcare workers. Our comprehensive analysis consisted of existing research and qualitative insights from ED providers impacted by stress-inducing factors such as increased patient volumes or long and unpredictable shifts. Current evidence-based research discussing the impact of stress on the workplace emphasize the importance of healthcare organizations stepping in to address burnout early so that providers maintain their physical and mental health. Future recommendations would be to survey physician assistants working in the Emergency Department in the DFW area to predict and forecast what is leading to increased burnout and stress specifically in the emergency medicine setting. Our results indicate that it is important to educate and advocate for implementing targeted interventions and strategies to mitigate the identified risk factors in burnout and stress-related consequences when working in the emergency department as a healthcare provider.

Keywords: emergency room, stress, burnout, workplace health

I. Introduction

Stress and burnout in the medical field have become increasingly popular topics in many headlines. Pre-COVID, this was often a topic not frequently addressed by managing and human resource staff. Burnout and stress are now topics covered by physician assistant (PA) students to prepare them better if they begin experiencing this throughout their time as a clinician. At West Coast University, the physician assistant cohort learned about the impact of stress on the workforce in a PA Professions class. Stress from academic courses consists in three different categories. This includes acquiring large amounts of information in a short time frame, needing to rapidly develop a professional identity in a highly responsible role, and emphasizing insensitive issues and interpersonal skills (Finklea & O'Neill 2021). Various factors contribute to stress on the first job as a physician assistant, such as choosing a job that sets the stage for the PAs entire career, stress related to acceptance of PAs in the specific setting, educating staff on the PA role as well as learning the new job. It is essential to inform clinicians about these stress factors and ways to reduce and deal with them.

Several significant elements influence staff performance, such as the workplace environment, working conditions, and work-life balance. Workplace stress can result from unpleasant working conditions and a negative work environment which often results in burnout. Burnout is a type of stress disorder characterized by emotional exhaustion, lack of empathy for patients, depersonalization, and a diminished feeling of personal accomplishments. Healthcare professionals are prone to emotional tiredness due to their work and often feel underpaid and underappreciated. Healthcare provider burnout and depression are topics of increasing interest and research. Numerous studies have linked burnout to rising and quick turnover rates in various clinical settings, specifically the emergency department (Willard- Grace et. al 2019). This will be further addressed throughout our research of emergency department burnout and stress.

A. What is Stress?

Stress can be a feeling of emotional, psychological, or physical tension influenced by various factors; it is perceived by a person and intensified in response when environmental change or threat occurs internally or externally, and the person must respond. Stress is the body's imbalance to cope with external demands. The impact of stress on the workplace brings productivity down by 40%; this decrease results in work not being completed on time compared to how they were performing before these stressors. Staff is approximately 30% less engaged and 15% more likely to be job hunting and absent from work (Bui et. al 2021). These statistics show that stress negatively impacts workers in various job settings. If there are higher absences, the clinic cannot function in a timely manner and has to adapt quickly to get the work done. If a worker is actively job hunting, they are only partially dedicated to their current position which could lead to a lack of productivity and engagement from that worker. Each staff member plays an essential

role in the team. Workplaces must emphasize the importance of each member, so they feel appreciated and recognized. The custodial staff is just as important as the head PA surgeon; one job can only get done with the help of the other.

Healthcare workers are continuously exposed to high levels of stress which are seen in emergency department professionals, due to the responsibility of their work and other stressors. These high demanding jobs lead to increased dissatisfaction in work, negative health consequences, exhaustion, and poorer quality of sleep (Bragard et. al 2015). In turn, stress induces anxiety which can be defined as a feeling of nervousness, anguish, restlessness, and often the feeling of loss of control which leads to physical and psychological disorder, which are common in the medical field. Occupational burnout syndrome may arise if these stressful situations are maintained over a longer period of time. In a 2022 study, about 12% of PAs were at risk for moderate to severe anxiety compared to their physician counterparts where nearly one in three doctors had an anxiety disorder at any time (Smith et al., 2022). Emergency professionals are more likely to develop these conditions due to the demanding work environment which is associated with acute stress and anxiety (Smith et al., 2022).

In a research article, Stress in Emergency Healthcare Professionals: The Stress Factors and Manifestations Scale, Garcia et. al designed a study with a quantitative, prospective, descriptive, and cross-sectional methodology involving 269 in-hospital and out-of-hospital emergency departments. The workers were recruited based on a consecutive non-probabilistic sampling procedure. The inclusion criteria were: workers who had been on sick leave due to a stressful event according to DSM-5 diagnostic criteria or in treatment for a high level of stress and had worked in the emergency department over the past year. The participants were told about the purpose of the study and signed the informed consent form. The data collected included personal and work issues information. Optimism about work was also measured, with a 5-point Likert scale, with the highest level of optimism scored with a 5. The self-made Stress Factors and Manifestations Scale (SFMS) was used to collect information on stress. A panel of 6 voluntary experts was utilized for the initial design of this scale. These experts were registered nurses, psychiatrists, and psychologists with at least 5 years of experience in mental health.

In their research, there was a strong and positive correlation (state anxiety: $R = 0.693$; trait anxiety: $R = 0.765$), with a high statistical significance ($p < 0.001$), between the stress scale and the State-Trait Anxiety Inventory questionnaire, coinciding this correlation with two other investigations. In one conducted with emergency physicians, anxiety and stress were strongly associated with more anxious individuals having higher stress levels. In the other, peak salivary cortisol response was significantly associated with high STAI scores. This indicates that the existence of stressors in the emergency department staff, measured with the stress scale, implies a higher probability of anxiety states, both state and trait anxiety; thus, indicating validity. Their results found that women showed the highest levels of stress. Another relevant aspect of the study was the view obtained about stress from the perspective of optimism. Although some articles in other types of populations have studied the influence of optimism, relating it to coping with stressful situations, in the present study they identified a strong relationship between optimism and stress ($R = -0.351$, $p<0.001$), and have found that the most optimistic workers had lower levels of stress, with statistically significant values (Garcia et. al 2022). There were limitations seen in this study such as not taking into consideration the age of the women nor time spent in the emergency department. This study showed that high levels of anxiety, female sex, being less optimistic, and working in hospital emergency departments were related to increased levels of stress. Although we are unable to change our sex and workplace environment, if choosing to work in the ED, we must further address ways to decrease anxiety and optimism in the workplace.

B. PA Roles in the Emergency Department

The Society of Emergency Medicine Physician Assistants addresses the different qualifications, practice settings, scope of practice, and cost-effectiveness of Physician Assistants. In emergency medicine, the ED medical director, primary and secondary supervising physicians, and the EMPAs work together to reach decisions about delegation. There are no “typical” restrictions regarding PA practice in the ED. The physician/PA team and the hospital work to clarify any limitations on the PAs scope found within the state law or hospital policy. Physician Assistants in the Emergency Department can perform entire history and physical exams, order and perform diagnostic and therapeutic procedures, refer patients to appropriate specialties, write admission orders, and contribute to quality improvement activities in the department. PAs may experience stress when determining what their scope of practice is by the hospital compared to the state, meeting state and hospital supervision requirements, and following strict billing when treating Medicare patients in the hospital. Utilizing PAs in these settings has proven to be cost-effective and efficient. They can see patients faster, which helps reduce wait times and improve patient satisfaction rates (SEMPA). Physician Assistants provide nearly identical medical services that are at a much lower cost to their supervising physicians. PAs can treat lower acuity patients, fast-track patients who will likely be discharged home, and assist with critical patients when needed. The problem with this is when wait times are increased, and the PA is the primary provider expected to diagnose and treat these patients, there becomes a delay in care which causes stress to the PA and the whole emergency department.

C. Burnout In the Workplace

From the World Health Organization, "Occupational burnout is a syndrome resulting from chronic work-related stress, with symptoms characterized by 'feelings of energy depletion or exhaustion; increased mental distance from one's job, or feelings of negativism or cynicism related to one's job: and reduced professional efficacy" (World Health Organization 2019). Burnout in the workplace represents the long-term response to emotional and interpersonal stressors from a job. According to a news report from the National Commission of Certification on Physician Assistants (PA), 30.6% of certified PAs reported experiencing burnout (Creek 2021). Burnout levels vary by specialty, with rates exceeding 60% in emergency medicine, oncology, and family medicine. Studies in physicians have shown a link between depression and burnout has proven to have a poor impact on performance, including medical errors and patient outcomes.

Medical professionals are kept to a high standard when caring for patients in various specialties. They have been through extensive schooling, clinical rotations, and residency and are often deemed professionals in their field. Society sets a zero-mistake standard for physicians and other advanced practice providers (Tamburri, 2017). This high standard may create isolation for those who make mistakes, leaving providers unable to learn healthy ways to cope, resulting in dysfunctional approaches to recovery. These poor responses, such as isolation, anger, sadness, substance abuse, and callousness towards their patients and colleagues, place providers at a higher risk for burnout (Gispen & Wu, 2018). Medical professionals may not feel supported or even victimized by the hospital or organization they work for when their burnout is not addressed.

D. Emergency Medicine Burnout

Stresses have had a significant impact on providers such as physician assistants. One of the main ways stresses can impact PAs is its impact on mental health. The American Academy of Physician Assistants evaluated levels of burnout pre-COVID to today, which resulted in shocking statistics. They had asked Physician Assistants to rank their level of being "burned out." The rankings were as follows: very burned out, burned out, somewhat burned out, slightly burned out, and not at all burned out. The levels of very burned-out providers increased from 4% to 18%. Unfortunately, the level of PAs who were not burned out decreased from 31% to 14% (Chapman & Morrison, 2022). These results show that the COVID-19 pandemic significantly impacted the level of burnout in nearly half of providers due to the demands of the pandemic. Although a variety of providers experience burnout in the medical field, younger new hires in emergency medicine are more likely to experience burnout than those older and have more experience. Being overworked in high-stress environments during training can overwhelm someone who just started a job, potentially leading to understaffing. In addition to the adverse long-term effects on medical providers, burnout can result in lower quality of patient care, especially if they are being cared for by a stressed and overworked team. For example, suppose a critically ill patient is under the care of an emergency medicine PA who has been working for over 12 hours. If the PA is already exhausted and has more than five patients to care for, this can lead to decreased patient satisfaction and increased medical errors. The chronicity of overworked providers in emergency medicine still takes a toll today.

An additional risk factor that leads to higher levels of burnout is the SVS phenomenon. The second victim syndrome addresses the psychological trauma healthcare workers suffer from involvement in an adverse event. Typically related to committing a medical error resulting in a poor patient outcome, SVS may also involve any adverse patient outcome, expected or unexpected, with the physician becoming the "second victim" (Lam, 2018). There is a continuous chain of events when experiencing burnout in the Emergency Department. If a provider is burned out, they are more likely to commit an error during patient care; this puts them at a higher risk for second-victim syndrome and litigation stress, likely exacerbating their burnout (Burlison et al., 2019). This cycle is associated with an emotional toll leading to negative consequences, including depression, departing from medicine, and potentially suicide. These consequences of burnout will be addressed in the following section.

E. Risk Factors Contributing to Burnout in the Emergency Department

In last year's 2022 Medscape report, 57% of male EM providers and 66% of their female counterparts said they felt burned out (either burned out or both burned out and depressed). This year 36% overall said they felt burned out, 5% felt depressed, and 18% said both (Koval 2023). Although this number has decreased from years in the past, this rate of burnout, depression, and stress should still be concerning for Emergency Medicine providers. The leading factors behind burnout among Emergency Medicine providers were (1) bureaucratic tasks (51%), (2) lack of respect from patients (50%), and (3) lack of peer respect (administrators/ employers, colleagues or staff) (46%) (Kane 2023). Other factors that were addressed in this article include insufficient compensation, lack of control or autonomy, too many hours at work, computerization of practice, stress from treating patients with COVID-19, and government regulations.

F. EHR Documentation

EHR documentation has continued to frustrate medical providers in general. Sometimes, providers must catch up on charting in the Emergency Department and cannot use a scribe or alternative sources to assist with the daily flow in the fast-paced ED. According to the JAMA Internal Medicine report, on average, medical providers spend 1.84 hours per day beyond their hours at work to complete EHR documentation. That number adds up to nearly 10 extra hours per week where charting is done outside of the workday (Gaffney et al., 2022). The usual EM advanced provider shift is anywhere from 8 to 12-hour shifts; this creates added stress when most medical providers have a busy schedule outside their work life. Using medical scribes would be a valuable way to cut back on the additional time Emergency Medicine providers spend outside of their workday on documentation. Further research will be addressed to support that 8 to 12-hour shifts are a stressor for medical providers.

G. Shift Schedules and Increasing Work Hours

Organizational and environmental causes of burnout apply to Emergency Medicine providers. A notable exception is the usual connection between burnout and increased work hours. Non- Emergency Medicine providers show a direct correlation between burnout and increasing work hours. Emergency Medicine providers are the least likely specialists to work excessive hours (> 40 hours/week). However, the necessity to work nights, weekends, and holidays contributes to these burnout levels in the ED setting (Peckham, 2019). Since emergency providers have fewer weekly hours than other specialties, they can pick up extra shifts, which increases their work hours and associated stressors (Peckham, 2019). Often these physicians and PAs are working extra shifts to pay off debt, another stressor and significant contributor to burnout. This ability to pick up extra shifts for incentive creates a setting where they can pay down debt quicker, and the perception that they are working less than other physicians and APPs contributes to the increased susceptibility to burnout (Silverman, 2015). There needs to be clear communication and respect between providers that they are not required to pick up these extra shifts, and their emotional health is essential. APPs and Physicians must work together to create a collaborative and well-

respected relationship. This relationship will allow providers to discuss when they feel burnt out or need help with diagnostic uncertainty, significantly stressing EPs and promoting burnout and emotional exhaustion.

H. Sleep loss and Fatigue in the ED

The emergency department is built around shift work. Emergency medicine has a 24-hour need for high-quality emergency care, often disrupting the circadian rhythm and sleep loss for providers. Emergency medicine must always be available, meaning they encounter more sick patients than other providers. The effects of shift work, such as sleep deprivation, are often associated with worse patient care, decreased job satisfaction, and less personal well-being (Machi et al., 2012). Regulatory precautions need to be put into place to monitor the increased cardiovascular disease, metabolic syndrome, and increased mortality, which can be related to the sleep disruption from the 24-hour service emergency workers must provide. There was a drastic change in the hours providers were expected to work throughout the COVID-19 pandemic (Hu, 2021). As we progress through 2023, these changes must be addressed to ensure that emergency providers can safely and efficiently practice medicine and address their employers when they feel burnt out. Further research should address sleep loss and fatigue in EM providers to find a balance between restricting work hours, patient satisfaction, and decreasing provider burnout rates due to sleep deprivation.

I. Litigation Stress

Litigation stress is reported as symptoms of isolation, negative self-image, and subsequent depression which can be associated with sleep disruption, substance abuse, impaired concentration, anger, and disorganized thinking. Emergency medicine providers face high levels of stress and anxiety provoking patient cases in their workplace so the added stress of potential lawsuits can be correlated to increased stress and the feeling of being burnt out. Emergency services are the “first care providers”, meaning that they are dealing with so many sick patients and will likely deal with an increase in malpractice claims. Nearly 73% of emergency medicine providers admit to practicing “defensive medicine” (Kanzaria et. al 2015). Defensive medicine is ordering extra tests to avoid missing anything with the fear of litigation as the reason. Physician Assistants often practice defensive medicine with the possibility of “over ordering” diagnostic imaging when working with a supervising physician for the fear of misdiagnosing and malpractice claims which reflect on the physician and PA.

A study compared US ED physicians and NPs/PAs use of diagnostic imaging and approach to complex patient cases. It was found that NPs/PAs-alone used less care and low-value advanced diagnostic imaging, while the NP/PA-physician combination used more care and low-value advanced diagnostic imaging. NPs/PAs-alone tend to see fewer complex patients than physicians, it is possible that they used fewer services than physicians for simpler, more algorithmic cases. In contrast, NPs/PAs used more services than physicians for more complex cases—and these findings were reproduced in EDs where nearly all NPs/PAs saw patients collaboratively with physicians (Mafie et. al 2022). Further research will need to be addressed to differentiate the utilization of diagnostic tools and outcomes in Physician Assistants compared to Nurse Practitioners in this area.

APPs are playing an increasingly growing role in the Emergency Department. The collaborating relationship between physicians and PAs can help alleviate the increased levels of stress due to high patient volume and the fear of malpractice cases. Policymakers and clinicians have a stake in improving the efficiency of emergency care by creating trusting relationships between emergency medicine providers, their hospital systems, and by implementing continuing education courses to provide reassurance in their colleagues' training and competence as APPs.

J. Consequences of Burnout

Consequences of burnout range from provider to provider. But burnout can manifest itself as causing poor clinical care, increased mistakes, patient dissatisfaction, substance abuse, self-medication, depression, dysfunctional interactions between colleagues, and suicide. A meta-analysis completed found a statistically significant negative relationship between physician burnout and patient safety ($r = -0.23$), as well as burnout and quality of care ($r = -0.26$) (Salyers et. al, 2017). Physicians and physician assistants were shown to have comparable risk of suicidal ideation with 8.2% in PAs and 6.4% in physicians (Smith et al., 2022). Patient satisfaction suffers as clinical care decreases, which in turn may further decrease health outcomes for our patients.

Depression and self-medication is an additional risk factor that can correlate to consequences from medical professionals feeling burnt out. Approximately 15% of physicians are not only burned out, but “colloquially” or clinically depressed (Stehman et al., 2019). As a

result, some physicians have formed harmful coping strategies such as alcohol and drug use, and the most recent data shows that alcohol abuse is the primary substance. Approximately 12.9% and 21.9% of male and female physicians are affected by this compared to 8.4% of men and 4.2% of the 18 and older U.S. population. The most severe consequence of burnout is suicide. About 14% of respondents to the Stehman study had considered suicide. Yet, researchers believe that this is still underreported and that physicians experiencing these symptoms still see a stigma in medical culture in trying to seek care. One possible explanation is providers may feel like failures in their profession, isolated, or cut off from their colleagues who they believe are coping better. These feelings along with an avoidance of feeling like a burden on friends and family may push physicians to see suicide as the answer (Stehman et al., 2019).

Leaving healthcare is a consequence of medical providers suffering burnout that affects all the team members in the medical field. Providers who are suffering burnout are more likely to leave health care entirely (Sinsky et. al 2017). This problem may start out by providers decreasing their work hours, calling in sick, changing jobs, which negatively affects the health system and quality care which is being provided to our patients. If providers follow through in these intentions to leave the medical field due to an increase in burnout and stress this could profoundly worsen the projected shortage of US physicians and APPs.

K. COVID-19 and Burnout

The COVID pandemic has been associated with loss of revenue, reduced work hours, and reduced earnings for physicians across the country (Hu & Dill 2021). This has led providers and physicians to consider how to maintain clinical quality standards and financial stability (Gibler et. al). This then impacted physician assistants working through the pandemic. The biggest impact was that respondents reported a change in hours worked. However, as practices faced income challenges, this forced independent groups to adjust and manage physician assistants and their hours worked as patient traffic decreased. Yet, any increase in hours was due to possible shortage of providers in regions that were experiencing heavy numbers of COVID cases. The next biggest change was median profession-wide compensation decreased for the first time in years, according to the American Academy of Physician Associates. More than a third reported a decrease in base salary while 3 in 10 reported a decrease in hourly wages (Smolko 2022). It should also be noted that employment and salary changes are still masked behind changes still implemented from the start of the pandemic that is still ongoing.

Emergency Department staff members are at a high risk of burnout, poor wellbeing, and increased stress which play a major impact in the level of patient satisfaction, staff morale, and retention. The goal of this study was to determine the level of burnout, stress and satisfaction with current employment roles in the emergency department during COVID-19. A multisite cross- sectional survey captured ED employment data, wellbeing, burnout, stress, work environment, and caring for COVID-19 patient questions. Results showed that only 58.8% (n=104) of the participants were happy in their role in healthcare. Satisfaction levels were low, and burnout and stress levels were high (satisfaction/burnout M 71.0, SD 17.1. Stress (M90.6. SD 16.5)) (Dixon et. al 2022). ED staff are vulnerable to these increased levels of stress and burnout rates. We must work to promote wellbeing, personal resilience, and self-care to grow professional and personally post pandemic. Further research will be needed to address levels of burnout in our post pandemic time.

II. Proposed Methodology for Analysis

Our initial goal would be to create a survey to send to all Physician Assistants who practice in the DFW area to assess burnout levels in emergency medicine providers further; this would allow us to address these concerns as a more focused group since this is the area some of us would like to practice emergency medicine after graduating. This survey would only include physician assistants, so we can further address burnout across multiple regional hospitals in our future career paths. Our study can be divided into three sections: burnout assessment, personal PA demographics, and work-environment sections. The demographics section will gather the provider's age, years practicing in the emergency department, average hours worked, and average number of hours worked per year. The work-environment section will address the hospitals' trauma level designations, and size of their ER or hospital bed size, if available, and the collaborative relationship between PAs and their supervising physicians.

To enhance the comprehensiveness of our research project, incorporating an existing questionnaire that assesses burnout in the workplace would offer significant benefits. Out of the many available screening tools, the Oldenburg Burnout Inventory (OLBI) is a validated and widely used questionnaire that allows for a more focused assessment of burnout within a high-stress environment such as the emergency department. The OLBI consists of 16 positive and negative formulated items that focus on two main components of burnout: exhaustion and disengagement; participants would respond to the statements using a scale from 1-4, with 1 representing strongly agree and 4 strongly disagree (Tipa et al., 2019). By summing the responses to the individual items within both subscales (8 items each), higher scores indicate a high risk of burnout, while lower scores may suggest lower levels of burnout. The self-report nature of this questionnaire will make it easier for providers to complete, which would likely enhance participant response rates. Utilizing the OLBI, in addition to the survey we created, we can gain even more valuable insight into specific elements of burnout that may motivate other researchers and organizations to develop targeted interventions and foster a healthier work environment.

To distribute both surveys, our team would contact EM agencies directly, such as Envision, IES, and Medical City within the DFW area. Throughout the clinical year, we have worked with providers through Envision, IES, and many Medical City facilities in the DFW area. Since we have established a relationship with these facilities and have HR and lead APP contact information, this would allow us to gain results directly from emergency departments we are familiar with. Our goal would be to speak directly with the lead APP and then distribute the anonymous surveys to each nurse practitioner and physician assistant in the emergency department. The surveys would be sent as a Google survey explaining that it was anonymous and they are recommended to answer truthfully as their results would not impact their workplace. We aim to have at least half of the APPs from each agency complete this anonymous survey to have a large group of data varying in years practiced in the ED.

The burnout section in PAs specifically addresses fatigue at work, physical problems, risks or thoughts of suicide, and difficulty sleeping. In the section that questions what the practicing PAs believe, it includes how much their level of burnout can be attributed to the number of hours worked, scope of practice, feelings of overwhelming patients, patient load, relationship with collaborating provider, department support, EHR documentation, job satisfaction, and lack of respect from patients; they would rank these from most to least attributable to their level of burnout. This is shown in a one to five scale in Figure 1, with burnout assessment having 1 being no experience with these at all, 2 at least once a week, 3 half of the days of the week, 4 more days than not, and 5 being a daily occurrence. This study would also question what the providers believe to be the most significant attribute to their level of burnout. The collaborating relationship between doctors and PAs should be mentioned to participants in this study to see if they feel the relationship increases or decreases burnout or workload. The study would evaluate the level of burnout by ranking it in high-level, moderate, and low-level. A subsection of this could address burnout pre- and post-pandemic to determine whether factors such as vaccine hesitancy, disruptions in care to disagreements in Covid-related treatment, number of Covid-positive patients, and whether lingering effects related to Covid-19 were contributing factors to the burnout on a scale of how much they agreed with the statements.

It is essential that this study also addresses that the problems disappear when they are outside of work. Yes or no specific questions allow us to understand if the Physician Assistant has experienced additional risk factors such as suicidal ideations or mistreatment from their collaborating physician. This will enable the study to further differentiate between depression and burnout in the emergency department. We can record qualitative statements into numerical values for data analysis. We would then cross-compare between the three sections to analyze and speculate on trends from the raw data. Based on what the results show, this study could support discussing with the administration and other staffing agencies the importance of implementing interventions to reduce levels of burnout. The PAs completing the survey would be allowed to complete this anonymously so hospitals could use the results without bias. Identification of these levels of burnout is the best starting place to begin. After hospital systems address physician assistants experiencing burnout, additional policies can be implemented to address the hours worked, and department support can affect these providers.

The purpose would be to demonstrate whether extended shifts and work weeks and increased stress correspond to changes in patient safety. A study involving senior physician residents and adverse patient outcomes saw that after a 48-hour week, there were significant increases in both avoidable adverse, medical, and attention errors. Another factor that was analysed was the instance of near-miss crashes also compared to an increase in hours worked which found an upward trend in near-misses affecting providers the more hours they worked. The study found a synergistic relationship the more hours the residents worked and became under more stress to reveal that burnout not only affected patients, but providers as well (Barger et al. 2022). Since the majority of crashes happened during the commute to work, for the purpose of our study, we could possibly include questions to determine how many close calls physician assistants experienced or how many times PAs report missing activities that decrease stress or find less joy in these same activities.

III. Interventions to reduce Burnout and Results of Previous Studies

With the many risk factors leading to higher burnout and stress levels in Emergency Medicine providers, we must address burnout due to its negative personal consequences. Providers suffering burnout are more at risk of substance abuse, relationship trouble, depression, and suicide. Furthermore, burnout endangers the quality of care and patient safety because affected physicians commit more medical errors, adhere less to practical safety standards, and are more likely to provide suboptimal patient care. The impact of burnout has been an ongoing discussion for many years. In a study conducted in 2015, burnout was measured by giving validated questionnaires to attending and resident physicians from two university-based EM programs (Lu et al., 2015). The questionnaires were used to measure depression, career satisfaction, quality of life, and suboptimal care. The study measured suboptimal care among the emergency physicians by using a set of six statements that focused on self-reported patient care practices. These statements assessed various aspects of suboptimal care, including actions such as admitting or discharging patients to manage the busy workload, or not fully discussing treatment options or answering patients' questions. Of the 155 participants, there were a total of 77 survey responses that were fully completed, with approximately 57% of the EPs reporting burnout. The study suggests that while other aspects of provider wellness such as quality of life or career satisfaction did not show significant relationships with suboptimal care, burnout did. This indicates that burnout may have a pervasive and adverse impact on various aspects of the quality of care provided to patients, including empathy and professionalism.

There is often the pressure for medical providers to deal with the stress and burnout side effects by themselves. In Medscape 2023 Lifestyle, Happiness and Burnout in Emergency Medicine, EM providers were asked if they sought professional help to reduce burnout. Results from this showed that 41% of EM providers responded, "no and will not consider using", 15% said "yes", and 44% said "no but would consider using" (Koval 2023). Many of the physicians in this analysis commented that they feel that they can deal with it themselves and that professionals have nothing to add. Those who did not seek help for depression reported that they worried people would think less of them, it would make a negative statement about them, the medical board or employer could find out, people may doubt their abilities as a provider and thought of depression as a weakness. As advanced medical providers we have a strong desire to treat others and provide high quality care for our patients but based on these results we often neglect our own mental and physical well-being. Emergency Medicine providers should have access to debrief groups after high stress situations where they may be experiencing second victim syndrome as well as resources to address their burnout with the hospital system or employer they are working for. Protecting our healthcare workers should be one of the most important concerns of future prevention campaigns (Carlade et. al 2022). Identifying the risk factors contributing to burnout and reporting them is extremely important to outline future preventive strategies that can be designed to reinforce existing ones and prevent possible crises in the domain of Emergency Medicine providers and burnout.

IV. Discussion

As future Physician Assistants, our goal is to address if we are experiencing burnout and further implement ways to prevent and manage stress and burnout as Emergency Medicine providers. The results from our survey will allow us to differentiate the feelings of burnout further due to fatigue at work, trouble sleeping, high patient volume, or lack of support. Burnout and its risk factors in Emergency Medicine must be addressed to provide quality patient care and have a healthy work-life balance. Throughout our clinical rotations, we have been exposed to various Emergency Departments. One of our clinical rotations in Monahans, TX, has a poster in the break room to remind staff of ways to reduce burnout. This poster includes statements of compassion fatigue, secondary trauma, and burnout. Educating employees on box breathing is an effective way to help with focus and remain more tranquil and alert. Box breathing is used by Navy seals, which is a yogic breathing technique that packs a powerful relaxation punch. The rhythmic 4x4x4x4 breathing helps reduce stress and lower blood pressure and cortisol levels (Obaya et. al 2023). The poster in Monahans ED explains how box breathing brings balance to your mind and body and regulates your natural rhythm. You start by breathing in for 4 counts, hold for 4 counts, exhale for 4 counts, and hold for 4 counts. This poster reminds the ER staff of techniques to use to be grounded and reduce burnout.

More emergency departments could post posters and email reminders of ways to remain grounded, practice box breathing, and practice gratitude to reduce burnout when ED workers are experiencing low job satisfaction and feel powerless or overwhelmed at work. Reminding workers to remain grounded when they begin feeling fatigued is also a technique that can quickly and quietly distress and help refocus the worker back into the moment. For example, using the 5-4-3-2-1 method allows Emergency Medicine workers to identify 5 things you can see, 4 things you can feel, 3 things you can hear, 2 things you can smell, and 1 thing you can taste; this helps people always be aware of their surroundings. It is essential to provide these resources to the Emergency Department workers so that they can utilize the department's resources to help reduce stress and better take care of themselves.

V. Conclusions

In addition to utilizing the workspace and surrounding people with helpful information regarding ways to manage stress, employers must also take proactive measures to help emergency department (ED) workers, especially physician assistants (PAs), combat burnout and reduce stress levels. The importance of addressing burnout and stress among these healthcare professionals cannot be overstated. Emergency department workers, including PAs, often face incredibly demanding and high-pressure situations, dealing with critical patient cases, long hours, and the constant need for quick decision-making. This environment can lead to emotional exhaustion, compassion fatigue, and a heightened risk of burnout. Burnout not only affects the mental and physical well-being of ED workers but can also lead to reduced job satisfaction, decreased productivity, and increased turnover rates in the healthcare field.

Fostering a culture of support within the ED is crucial in addressing these challenges. Employers and colleagues should actively engage in creating an environment where emotional and professional support is readily available. Regular check-ins and open communication channels can help ED healthcare providers share their concerns and experiences, reducing the feelings of isolation that often accompany burnout. Providing access to mental health resources is another essential component in the battle against burnout. ED employers can offer counseling services or employee assistance programs to help workers manage their stress and emotional well-being. By openly discussing burnout and its effects, healthcare providers can not only feel less isolated but also build a stronger sense of camaraderie with their peers, enhancing overall team cohesion. Encouraging work-life balance is equally important. ED workers need time to recharge and take care of their own physical and mental health. Employers can support this by promoting the use of unused vacation time, allowing ED staff to step away from the high-stress environment periodically. This time off can be spent with loved ones, pursuing hobbies, or seeking mental health support as needed.

In conclusion, addressing burnout and stress among emergency department workers, including physician assistants, is a shared responsibility that can significantly impact the quality of patient care and the overall well-being of healthcare providers. By fostering a culture of support, providing access to mental health resources, and promoting work-life balance, employers can create a healthier and more sustainable work environment that benefits both the providers and the patients they serve. Ultimately, reducing burnout and stress in the emergency department is not just a matter of employee well-being; it is essential for maintaining the highest standards of care in these critical healthcare settings. A comprehensive approach that combines organizational support, individual resilience-building, and a focus on mental health can contribute to a healthier and more sustainable work environment in the emergency department.

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