Always On Call: Navigating Motherhood and a Career in Emergency Medicine

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Abstract

Background: Over 16 million women in healthcare roles provide over three-fourths of all medical services in the United States. Recent research has acknowledged burnout as a growing problem worldwide and a reason for exits from the field, notably in acute care settings such as emergency medicine. Although labeled as "non-traditional," women with careers in medicine are more essential now than ever before, as the country faces national shortages of healthcare providers, impacting access to quality care and resulting in a massive influx of individuals turning to local Emergency Departments for medical care. Virginia is especially impacted, where the physician-to-patient ratio continues to worsen each year. Therefore, to retain working mothers in emergency medicine, a better understanding of their experiences and organizational needs is warranted.

Objective: The purpose of this study was to explore the impact of a career in emergency medicine as a healthcare provider on the well-being of working mothers in Northern Virginia, as well as the influence of organizational support on career commitment and retention.

Methodology: This qualitative study explored the lived experiences of women Physicians and Advanced Practice Providers (APPs) in emergency medicine while navigating the demands of motherhood with small children. Seventeen semi-structured interviews were conducted with mothers working in emergency departments in Prince William and Loudon counties in Northern Virginia from January 13 to February 28, 2025. Thematic analysis using inductive coding and constructs from the Jobs Demand-Resource Model or deductive coding were utilized to analyze the data.

Results: Four overall themes were identified. Findings showed that the demands of a career in emergency medicine for mothers seep into life at home with negative impacts on them and their

families, which in turn impacts their engagement, motivation, and retention professionally. A positive correlation between the well-being and retention of the providers who work for healthcare systems that provide higher levels of organizational support was also shown.

Conclusions: Working mothers in emergency departments who feel well-supported by their organizations, peers, and spouses appear more likely to want to stay in their positions. Healthcare organizations and administrators should consider implementing policies that allow for allocated breaktime into shifts, more flexibility and control of work schedules, emergency childcare assistance, to change the taboo call-out culture, and provide a dedicated space with allocated time to pump for the postpartum mother, all without the guilt factor. Identifying and understanding specific needs is the first step to improving the institutional culture and work environment for working mothers in emergency departments, which can be done by simply asking: *What do you need?*

Keywords: working mothers, physicians, advanced practice providers, emergency medicine, burn out, organizational support, career commitment, career motivation

Dedications

For my daughters - who inspire me in every way possible, whose laughter is my favorite sound and has gotten me through the hardest days. You are my light, in *every* lifetime.

For my husband - who supports me, encourages me, and reminds me of my purpose daily. You are my rock.

For my parents - who have supported my every endeavor, big or small. I can't imagine reaching any of my goals without you, your guidance or prayers.

For my friends - who have become family, and are the truest example of a village. We made it.

For the working mothers - who know all that's left unsaid. I see you, I feel you. Keep going.

For the healthcare workers - who endure more than the rest of the world could ever know, thank you.

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List of Abbreviations

AAP	American Academy of Pediatrics
APP	Advance Practice Providers
CDC	Center for Disease Control
COVID-19	2019 Coronavirus Disease
EM	Emergency medicine
EMR	Electronic medical records
ER	Emergency room
ICU	Intensive Care Unit
IRB	Institutional Review Board
JD-R	Jobs Demand-Resource
PA	Physician Assistant
PTO	Paid time off
US	United States

Chapter 1

Introduction

There are over 16 million women in healthcare roles that provide over three-fourths of all medical services in the United States (U.S.) (Day & Christnacht, 2019; U.S. Bureau of Labor Statistics, 2022). Due to the increasing feminization of medicine, the field will continue to have an increased polarity of female occupants over time; and they will be in demand to care for an ailing nation (U.S. Bureau of Labor Statistics, 2022). Women with careers in medicine are even more essential now than ever before as the U.S. continues to face national shortages of healthcare providers. An estimated 40,000-90,000 physicians will exit the workforce by 2025 (Dudley et al., 2022; Yeluru et al., 2022). The retention of this workforce is imperative, but this population faces challenges that understandably push them to make unanticipated career choices. In the field of medicine, mothers have been labeled as "non-traditional women" (Wear & Castellani, 2002) and have reported feeling that there is "no good time" for children (Simpson et al., 2021).

Pre-pandemic research studies show that over half of women in healthcare opted to prioritize their careers and delay motherhood (Hoffman et al., 2020). Additionally, maternal employment is proven to be one of the top reasons for low breastfeeding, most especially among full-time positions in Westernized Nations (Spitzmueller et al., 2016). Then, once women finally have children and return to work, they subsequently experience what is known as the motherhood penalty - an international sociological phenomenon that places them at a professional disadvantage to women who are not mothers daily (Brown, 2010; Kricheli-Katz, 2012).

Workplace culture can significantly influence the health and well-being of its employees across all occupations, especially in the healthcare setting, where burnout has become an epidemic negatively impacting the health and well-being of working mothers (Edú-Valsania et al., 2022; Petrino et al., 2022). Navigating motherhood with a career in medicine is often challenging, given irregular work hours, shortages in healthcare staff, increased workload, and lack of regular sleep (Chan, 2022). Recent research has acknowledged that mothers who work in non-office healthcare environments, such as hospital, surgical, or emergency/urgent care services, demonstrate a greater need for organizational support due to the irregularity in their schedules within an already high-stress environment (Chan, 2022). Higher organizational support is linked to lower levels of burnout and stress, as well as higher levels of employee satisfaction, retention, and commitment (Paul, 2020). Providing organizational support is essential for promoting well-being and retaining the workforce of healthcare professionals, especially for mothers working in emergency medicine, including those in Northern Virginia.

Additionally, family well-being and a career in medicine have a bidirectional influence on one another; when one suffers, most likely the other will feel the same impact (Benbow, 2023). In a national survey studying personal and professional satisfaction and happiness amongst physicians, job stress and work hours were identified as the leading factors of distress amongst in marriages and families (Dutta et al., 2024). Another survey of over 5,500 physicians demonstrated their belief that their careers impacted their relationship with their children compared to the general population (Shanafelt et al., 2016). In an article by Castello and Schmitz (n.d.), supportive families were described as a physician's "emotional lifeline," as their happiness and well-being is a physician's main support system and serves as a protective barrier against burnout (Landry, 2023). When the family unit struggles, it contributes added stress and

leads to higher burnout, reduced empathy, and concentration for the healthcare provider (Landry, 2023). This ultimately negatively impacts the quality of patient care at work resulting in potential bad outcomes; further deteriorating well-being for providers and their families (Landry, 2023).

Background

Northern Virginia is one of the most diverse areas in the country, with a population is 2,556,143 (Northern Virginia Regional Commission, 2024). The region has experienced significant population growth within the past 25 years, predominantly within Fairfax and Loudon Counties – which are the first and third wealthiest counties in the country respectively (Johnson, 2023; Northern Virginia Regional Commission, 2024). The trends in population growth, demographics, and health status highly influence provider experiences and patient outcomes. Virginia's physician-to-patient ratio continues to drop with each year and is now very close to the national average, impacting access to and quality of care and resulting in a massive influx of individuals turning to local Emergency Departments for medical care (Cicero Institute, 2024).

Female physicians who are mothers experience higher rates of burnout compared to male physicians due to various professional structural and cultural challenges that severely disrupt work-life balance (Chan, 2022; Edú-Valsania et al., 2022; Gawlik et al., 2024; Pace & Sciotto, 2021; Petrino et al., 2022; Sahni, 2020). These include school/training demands, attitudes towards mothers in the medical field, gender inequality, compensation disparities, insufficient organizational support, inflexible work schedules, and lack of family-friendly policies (Collie et al., 2022). More personal factors that negatively impact maternal well-being include family needs, child-bearing responsibilities, fertility challenges, and more (Yeluru et al., 2022). Essentially, everything else takes precedence at the cost of this population's physical health, relationships, and careers (Gopal, 2017).

Recent literature has highlighted the myriad of barriers healthcare mothers experience that impact them individually and ripple into their careers, ultimately impacting the organizations and healthcare systems they work for (Chesak et al., 2021). In fact, Chesak et al. (2021) stated that society is affected when healthcare mothers are struggling, so they need to be in an environment amongst people that will support them without making them feel guilty for asking for help. The most common challenge this population struggles with is work-life balance, which feels more like an illusion in current times, and contributes to deteriorating mental and physical well-being (Chesak et al., 2021; Collie et al., 2022). A few solutions Chesak et al. (2021) suggested include improving supportive networks and opportunities for professional development. Healthcare organizations can demonstrate more flexibility and support towards their working mothers by implementing family-friendly policies. These types of policies can help improve well-being and perceptions of life satisfaction by reducing work-family conflict and burnout (Galvin, 2023). In exchange, organizations could see an increase in motivation and commitment amongst highly educated working mothers, which would, in turn, improve the quality of patient care and health outcomes amongst local communities (Galvin, 2023).

Theoretical Framework

The Job Demands – Resources Theory is a universal model with two collateral drivers measuring employee health and well-being (Tummers & Bakker, 2021). The better the resources, the happier, more motivated, and satisfied employees will be, especially if the demands are high, such as in healthcare. Post-pandemic medical culture has demonstrated significantly higher demands on employees with subpar resources in emergency departments across the world, resulting in overburdened and overworked employees questioning their next career move. Emergency medicine (EM) physicians and advanced practice providers (APPs) who also have

small-aged children may often feel the demands are endless and the resources available unhelpful. This theory will allow for a better understanding of the myriad of demands with consequential potential adverse health outcomes, as well as the positive outcomes with available resources at hand, on working mothers in the EM world. With greater understanding, appropriate efforts could be engaged to manage attrition rates in this highly specialized group of educated women.

Problem Statement

Healthcare providers who are mothers to young children in high-acuity settings such as emergency medicine experience significant personal and professional challenges during their child-rearing years. They may experience higher levels of burnout and be overlooked for professional advancements despite hefty contributions of being away from home for long periods of time and missing crucial family life moments for years. This is a rising concern internationally, but little is known about this population living in highly resourced areas, such as Northern Virginia. Qualitative research is warranted to gain an in-depth understanding of their experiences and the organizational factors that contribute to mothers working in emergency medicine's well-being and their potential exit from healthcare. This project could help bring a greater understanding of the types of organizational practices that would help retain working mothers in major hospitals in the Northern Virginia region so that the local communities are less impacted by the increasing shortages of healthcare providers.

Purpose of the Research

The purpose of this study is to explore the experiences of working mothers who are healthcare providers in Emergency Departments in Northern Virginia and the impact their career in emergency medicine has on their well-being and family through semi-structured interviews.

Conducting semi-structured interviews will provide invaluable insight into the suppressed needs of mothers and reveal the challenges that remain unbeknownst otherwise (Belina, 2022). This approach will enable the gathering of more detailed qualitative exploratory data in a more natural order while encouraging two-way communication. Organizational support will also be explored to determine how it influences burnout, career commitment (intent to leave, employment status change), and motivation (level of engagement). Through the theoretical lens of the Jobs Demand-Resource (JD-R) Model, this population's unique experiences will be documented to understand their needs and identify strategies that could improve their well-being, enhance their professional commitment and motivation, and hopefully maintain them in the emergency medicine workforce.

Research Questions & Hypothesis

Two research questions were explored in this qualitative study.

Q1: In what ways does working in emergency medicine impact the overall health and well-being of mothers and their families?

- H1: Working in emergency medicine negatively impacts the health and well-being of mothers.
- H2: Working in emergency medicine positively impacts the health and well-being of mothers.
- H3: Working in emergency medicine has no impact on the overall health and well-being of mothers.
- H4: Working in emergency medicine negatively impacts the health and well-being of families.

- H5: Working in emergency medicine positively impacts the health and well-being of families.
- H6: Working in emergency medicine has no impact on the overall health and well-being of families.

Q2: What organizational factors positively or negatively influence career commitment and motivation for mothers working in emergency medicine?

- H1: Organizational factors such as family-friendly policies, flexible or part-time scheduling, and breastfeeding policies positively influence career commitment for mothers working in emergency medicine.
- H2: Organizational factors such as family-friendly policies, flexible scheduling, and breastfeeding policies positively influence career motivation for mothers working in emergency medicine.
- H3: Organizational factors such as lack of supervisory/peer support, lack of family-friendly policies/resources, breastfeeding/pumping support, rigid scheduling, and on-call shifts negatively influence career commitment for mothers working in emergency medicine.
- H4: Organizational factors such as lack of supervisory/peer support, lack of family-friendly policies/resources, breastfeeding/pumping support, rigid scheduling, and on-call shifts negatively influence career motivation for mothers working in emergency medicine.
- H5: Organizational factors have no influence on career commitment for mothers working in emergency medicine.

- H6: Organizational factors have no influence on career motivation for mothers working in emergency medicine.

Rationale and Implications

The challenges faced by working mothers were called "ubiquitous globally" by Collie et al. (2022), who rationalized that the characteristics required for a career in medicine are "ill-suited for mothers" although "non-essential to the practice of medicine." There is a plethora of research available that has investigated the well-being and burnout of all healthcare workers, especially in the post-pandemic era in the United States. However, most research has primarily focused on how to improve work conditions and alleviate stressors for healthcare workers collectively. There is little research on the impact of organizational support on mothers who are healthcare providers in emergency medicine with small children at home, specifically in public hospitals in Virginia.

One method for discovering the needs of this specific population is to ask open-ended questions identifying their experiences, challenges, and needs. Therefore, a qualitative approach using semi-structured interviews is proposed. This approach is ideal as it provides participants with a platform to share their stories. Collie et al. (2022) conducted their research with similar methods and were able to successfully discern trends over time during different stages of motherhood with detailed information unique to this group. Furthermore, conceptualizing the data using the JD-R Model as a theoretical lens will help identify organizational demand factors, supportive factors, and mediators that impact this population's work and family life daily. Results from this study ignite some cultural change strategies and guide maternal and family-friendly organizational practices in the ER world that will be helpful to the mothers' professional and personal lives.

Chapter 2

Literature Review

The complex relationship between motherhood and employment is gaining international interest, especially in the medical field (Bhardwaj, 2022; Brown, 2010; Collie et al., 2022; McMurray et al., 2000). However, the struggles of mothers with professional roles as emergency service healthcare providers who have small children at home have been overlooked. The literature on burnout and the challenges faced by "mothers in emergency medicine" warrant investigation. A literature search was performed using Google Scholar, PubMed, and Science Direct using keywords "working mothers," "physicians," "advance practice providers," "emergency medicine," "burn out," "organizational support," "career commitment," and "career motivation." The search was limited to articles from the last 10 years and published in English.

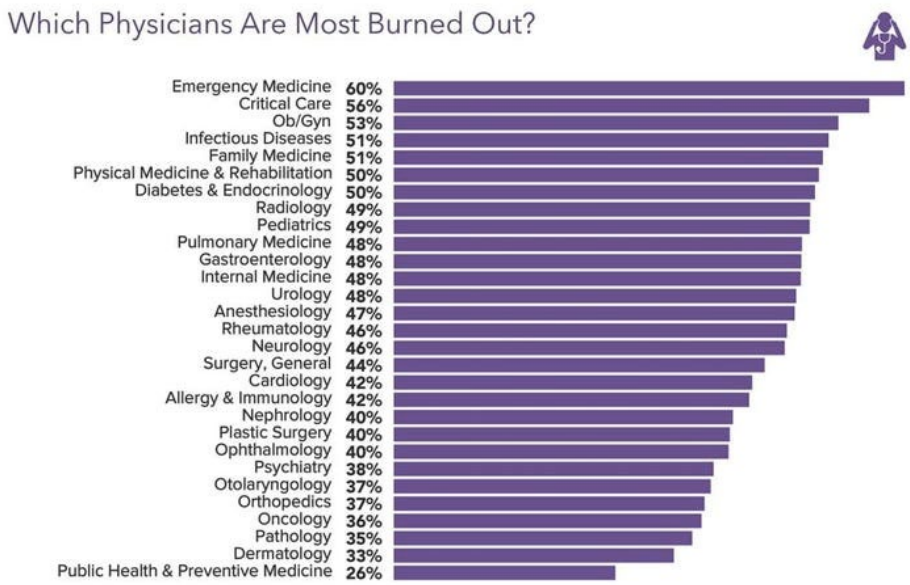
Healthcare Burnout

In 2019, the World Health Organization classified burnout as an "occupational phenomenon" for the first time, and it has been exponentially increasing in medicine (Pearl, 2022; World Health Organization [WHO], 2019).The prevalence of burnout in the general workforce has remained stable over the past 10 years at 28%, but in healthcare, it has increased from 45% to at least 54% with a concomitant decrease in life satisfaction and balance to as low as 40% amongst workers (Bhardwaj, 2022). Furthermore, healthcare professionals reported feeling that the national healthcare system "was sick" before COVID-19, but the pandemic stretched the system well beyond capacity, dangerously fueling healthcare burnout. Pre-pandemic research showed that healthcare burnout was as low as 30%, but it has since risen upwards of 70% all over the world (Luc, 2023; Lyubarova et al., 2023; Stringer, 2023).

In the United States, healthcare burnout affects all medical staff but is now an epidemic among physicians and physician assistants, also known as advanced practice providers (APPs), where over half report at least one symptom of burnout (Green et al., 2020; Lyubarova et al., 2023; Pearl, 2022). Global research has demonstrated that medical subspecialties with high acuity are at higher risks and with a higher prevalence of burnout and employee turnovers than all other specialties (Batanda, 2024; Bhardwaj, 2022; Pearl, 2022; Petrino et al., 2022; Physician's Briefing Staff, 2022). Pearl (2022) ranked burnout rates amongst physicians across specialties after conducting a large survey, and compared to other specialties, emergency medicine providers were found to have the highest rates at 60% (Figure 1).

Figure 1

Burnout Amongst Specialties (Source: Pearl, 2022)

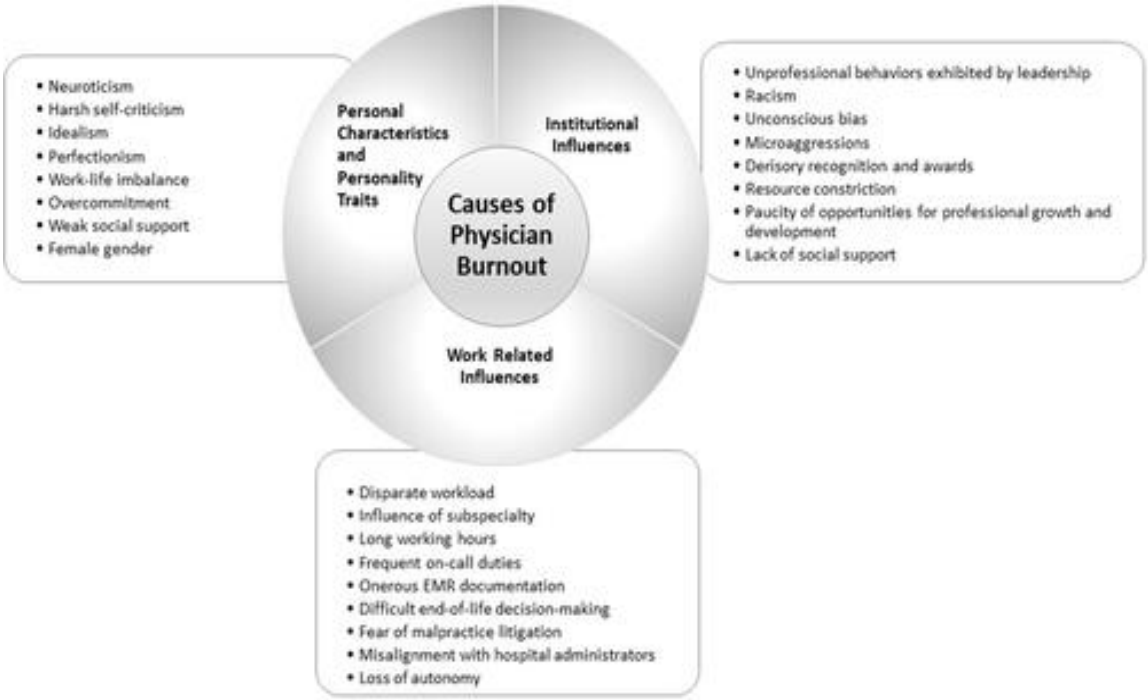


Healthcare burnout is complex and multifactorial, and there is no general consensus on how to appropriately tackle it (Lu et al., 2022; Valeras, 2020). Some of the causative factors include high volume and acuity cases, long hours, limited vacation time, staying up to date with

technological advances and electronic medical records (EMR), health coverage, and reimbursement challenges, all while remaining compliant with organizational, state, and federal regulations (Green et al., 2020; Luc, 2023). Burnout rates especially worsen with organizational changes such as metrics goals, new EMRs, or new management, which can negatively impact the work environment and lead to healthcare providers questioning if their place of employment is a good fit (Green et al., 2020; Lu et al., 2022). Growing evidence shows that burnout causes are multifactorial and interconnected with personal traits, work, and organizational dynamics, as Bhardwaj (2022) suggested in Figure 2. For example, a weaker personal support system paired with a lack of social support professionally will contribute to a regular sense of loss of autonomy and a gradual decline in overall health (Bhardwaj, 2022).

Figure 2

Causes of Physician Burnout (Source: Bhardwaj, 2022)



Healthcare Burnout Costs and Consequences

Clinician burnout that is ineffectively managed can result in tragic consequences for the economy, workforce, and general population (Bhardwaj, 2022; Brown, 2024; Hodkinson et al., 2022; Lu et al., 2022). The estimated annual cost of burnout amongst healthcare providers is an alarming $300 billion annually, and this does not include annual salaries and is expected to rise in coming years (Bhardwaj, 2022). Additionally, the nation is facing premature retirement amongst physicians well before anticipated as they resign to protect their physical and mental health (Bhardwaj, 2022; Luc, 2023). In fact, the workforce is believed to be 21,000 - 45,000 short in primary care services and 34,000 - 87, 000 short in specialist services by 2025 (Bhardwaj, 2022). More locally, the shortage of physicians is continually monitored by state agencies as the physician-to-patient ratio has dropped below the national average, placing a tremendous burden on emergency care services (Cicero Institute, 2024). Rising economic losses paired with current provider shortages will impact future generations of healthcare providers and how they practice medicine.

It is imperative to address healthcare burnout as it is directly correlated to quality patient care, and perhaps patient outcomes are some of the more important metrics measured at the organizational level (Bhardwaj, 2022; Green et al., 2020; Lu et al., 2022). A systematic review and meta-analysis of 4732 articles conducted by Hodkinson et al. (2022) examined the degree of healthcare burnout in patient care globally and found that higher burnout resulted in poor organizational function and sustainability due to a fourfold decrease in career satisfaction, a threefold increase in career regret, and a threefold increase in turnover intent amongst physicians. Furthermore, burned out clinicians were observed to have double the rates of patient safety incidents, patient dissatisfaction, and lower professionalism scores. These rates were at the

highest in hospital settings, especially ERs and ICUs. Unsurprisingly, ER providers had the greatest burnout rates with consequential higher patient safety incidents and displayed the lowest levels of professionalism (Hodkinson et al., 2022). Unfortunately, upwards of 40% of clinicians do not trust that their hospital systems are making the changes that they feel would be most beneficial to addressing burnout, ultimately impacting quality care and productivity within hospital walls (Bhardwaj, 2022; Levins, 2023). Levins (2023) and Swancott et al. (2024) reiterated that contributing factors to the dire consequences of career regret and lower professionalism over time are jeopardizing patient safety, and rooted in a lack of organizational support, increasing organizational pressure, and various resourcing issues.

Culture of Emergency Medicine

Emergency Medicine is a global necessity with needs that cannot be met by other specialist providers who have not acquired the specialized skillset (Swancott et al., 2024). It is also a unique occupational setting for those working in it. The culture of acute care settings is vastly different from outpatient office settings, and when paired with fewer career advancements, compensation disparities, higher litigation risks, and global calamities such as COVID, it can significantly fuel burnout in these specialists (Jyothindran et al., 2021; Lyubarova et al., 2023; Miles, 2024; Purdy et al., 2022). Bhardwaj (2022) suggested that burnout can cause widespread toxic work cultures tainted with doubt, unprofessional interactions, destructive behaviors, and despair. This form of culture, often accepted in emergency medicine, is a major contributor to staff behavior and experience, as well as patient experiences and outcomes. A systemic review of literature by Swancott et al. (2024) demonstrated that high levels of stress, mental illness, and burnout plague emergency medicine with worsening workplace conditions due to underfunding, increasing demands, and overwhelming workloads (Batanda, 2024; Swancott et al., 2024). This

exhaustion is affecting healthcare providers' medical decision-making, communication, and coping strategies (Batanda, 2024).

Furthermore, ER physicians and APPs develop their own beliefs based on systemic practices that might often go against their personal values and even to their detriment (Purdy et al., 2022). This is described well in a study by O'Shea et al. (2020), who sought to examine provider beliefs on taking breaks as a means of self-care during their shifts and identified several key themes. Researchers found the general consensus was that high productivity and high patient safety were viewed as strengths, and practices allowing self-care were viewed as weaknesses. Even when unmet basic physiological needs such as hunger negatively affect cognitive function and emotional self-regulation, there was an expectation to persevere. Another finding was that most providers imagined the worst-case scenarios happening to their patients if they went on a break, so they simply wouldn't take a break. Self-care in the ER is an acquired skill amongst this population that requires flexible and individualized strategies so that timing and communication are appropriate. Professional and personal relationships could serve as a stressor or a protector in this environment, but personal needs while on shift are usually not a priority (Batanda, 2024; Collie et al., 2022).

Mothers in Medicine

Recent research has found women are significantly more likely to experience burnout than men in Emergency Medicine, with 56% of women and 41% of men reporting at least one symptom of burnout (Lyubarova et al., 2023). The Physician Work Life Study found that women physicians spend more time with their patients to provide high-quality care, despite managing complex patients with fewer resources compared to men (McMurray et al., 2000). Despite women making phenomenal healthcare providers, they have reported less satisfaction with

interpersonal factors such as marriages and parenting at all stages of a medical career compared to men (Cujec et al., 2000).

Motherhood can lead to a negative relationship with their places of employment due to the multiple competing roles they have daily, especially in the United States, where comprehensive family-friendly policies are non-existent (Brown, 2010). Furthermore, factors such as lack of resources, lack of support, job demands, schedule flexibility, work-life integration, and organizational culture and practice impel burnout in female physicians and APPs (Lyubarova et al., 2023). Long hours, inflexible work schedules, personal needs, extended separation from kids, suboptimal organizational policies, cultural norms, childcare problems, as well as decreasing financial and social support as factors impacting their personal health, family well-being, career motivation, and commitment can all impact burnout (Brown, 2010; Cabrera 2009; Collie et al., 2022). Furthermore, mothers in medicine have been labeled as "non-traditional women" and are susceptible to experiencing the "motherhood penalty" with gaps in pay, hiring discrimination, and fewer advancement opportunities (Brown, 2010; Kricheli-Katz, 2012; Wear & Castellani, 2002).

Personal Well-Being

Many mothers working in healthcare have found the overlapping demands of work and family life to be incredibly stressful and their integration nearly impossible. Consequentially, many are in constant search for employment opportunities with flexible scheduling or part-time options, which directly impacts their commitment, satisfaction, motivation, and turnover intention (ALobaid et al., 2020; Collie et al., 2022; Hoffman et al., 2020; Pace & Sciotto, 2021; Sahni, 2020; Simpson et al., 2021). Work-related stress and burnout can also lead to various complications during prime child-bearing years for women, including decreased fertility, high-

risk pregnancies, and miscarriages, in addition to physical, mental, and emotional stress (Collie et al., 2022). Then, once they have children, mothers can be overburdened with pregnancy, childbirth, breastfeeding, and childrearing responsibilities on top of professional expectations. Naturally, feelings of guilt and inadequacy as a mother and healthcare provider are understandable due to the constant push and pull between career and family (Ahn et al., 2021; Physicians Angels, 2022). Essential needs sought after when considering prospective jobs have included work-life balance, family-friendly policies, schedule flexibility, salary, health insurance, and benefits (health insurance, retirement, paid maternity leave) (Gitis, 2022; MacKee, 2020).

Family Well-Being

An equal work-life balance can feel impossible to reach for many healthcare mothers with professional and personal responsibilities that compete for the same resources of time and energy (Pace & Sciotto, 2021). When a feeling of work-life balance is achieved, it is linked to higher personal and professional satisfaction as well as improved well-being of the entire family unit, but if a clear imbalance exists, it causes mental strain and stress on all family members (Pace & Sciotto, 2021). Gawlik et al. (2024) found that 66% of healthcare providers exhibited a higher prevalence of parental burnout in the US due to financial stressors, limited support, and limited access to child-rearing responsibilities. Several unfortunate findings were that increased parental burnout increased strain on the parent-child relationship, unhealthy coping mechanisms for the entire family, suicidal ideations, and lead to increased child abuse and neglect, severely impacting the child's development and well-being (Gawlik et al., 2024).

There is growing evidence of a significant correlation between gender and parental burnout, with 68.2% of women and 41.9% of men reporting greater work-family conflict due to

lack of time and support, gender biases, and social norms that exist today (Gawlik et al., 2024; Pace & Sciotto, 2021; Sahni, 2020). In a pre-pandemic study conducted by ALobaid et al. (2020), three major themes were identified that led to consequential results for working mothers. First, long hours away from home negatively impacted career motivation and efficiency at work. Second, working mothers felt torn between personal and professional expectations. This feeling of inadequacy in both roles resulted in the third theme of an urgent need for more flexible or part-time opportunities. If better options were not possible, they would resort to leaving the workforce (ALobaid et al., 2020). Gawlik et al. (2024) further suggested that women transition out of the workforce when they struggled with accepting additional professional responsibilities, which resulted in a decline in career advancements. In the United States specifically, work-family conflict was mostly related to high workplace stress as organizations proved to be unprepared to meet the needs of mothers during pregnancy and well after childbirth (ALobaid et al.,2020). Over 66% of working mothers in healthcare admit that one of the most influential factors for career advancement and growth is affordable and quality childcare (Gitis, 2022).

Supervisory Support and Career Motivation/Commitment

Supervisory support is crucial to the success of working mothers' careers and patient experiences. A significant correlation has been shown between perceived supervisory and organization support and well-being (Ogbonnaya & Babalola, 2020). Higher perceived supervisory and organizational support were related to greater maternal well-being, greater sense of value to an organization, and positive attitudes and behaviors at work, which resulted in greater patient experiences with positive outcomes (Ogbonnaya & Babalola, 2020). Interestingly, an international review of 24 countries found that higher supervisory support was the one factor that reduced turnover intentions amongst working mothers due to increased psychological safety

- defined as the belief that one could express their concerns without negative professional repercussions (Halliday et al., 2022).

Understanding the interlinked dynamic between supervisory support, career motivation, and commitment for working mothers is important (ALobaid et al., 2020; Altaş et al., 2024; Sahni, 2020). With supervisory support fostering a benevolent work environment, working mothers can more likely achieve their fullest potential professionally and make the career advances they desire. In one study, over 90% of women reported desiring a successful career in leadership roles; however, they felt there were many barriers in their way (Sahni, 2020). For starters, inefficient supervisory support led to stereotyping and discrimination at work, increased stress, low productivity, low motivation, and decreased overall life satisfaction (ALobaid et al., 2020; Sahni, 2020). The impact of supervisory support on job satisfaction has also been linked to the concept of emotional labor among women in the workforce (Atlas et al., 2024).

Organizational Factors Contributing to Maternal Burnout

Many barriers to achieving greater maternal wellness are based on stereotypical "socio-cultural norms" that have been accepted by most employers and tolerated by working mothers; especially for those with a career in medicine (MacKee, 2020). Workplace practices and policies that combine motherhood and medicine are required well beyond sub-par maternity leave policies. These include policies related to schedule flexibility, breastfeeding, and organizational resources and support to prevent burnout in female physicians and APPs navigating motherhood with small children (Lyubarova et al., 2023).

Flexible Work Schedules/Policies

Trends in research over the past decade demonstrate that inflexible scheduled work hours in high-stress environments with inadequate institutional/organizational support are positively

correlated with parental stress and level of perceived work-family conflict (Goodman & Crouter, 2009; Hwang, 2019; Lucia-Casademunt et al., 2018). Unfortunately, many working mothers report schedules of 40-60 hours per week at irregular times, which results in them not seeing their children for long periods of time. Given the atypical hours, the standard daycare coverage isn't enough, requiring many families to hire aftercare help or private nannies, further adding to financial costs (Collie et al., 2022). Therefore, greater flexibility, which typically translates to some level of control on the work schedule, is crucial for mothers to balance work-family conflicts across the entire workforce (Gitis, 2022). Although the needs will be different amongst individual family units, one generalized example could be no on-call or overnight shifts for a designated time for the postpartum mother after returning from maternity leave. Such simple considerations can improve their mental health through a greater sense of overall well-being, self-esteem, and perceived efficiency while simultaneously decreasing their stress levels (Brown, 2010; Gitis, 2022). Over 63% of working mothers in healthcare say that a flexible schedule would keep them at their jobs and allow them to fulfill their family duties. If no adjustments are made, nearly 46% of mothers will ultimately put their career interests on pause if it means to continue working unpredictable or demanding hours with less organizational flexibility, less job security, or fewer benefits, as each of these components could have a monumental impact on their families (Gitis, 2022).

Breastfeeding Policies

Section 7 of the Fair Labor Standards Act of 1938 (29 U.S.C. 207) mandates that mothers have the right to take breaks up to one year after childbirth to express milk in a private space that is not a bathroom, designated just for them (Falletta et al., 2020). However, numerous studies have found that mothers returning to work were not granted this protected time or lacked a safe

area within their facility for lactation purposes (Collie et al., 2022; Juengst et al., 2019). In an observational study of female ER physicians, over 92% reported that a breastfeeding policy was important to them, but a meager 3% said their organizations had one (McDonald et al., 2017). Therefore, the longevity of their infant's getting breastmilk was significantly associated with their ability to pump during work hours, highlighting the role that healthcare organizations should accept to promote such opportunities for families (McDonald et al., 2017). Similarly, Juengst et al. (2019) found that this was the most common frustration expressed by new mothers because it was an "inconvenience" and there wasn't "enough time" for it. Due to the inability to exercise this legal right, working mothers returning to emergency medicine would see a drastic drop in their supply, resulting in their infants turning to formula before the desired time frame (Juengst et al., 2019).

According to the American Academy of Pediatrics (AAP) recommendations, infants should be fed only breast milk the first 6 months of life, then gradually supplement with other food sources until 24 months and after if desired (AAP, 2024). Yet, despite breast milk being the best source of nutrition during infancy, only 75% of mothers initiate nursing after birth and a mere 15% will exclusively nurse up to 6 months in the United States (Whitley et al., 2019). Research demonstrates that time, strain, and behavior-based conflicts in the workplace result in low rates of breastfed infants in the United States (f & Major, 2005). Maternal employment is proven to be one of the top reasons for low breastfeeding, most especially among full-time positions in Westernized Nations (Spitzmueller et al., 2016).

Return to Work Policies

The first few months upon returning to work from an extended time period off can be a vulnerable time for mothers after maternity leave. Often, there is minimal flexibility or

consideration for a mother's needs upon transitioning back to work, particularly in Emergency Medicine when they are placed *on call* or scheduled for overnight shifts away from their infants at home (Collie et al., 2022). Mothers have reported feeling guilty for taking breaks, pumping, or taking time off because they feel they may be further burdening their coworkers and have a constant responsibility to their patients (Collie et al., 2022). Comprehensive solutions with core foundational adjustments are urgently needed in current healthcare system practices for working caregivers so they can prosper personally and professionally. Sachs et al. (2021) suggested 10 key findings in their research that would create the ideal supportive environment for mothers returning back to work. These include control over work schedule, childcare support (onsite, subsidizing options, employee flexible spending accounts), encouraging paternity leave to promote positive gender dynamics at home, prioritizing maternal mental health, no gender pay gap, remove the motherhood penalty, allow the option for a longer maternity leave, gradually increase work load upon return, paid sick leave, and finally, publicly advocating for mothers (Sachs et al., 2021).

Protective Factors

Work and family have a "bidirectional relationship" as demands easily interfere with one another, so the role an individual holds in each domain can often feel incompatible (Little & Masterson, 2021). Numerous factors have been identified on interpersonal and organizational levels that can benefit mothers and enable a healthy integration between work and family. Interpersonally, mothers with more supportive partners who participated in parenting and domestic responsibilities found navigating motherhood with a career in medicine manageable (Collie et al., 2022). This was also appreciated among mothers who had nearby family and friends they could outsource to, especially with childcare needs (Collie et al., 2022; Jyothindran

et al., 2021). Professionally, positive workplace factors included supportive colleagues and supervisors who advocated for one another's needs. Organizational benefits such as the option to work part-time, more scheduling control, and flexibility also contributed to greater wellness for working mothers (Jyothindran et al., 2021).

Perception of job well-being based on organizational practices and supervisory support have been a focus of research amongst working mothers since the 1980s. In a very early study, working mothers were found to have a greater perception of their overall professional well-being when they experienced greater supervisory support, and any organizational well-being practices were a bonus (Eisenberger et al., 1986). Men, on the other hand, perceived no significant correlation between their professional well-being and supervisory support or organizational well-being practices (Eisenberger et al., 1986). Results from this study are similar to research findings today that show working mothers highly value their supervisor's support and understanding when it comes to work-life conflict and have resulted in higher retention rates and career motivation for employers (ALobaid et al., 2020; Altaş et al., 2024; Halliday et al., 2022; Ogbonnaya & Babalola, 2020; Sahni, 2020). In another study, Hwang (2019) investigated how organizational family-friendly policies in childcare, flexible shifts, and supervisory support affected parental stress among Korean mothers with young children and nonstandard work schedules. Results demonstrated that supervisory support and family-friendly policies were negatively associated with parental stress and were most important for families that work nonstandard hours (Hwang, 2019). The absence of family-friendly resources (flexible scheduling, childcare, support) was a significant source of stress and largely contributed to work-family conflict (Hwang, 2019). Therefore, supervisory support and supportive work cultures make it easier for working mothers to stay employed easier (MacKee, 2020). Additionally, when

a more thoughtful approach that considered individual needs was incorporated into an organization's culture, there was an increased awareness, and thus improved well-being, of the specific challenges faced by working mothers impacting their well-being (Cardenas & Major, 2005).

Theoretical Framework: Jobs Demand-Resource Model

Over the past decade, the Jobs Demands-Resource Model (JD-R Model) has been studied across health professions to analyze work environments' demand versus resources and its impact on employee well-being, performance, and career longevity. The model suggests that job demands have a greater influence on employee intentions, retention, service quality, and career longevity, while job resources can buffer the demands and influence organizational commitment and motivation (Luo & Lei, 2021). Regarding working mothers, Nomaguchi and Fettro (2018) utilized the model to examine the association between having younger children and work-family conflict among mothers in healthcare and public health roles. Mothers who worked less to mitigate work-family conflict perceived greater job pressure, were provided with less supervisor support, and were overlooked for career advancements. When the resources increased via supervisory support, demands decreased via less job pressure, and maternal work-family conflict perceptions were greatly reduced (Nomaguchi & Fettro, 2018).

The JD-R Model has also been applied to social workers with children using job demands and resources to predict employee well-being, burnout, and career outcomes such as retention, job satisfaction, and quality of patient care. A positive association existed between job demands and burnout, resulting in a positive association between burnout and turnover intention (Kaiser et al., 2020). A positive association also existed between job resources and engagement, resulting in an inverse relationship between engagement and career satisfaction as well as performance

quality (Kaiser et al., 2020). Therefore, management teams could focus on decreasing demands and increasing resources to improve career outcomes. A similar hypothesis was made in a very recent study with providers, and it found that when the resources exceeded job demands, the providers were less burnt out, more engaged, and had better performances with patients (Jeanmonod et al., 2024). Additionally, they found that administrators could increase stress/anxiety management resources to improve the current narrative of emergency medicine culture (Jeanmonod et al., 2024).

Literature Gaps and Implications for Future Research

There were several limitations found in the literature that may impact the generalization of research findings. The literature review was heavily focused on working mothers in emergency departments only, so the perspective of working fathers or single fathers was not considered. This subpopulation of working mothers also differs from working mothers in other socioeconomic and occupational groups, even if in the medical field, due to higher educational attainments and income levels; therefore, the challenges experienced could potentially be very different. Cultural and religious factors were also not considered, which could greatly influence motherhood and career choices. Pregnant mothers and women who were choosing to delay pregnancy were also not considered. Additional important limitations were that most of the research did not address how newly postpartum mothers delivered their babies (vaginal versus caesarian sections) or if any of the women were undergoing fertility treatments while working. Both of these factors could significantly change their needs and could have many emotional and physical challenges.

The current available research on the experience of mothers in Emergency Medicine is primarily international. This study would be the first known study on this population and topic to

be conducted in Northern Virginia. Although the crucial role of organizational support in healthcare settings is becoming a global concern internationally, it is hardly studied within this highly populated and diverse region that continues to face physician shortages. Most of the literature combines qualitative surveys with pre-determined questions or systematic reviews of available research, none of which conceptualized this topic through the analytical lens of the JD-R model. Despite the identified limitations, research findings hold several important suggestions for healthcare organizations and researchers. A qualitative study that explores the recurring challenges this population of women faces could provide unique insight into the personal impact their careers have. This is essential given that women are the predominant gender in medicine, providing most of the general population's caretaking needs. Furthermore, by understanding how mothers working in emergency medicine experience burnout based on daily demands and resource availability, more specific organizational support needs could be identified that could both keep them in their profession and be successful at home.

Chapter 3

Methodology

This qualitative study explores the lives of Northern Virginia women who navigate motherhood with their careers as physicians or APPs in the field of emergency medicine. There is a general understanding across the globe that working mothers need additional organizational support. However, little is known about their personal needs and experiences. Understanding mothers in emergency medicine's unique challenges can help fill current research gaps by identifying the types of organizational support that could help improve their work-home life and help retain them in this high-demand field of healthcare.

Study Design

The primary data collection method was semi-structured interviews. Semi-structured interviews allow a natural progression of questions and answers while allowing participants the flexibility to share their personal experiences and opinions, giving more in-depth data from participants (Mashuri et al., 2022). The interviews were conducted by participant preference of in person or through Zoom, and last less than 30 minutes each. The goal was to have 15-20 participant interviews. Table 1 outlines the 10 core interview questions, plus additional possible probing questions, paired to the research questions they answer. The interview guide is attached as Appendix A.

Table 1

Research Questions With Corresponding Interview Questions

Research Questions	Interview Questions
Demographic Data	What is your marital status? (single/married/widowed/divorced) Do you have children? How many? How old? What is your professional title, or practice role? What is your employment status? (FT/PT/PRN)
What organizational factors positively or negatively influence career commitment and motivation for mothers working in Emergency Medicine?	How does your organization support or not support your well-being and/or needs as a healthcare provider in Emergency Medicine and as a working mother? → probe: how is your schedule? How often are you on call? → probe (for those with infants): What types of support are you provided for with pumping/expressing milk? Do you get to take breaks when needed? Do you have the privacy or space to do so? What does this look like for you? What are some organizational resources you found that help mitigate your professional demands? Is leaving the field a thought you have considered? → probe: if yes, could you elaborate? Why or why not? What do you need to be successful as an Emergency Medicine healthcare provider and a mother to small children? → probe: How does your supervisor support your needs? How do your peers support your needs? supervisory/peer support? Is there anything else you would like to add or share about your experiences as a mother working in Emergency Medicine?
In what ways does working in Emergency Medicine impact the overall health and well-being of mothers and their families?	How does working in Emergency Medicine impact your role as a mother outside of work? → probe: what are some of the unique barriers you are challenged by in your professional role? Do you have the flexibility you need to meet the needs of both roles? Please describe. → probe: how are you meeting the demands of both roles? Does your professional engagement change as a result? How have you (if at all) had to change your employment status to meet the demands of daily life as a mother and healthcare provider? → probe: How has being a mom has impacted how you work as a healthcare provider? → probe: do you feel your level of engagement changed? Please elaborate.

	Is there anything else you would like to add or share about your experiences as a mother working in Emergency Medicine?

Study Participants

Participants for this study are adult women who work as physicians or APPs in emergency medicine in Northern Virginia and who are also mothers to small children under the age of 13. They were recruited primarily through convenience sampling, starting with publicly available emails available on hospital websites for hospitals located in Loudon and Prince William Counties in Northern Virginia. Snowball sampling techniques were the backup recruiting method if additional participants were needed, but this was not the case. Participants were required to be employed in one of the five distinct emergency departments within Loudon and Prince William counties in Northern Virginia to participate. Two emergency departments are within large hospitals where patients get admitted and three are stand-alone departments, but fully functional for emergency services. All facilities are open to the public by ambulatory or ambulance services. Typically, the larger hospitals have 120-200 visits per 24-hour period, and the smaller facilities have 75-120 visits to the emergency room per 24-hour period. The setting for this project was selected based on researcher access and convenience.

If there were not enough participants who fit the inclusion criteria, the specialty of participants would have been expanded to include those who work in hospitalist service. Typically, employees in hospitalist services work irregular hours with several shifts in a row, similar to emergency services, so mothers working in this role may experience similar challenges as mothers working in emergency medicine.

Inclusion and Exclusion Criteria

Participants must be at least 18 years old, work as a physician (MD/DO) or APP (PA, NP) in emergency medicine, have at least one child under the age of 13, and fluently speak English. They must also be employed at one of the five hospitals within Loudon and Prince William counties in Northern Virginia. Race is not a demographic consideration for inclusion in this study. Physicians or APPs who are males, women with no children under the age of 13, are not at least 18 years old, do not provide direct patient care in Emergency Medicine, do not fluently speak English, or do not actively practice within the five selected hospitals will not be included in the study.

Recruitment

Because this study involves human subjects, approval from the Institutional Review Board (IRB) was obtained. After IRB approval was obtained, potential participants were emailed an IRB-approved email invitation to participate in the study. Participant emails are publicly available for all staff in the "Provider Contact Sheet" for the Emergency Departments of the five facilities. Informed consent was included in this email, making convenience sampling the easiest recruitment method for the researcher given they are also part of the study population (Stratton, 2021). The participants were informed that participation is voluntary, all information is confidential, and no personal identifying information was collected. Those that were interested in participating and gave consent were asked to provide their best contact information, time for scheduling an interview, and their preferred method of in-person or Zoom. Participants were asked at the end of the interview if they know of someone else who may qualify and be interested in participating in case more participants are needed.

Data Collection

During the interviews, participants were called by their names. Afterwards, the participants were de-identified from their contact information and assigned de-identified codes for naming and saving the interview data. Each interview was assigned a code using a letter (A for physicians, B for APPs) and a four number sequence indicating the order it was conducted with a four-digit date (two-digit month / two-digit day). All notes, recordings, and transcripts were saved using the assigned code. No personally identifiable information was collected or stored.

The data collected in this project were participant responses to the interview questions, which were recorded, with permission from the participants, and transcribed using Otter.ai (https://otter.ai/). Otter.ai has the capability to take notes, recordings, and transcribe audio files (Liang, 2016). Handwritten notes will be taken and typed to Microsoft Word immediately after the interview for those who do not agree to be recorded.

Data Analysis

Qualitative research analysis methods have been demonstrated to be sufficient in data interpretation and applicability of contextual factors, as well as in generating future research hypotheses when exploring healthcare-related research (Hagaman et al., 2022; Miner et al., 2023).

Descriptive statistics and thematic analysis were used to analyze the data. Descriptive statistics were used to analyze participants' demographic data. This included their practice role, length of time employed in emergency medicine, employment status (full/part/as needed), marital status, number of children, and age of children. Each data point has frequencies with mean and percentages summarized in table format. Thematic analysis was used to analyze the

open-ended response data collected in the interviews following a series of steps, including data transcription, data immersion, keyword identification, code selection, developing themes, and creating the final report (Naeem et al., 2023). In the first step, the data were transcribed by Otter.ai and reviewed by the researcher for errors. Once errors in transcription were corrected, the transcripts were exported to the qualitative data analysis software program Dedoose. Any Microsoft Word interview notes were also uploaded to Dedoose. This program used for data management and analysis (Dedoose, 2023).

Next, the researcher became very familiar with the results by reading and re-reading the data. Keywords were documented, and notes were taken during this initial step. Then the data was assigned to initial codes. Both deductive and inductive coding processes were used to interpret the data and create themes. The researcher was the only coder in this study; however, the faculty researcher and principal investigator of this study performed a thorough secondary review of the coding process. All deductive codes included constructs from the Jobs Demand-Resources Model as defined in Table 2. The two main constructs of job demands and job resources allows for contextualization of working mothers' extent of burnout and professional engagement, which may have either negative or positive outcomes impacting personal and family well-being, as well as career commitment and motivation.

Table 2

JD-R Model Constructs (Source: Schaufeli & Taris, 2014)

Constructs	Definition / Application
Demands	- Work load and responsibility (deadlines, notes, training, patient care, shift work, on call, etc) - Psychological or emotional load (abuse, discrimination, biases, pay differences) - Family demands (child rearing years)

Resources	- Organizational support (family friendly policies, flexible scheduling, etc) - Family support (extended family for childcare) - Personal sources (gym, therapist, etc)
Negative Outcomes	- Poor personal physical and mental health - Poor family well-being - Burnout - High attrition rates - Career dissatisfaction - Poor patient experiences - Bad patient outcomes - Lawsuits
Positive Outcomes	- Improved well-being - Career motivation - Career commitment - Managed or declining attrition rates

Part of the analysis included coding techniques generated by the researcher to "translate the data" into thematic patterns (Saldaña, 2016). It is a fluid transition between data collection and in-depth data analysis. Inductive coding methods were utilized to develop themes and concepts via reading and interpreting data by the researcher. Saldaña (2016) described coding as a "problem-solving technique" that the researcher applies during and after data collection, which links data to the ideologies for meaning in a systematic way. This type of analysis is impactful as it will identify recurring experiences and the unique perceptions of the studied population to answer the research questions (Miner et al., 2023). Where possible, the identified themes were merged and refined. The concluding step was to write the final report in which each theme is described in detail and its broad implications reviewed. Additionally, direct quotes from the data collection steps were included in the final report to illustrate the research findings, provide rich context, and supplement the credibility of the perspectives shared. Direct quotations will allow

for greater transparency and increase the trustworthiness of the researcher and the data (Eldh et al., 2020).

Institutional Review Board (IRB)

Since this study involves human participants, Institutional Review Board (IRB) approval was obtained by the Radford University IRB before recruitment and data collection was initiated. The essential ethical considerations that was upheld in this project will be informed consent, privacy, confidentiality, and participant safety at all times.

Limitations

The interviews began in January 2025 and continued into February 2025. This time frame was challenging for this population group due to high patient volumes and high acuity cases within emergency departments, following the holidays, and in addition to added personal responsibilities at home. Furthermore, some participants had sick children at home from daycare, as children often get sick more during the winter months.

Limitations of the research study include the use of a single coder as the researcher, convenience sampling for recruitment, and researcher bias, given that the researcher is also part of the population being studied. Reflexivity and qualitative data analysis software were used to minimize bias. Another consideration is that the study was conducted within only two counties in the Northern Virginia area, so limitations in resources, support services, general practices, and available programs will be specific to the hospitals represented.

Chapter 4

Results

This qualitative study explored the lives of adult women with careers as emergency medicine providers within two counties of Northern Virginia and the impact their careers have on their personal and families' well-being. The extent of organizational support and resources was also examined to determine its influence on these mothers' career burnout, commitment, and motivation. Chapter four provides the analysis process and interview findings of the study, which was conducted between January 13, 2025, and February 28, 2025. The IRB approval letter can be found in Appendix A.

Recruitment Strategies

The method of recruitment was direct emails to potential participants by the researcher. The emails were publicly available from their organizations and accessible to the researcher, who is also employed by the same organization. Thirty-five women were emailed the IRB-approved recruitment email (Appendix B), and three additional follow-up emails were sent only to those who did not reply over the course of seven weeks. Twenty consented to participate, and three ultimately did not schedule an interview with the researcher.

Participants

There were 17 total participants in this research study. All were adult women specializing in Emergency Medicine; seven were Physicians, and 10 were APPs (9 physician assistants and 1 nurse practitioner). All participants were employed either full-time, part-time, or per diem (as-needed contract); one participant was an independent contractor for her organization. All participants were married and had children aged 13 or younger. There was a total of 36 children among the participants, with an average age of 4 years and 3 months old. Table 3 below displays

the demographic characteristics of all participants. A larger table with detailed demographic data per participant is shared in Appendix D.

Table 3

Participant Demographics

Participant Characteristics	n	(%)
Medical Specialty		
Emergency Medicine	14	82.3
Inpatient Setting	1	5.9
Outpatient Setting	2	11.8
Professional Role		
Physician	7	41.2
Advance Practice Providers (APPs)	10	58.8
Employment Contract		
Full Time	10	58.8
Part Time	6	35.3
Per Diem	1	5.9
Marital Status		
Single	0	0
Married	17	100
Divorced	0	0
Widowed	0	0
Number of Children		
1	2	11.8
2	10	58.8
3	5	29.4
4+	0	0
Age of Children		
Infancy (birth – 1 year)	4	11.1
Toddlerhood (1–3 years)	13	36.1
Early Childhood (3-6 years)	9	25
Middle Childhood (6-12 years)	10	27.8

Data Collection

Seventeen interviews were conducted amongst the sample population, lasting an average of 22 minutes per interview. The interview method was based on participant preference; two

were completed in person, four were completed via Zoom video, and 11 were conducted over the phone. Five of the 17 interviews were hand-written notes that were later typed into Microsoft Word. The remaining 12 were recorded with interviewees' consent and later uploaded into Otter.ai for transcription. All participants answered all seven questions.

Data Analysis

Coding

A series of steps were completed to analyze the data into codes and then categories. The first step was uploading all recorded sessions into Otter.ai for data transcription. Then, all the transcriptions were reviewed multiple times to correct errors. During this data immersion step, a pre-coding analysis was conducted, and major keywords were identified as essential due to their repetitive presence. The next step was to upload all Otter.ai generated transcripts and Microsoft documents with data from handwritten notes into Dedoose. Then, line-by-line coding was performed on each document to identify additional codes and subcodes. All documents were reviewed multiple times during the coding process to make connections in a systematic way, as proposed by Saldaña (2016). All codes, and subcodes were color coded to organize the data. A total of 108 codes and 62 subcodes were identified during this process.

Next, all similar codes were merged together and then grouped into categories. A total of 35 categories were identified in the first round, which were then refined and merged into 27 final categories to begin the process of identifying themes. Direct quotes were applied to all subcodes, codes, and categories in Dedoose to provide rich context for the interview data and enhance the transparency and trustworthiness of the analysis process. All categories, codes, and subcodes are presented in Appendix E.

In the next phase of coding, deductive reasoning was applied to connect the findings to the JD-R Model. Based on the inferences drawn from the data, codes and subcodes were categorized amongst the existing constructs of the JD-R model (demands, resources, negative outcomes, positive outcomes). For example, codes (subcodes) applied to the demands construct included barriers (employment), survival (unpredictable, expectations, sacrifices, acceptance, resentment, frustrations, punishments), no change (high turnover), and return to work. Codes that applied to the resources construct included employer benefits, supervisory support, colleague support, incentives, and in home versus daycare. Amongst the codes (subcodes) applied to the positive outcomes construct included the children (daughters), role in society, professional ambitions, and the idea that change is good. As for the negative outcomes construct, codes (subcodes) include, but are not limited to, internal conflicts (repeating questions), perceptions (negative, more than a mom), declining mental health, reproductive health, and missed opportunities.

Generating Themes

After analysis of both inductive and deductive coding, four overall themes were identified. The themes were: (1) the clashing realities of motherhood and emergency medicine, (2) the juggling act of seeking professional and personal fulfillment, (3) the impact of a high acuity medical career on the family unit, and (4) the significance of perceived support from leadership and peers. Additionally, although not identified as a separate theme, there were notable findings from the question: *If you had a magic wand, what would the ideal scenario look like to be successful at home and at work? What would you need?* A detailed description of the four themes and additional findings from this question are shared below, along with a coding scheme that includes categories and key illustrative quotes for each.

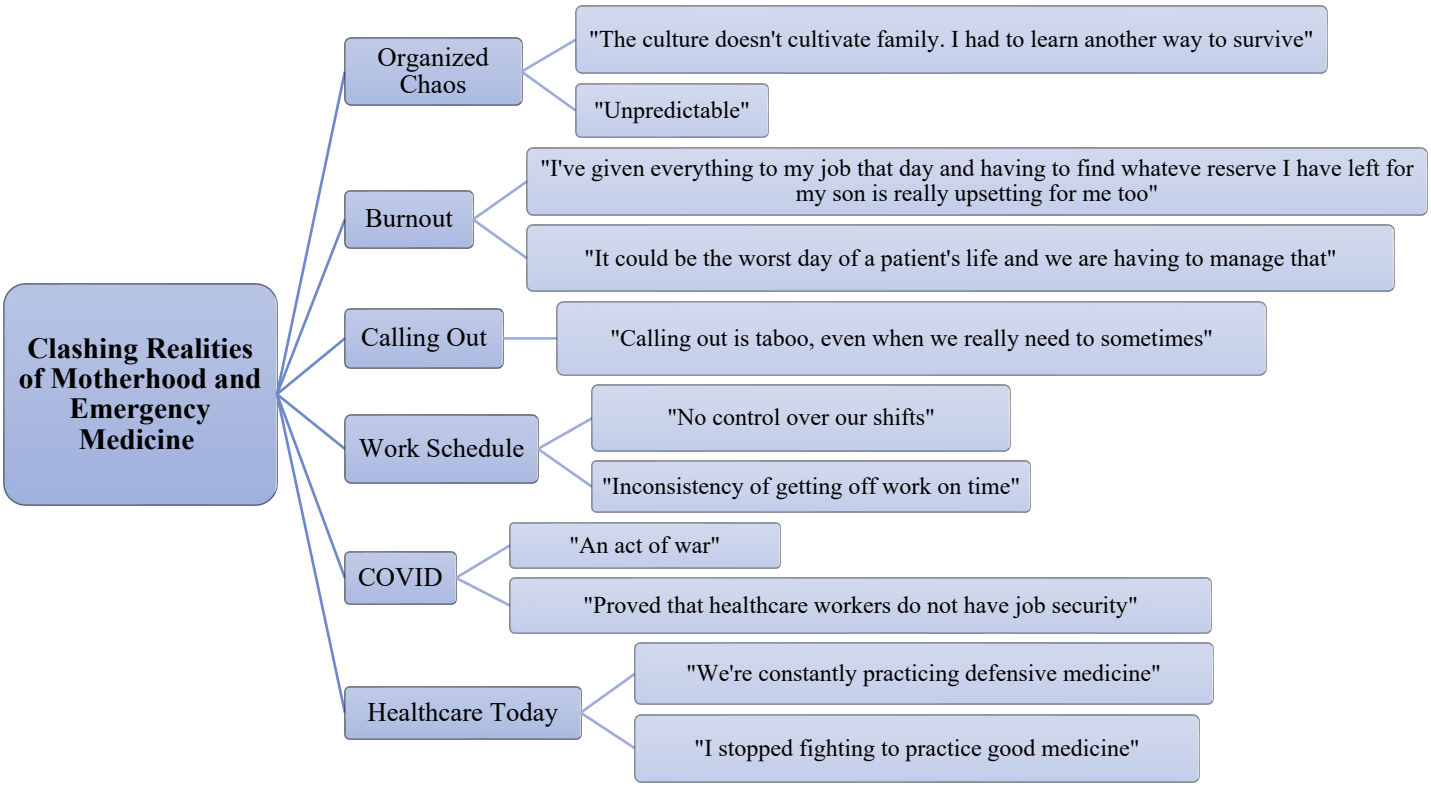
Theme 1: Clashing Realities of Motherhood and Emergency Medicine. The first theme identified was The Clashing Realities of Motherhood and Emergency Medicine, and it portrays the persistent challenges of merging early motherhood years with the unpredictable, destabilizing, and inconsistent culture of the ER. Participants shared that the specialty is plagued with high burnout rates, low retention rates, uncontrollable and even inconsiderate work schedules that are significantly disruptive to being a mother. All participants reported experiencing less than ideal resources and staff to work with, no breaks, and being most likely to stay hours past their shifts without getting paid. Many participants shared that transitioning their mindset from a provider role to "mom mode" is challenging because work almost always follows them home. Participant A0124 shared, "any day could be the worst day of a patient's life, and we have to manage it" and that "some cases are so heartbreaking" it "takes a mental toll on you which can take a while to process."

One interviewee, participant B0211, who made the decision to leave the specialty recalled being sat down by her medical director during the COVID-19 pandemic and warned that if leadership had to let staff go, she would be the first as she was the last one hired. At that time, she had a one-year-old son, was in the second year of her career with significant loans to repay and had just a few months at her new location. This individual openly shared, "The culture doesn't cultivate family. I had to learn ways to survive." Participant A0128 shared that "healthcare in America today" is the driving force behind many seeking exit strategies. One stated that airing healthcare executive expectations of patient satisfaction scores and meeting metrics while trying to "practice good medicine" on critically ill patients and the literal day-to-day facets of motherhood make it extremely challenging to remember why anyone chooses to

work in emergency medicine. Figure 3 illustrates this theme of clashing realities of motherhood and emergency medicine with six categories and supporting quotes for each.

Figure 3

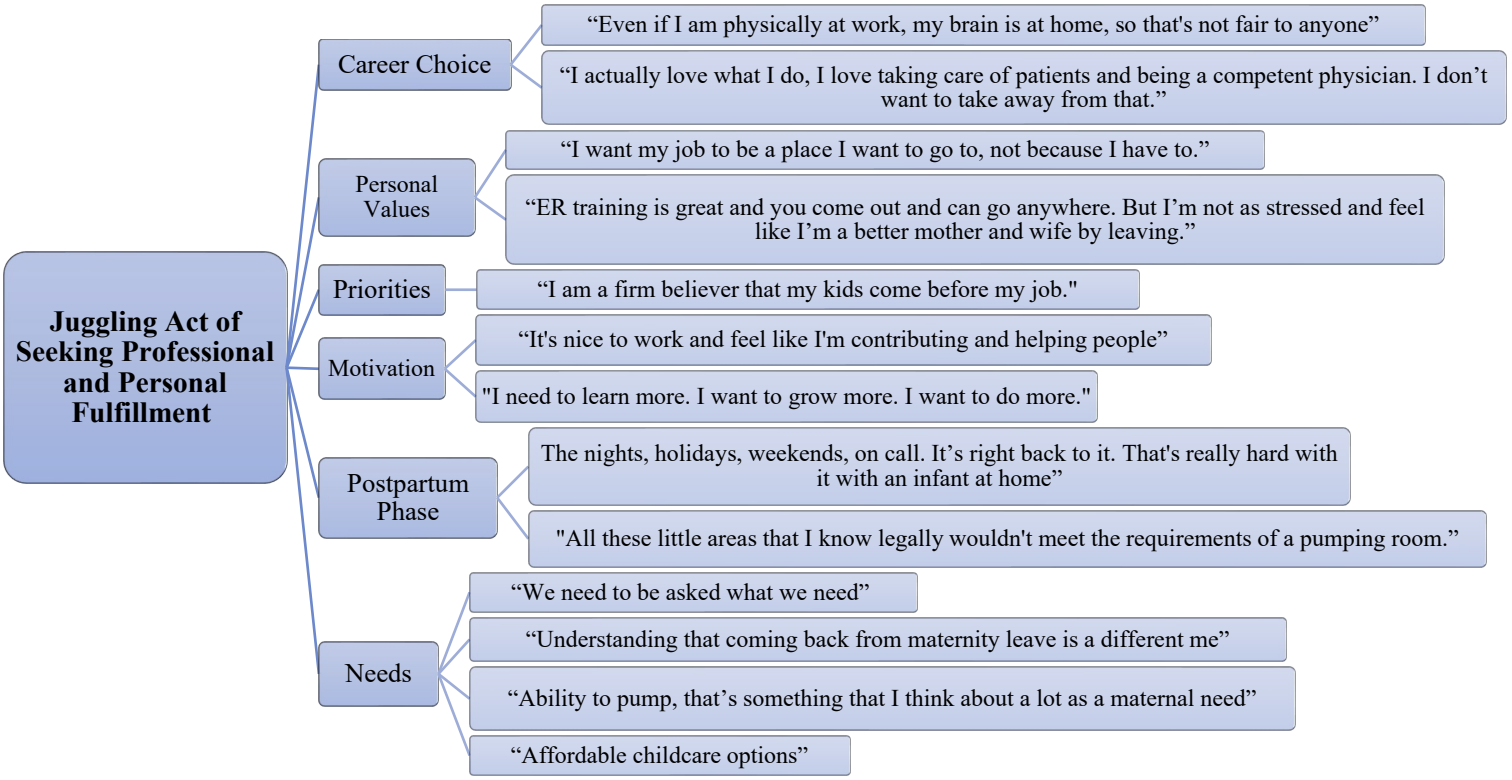
Coding Scheme for Clashing Realities of Motherhood and Emergency Medicine (Theme, Category, Quote)



Theme 2: The Juggling Act of Seeking Professional and Personal Fulfillment. The second theme, The Juggling Act of Seeking Professional and Personal Fulfillment, represents barriers identified by participants in their attempts at achieving work-life balance while feeling successful in both roles. Selected quotes and coding scheme for this theme are illustrated in Figure 4 to highlight some of the internal conflicts within core values to which participants tried their best to adhere to.

Figure 4

Coding Scheme for The Juggling Act of Seeking Professional and Personal Fulfillment (Theme, Category, Quote)



One recurring word in the interviews was "compartmentalize," as nearly all participants shared that they are the primary caretakers at home and are in charge of all meals, scheduling, and activities. To feel somewhat efficient as a mother and healthcare provider, they shared that they not only must compartmentalize roles and responsibilities at home and work but also be realistic about adjusting their personal expectations. Participant A0127.1 stated, "There is a rule that they [family] can text me, but do not call me at work. I can check texts at my leisure and respond at my leisure…The other thing is, when I'm home, I'm also home…I'm completely

mom mode." Furthermore, pre-motherhood workplace priorities and boundaries looked very different from those after motherhood, as many agreed that their careers had to be put on the back burner for some time as they navigated the early years of their children's lives. This came at a significant cost in terms of their professional aspirations. For example, participant B0218 shared that "I just feel like that energy for me is better utilized at home at this time."

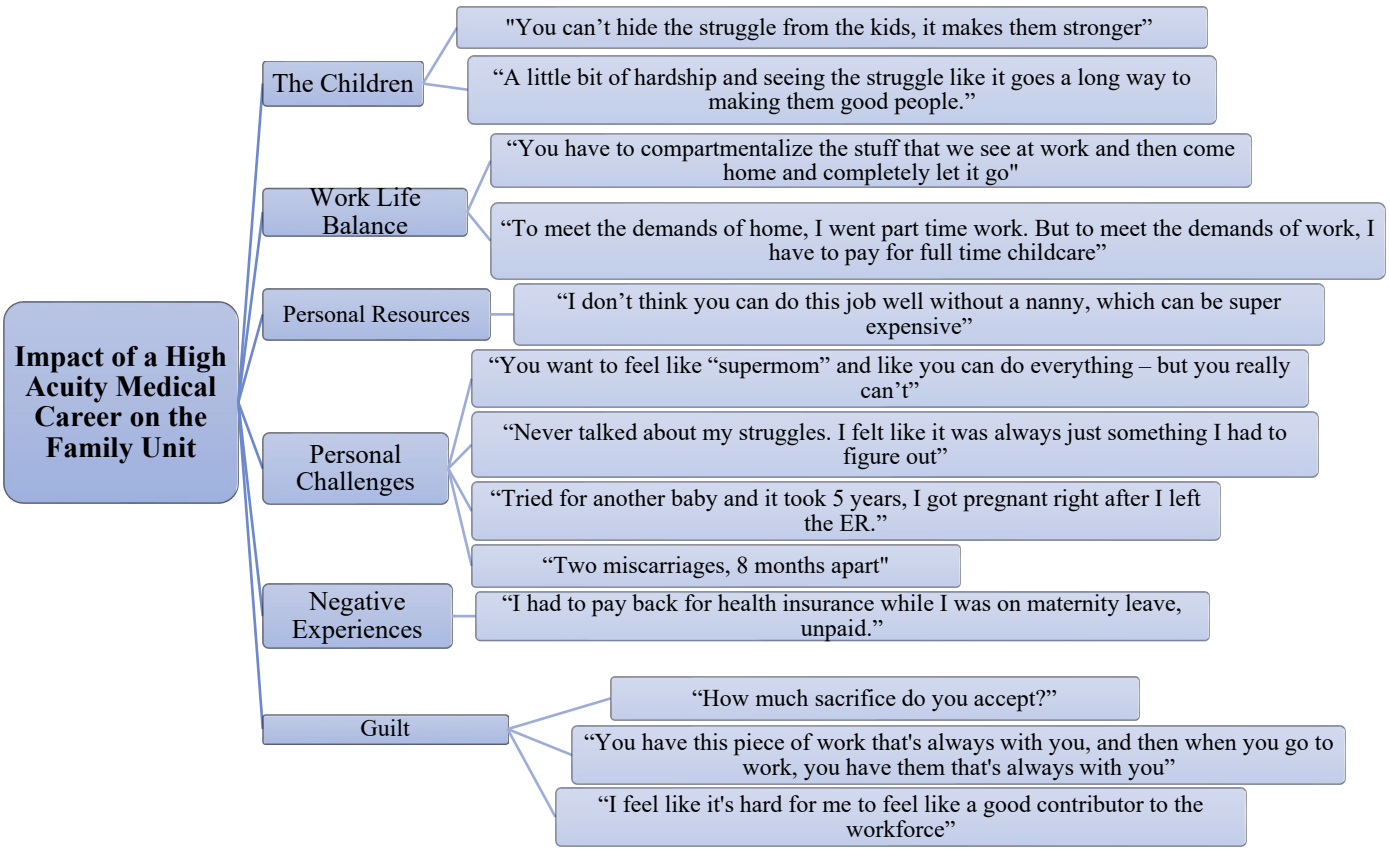
The impact of engagement at work was shared by all participants, and their responses varied from no change to without a doubt affected. More than half felt their "engagement in patient care" level did not change due to motherhood because they learned the value of compartmentalizing their roles. While the other half of the participants felt their professional engagement was "absolutely" impacted as they struggled with "mom guilt" anytime they were away from their families. A couple shared that their engagement was very much influenced by their perception of the extent of professional support they received, which will be further described in Theme Four.

Overall, several participants felt that being a medical provider enabled them to be better moms and even take care of their families better. Many also mentioned that being a mother made them feel like a better provider because they were, as stated by participant A0128, "more sympathetic to scared parents" and could "empathize with the parent who brings their sick child" at all times of the day. In terms of scheduling, many verbalized days were long and hours inconsistent but even working full-time meant being home more than the average nine-to-five position. Participant A0127.2 felt the time she had with her children, she tried to spend it with them "purposely" and "intentionally." As a result, many concluded that the grass is not always greener and that all pros and cons have to be considered when deciding on a specialty in medicine.

Theme 3: Impact of a High Acuity Medical Career on the Family Unit. The next theme, Impact of a High Acuity Medical Career on the Family Unit, represents the internal conflicts mothers experience leading to "mom guilt," the subdued role of their spouse, as well as the ways children understand their mother's career and integrate that meaning into their developing morals. Every single participant discussed the heaviness of the "mental load of motherhood" they carry each day, followed by the guilt of all the things they couldn't get to (illustrated in Figure 5).

Figure 5

Coding Scheme for Impact of a High Acuity Medical Career on the Family Unit (Theme, Category, Quote)



Self-perceptions led to self-doubt and contributed to "underlying anxiety" that gradually resulted in a different maternal identity many envisioned for themselves. Participant A0127.2 shared:

> I feel like I'm never filling the buckets all the way full because I'm not full time, and I'm not an admin in the hospital, and I'm not doing research, and I'm not a Partner in the group. I'm also not home and missing things.

Additionally, participant A0206 shared that related to the process of internalizing her challenges, "I never talked about my struggles. I felt like it was always just something I had to figure out," and that "truthfully, we almost always need a third person, but if someone else is doing my role at home then I'm not being mom" and accepts that this continues to fuel the "mom guilt." Therefore, mental health was heavily influenced by the never-ending to-do list and suppressed personal needs until a change had to be made to prioritize the family unit once again. This change is often presented in the form of decreasing work commitments, such as working part-time or per diem (as-needed) basis, or exiting the specialty completely. Greater work-life balance, career satisfaction, and positive self-image were expressed among the three participants who chose a different full-time specialty but continue to work in emergency medicine on an as-needed basis.

An APP with 10 years of ER experience, participant B0113, stated, "To meet the demands of home, I went part time work. But to meet the demands of work, I have to pay for full time childcare," and that "working less is the only way I can take care of my kids, be present for my family, have a moment to myself, and to still be considered valuable or respected at my job."

Although many decreased their contracted hours per month, they struggled with the reality of leaving medicine completely. Participant B0218, who made the drastic change to work

on an as-needed basis, sensitively stated, “It scares me to think about not being in medicine, because if I left medicine, I don’t think I’d ever go back.” The physician participants did not share this sentiment, as several shared that they were less likely to exit the specialty, despite how much they might desire to, due to their rigorous training. Participant B0127.1, who welcomed her third child one year ago, said her specialty is a “one way trip to retirement,” as is for most physicians, because they refuse to go back to residency training even if they think about leaving medicine “all the time.”

Additionally, several participants expressed concerns about missing family opportunities while working, such as “all the developmental milestones and birthdays, games, activities.” They feared being absent would negatively impact on their children, despite all their sacrifices to be home as often as possible. This concern was also verbalized by those who reduced their work hours to part-time and per diem. Participant B0201 said her mother advised her not to hide things as “they’ll see it [the struggle] and makes them stronger.” Another common thought was, according to participant B0127.2), “a little bit of struggle goes a long way to teaching good values.” Several participants felt that their daughters provided them with the “sense of purpose” to work and be more than a mom. Participant A0128 in particular stated, “I want her to be raised to know that you are responsible for your own financial independence.” These mothers felt that demonstrating the importance of maintaining a career, despite challenges faced during motherhood, will teach their children, especially their daughters, “tough life skills early.”

Theme 4: Significance of Perceived Support. The fourth theme emphasizes the importance of support, what that looks like, where it comes from, and its impact. Support was largely perceived as a resource that maintained the well-being of participants and their families. The spouse’s roles were appreciated for the extent of flexibility they brought into the home life

and were a major contributor of support in participants' personal lives at home. The organization's role is more complex as it was the major contributor to professional support with the extent provided being perceived in two different ways.

Spousal Support. The profound amount of support spouses bring to participants of this study can't be overstated. The statement, as stated by participant B0207 several times, "I don't know what I would do without my husband" was also made by several participants, as they acknowledged that their husbands "pick up a lot of slack" when they are working on shift. Every single woman said that their husband's jobs were "more flexible," with nearly half having the option to "work from home." And when individual families face their own personal emergencies, the spouse is always expected to be "the one to stop what they're doing" and manage the crisis.

Organizational Support. There was a mixture of responses when participants were asked about the extent of their organizational support, or their utilization of helpful resources provided. Answers ranged from "I don't know of any resources" (participant A0217), "the organization is massive so I don't think I can necessarily expect anything" (participant B0219) to "fairly supportive, they allow schedule requests and honor most of them" (participant A0124), "we all cover each other's back" (participant A0128), and surprisingly by participant A0127.2 "I don't think I could ever find a place that is quite so accommodating. The director called me [to say] want to make sure you're happy and you found that balance." Several participants made it a point to separate organizational support and colleague/peer support, stating "my organization is very helpful and understanding since I am mostly surrounded by working mothers" (participant A0114) and "hard to delineate between the actual company I work for versus my colleagues, my colleagues are great because there are a few moms and dads" (participant A0127.1).

A subtheme of employer benefits emerged when participants shared their general understanding and perception of support. Several participants shared that they received basic healthcare when employed but were required "to pay it back while on unpaid maternity leave." Other benefits included receiving "PTO [paid time off] and 401k", "part-time with full time benefits," paternity leave, and better than average maternity leave with "6 weeks full pay by the organization, then 6 weeks from short-term disability" (participant B0217). One organization offered the option for "a flexible return to work with reduced work hours for first three months back after leave." Unfortunately, these benefits were lost if any contractual changes were made by the employee. Participant B0218 shared, "I lost all my benefits for cutting back hours to prioritize my family", which included the "bonus and incentives." On the other hand, participant B0113 mentioned she works part-time with full-time benefits but shared that she has to pay a fee for signing up for a family health insurance plan as a part-time employee.

Among postpartum mothers, a greater understanding of breastfeeding was a common concern upon returning to work. An exclusively breastfeeding mother clearly stated, "everything kind of revolves around your pumping schedule" in that first year after giving birth. Participant B0217, who returned to work within two weeks of her interview, quickly realized that pumping at work had many challenges, "legally our time is protected, but you just get that guilt to see patients and meet metrics," so she stated she "holds off until uncomfortable." Participant B0127.1 shared, "they should be providing us room and time, but that's absolutely not even a topic of conversation in the emergency department, where you are required to see patients constantly." Several shared that they got mastitis, breast inflammation from infection, or blocked ducts with each pregnancy upon returning to work. Most participants shared that their space was often shared for multiple purposes, and one participant shared that she would pump in a hidden

bathroom while standing up. Nearly all participants made the ultimate decision to resort to formulas for their infants, as they were not given opportunities to pump often enough for breastmilk storage.

Outside of postpartum, excerpts with participants sharing their needs included "affordable childcare options," "support that we need more control of our schedules," "incentives to stay," "time, and even permission to pump," "understanding that coming back from maternity leave is a different me," and "not losing my benefits for cutting hours back." Participant B0227 proudly stated she felt a stronger allegiance with the organization she is with than the previous "because I felt they were helping me more." However, participant B0201 does not share the same sentiment as she works for a different organization noted that "asking for change and not getting it makes you bitter." This results in a "revolving door of doctors" overtime due to the lack of support they felt. Figure 6 illustrates the categories and quotes of participants' perceived support, and insight into their varying significance.

Figure 6

Coding Scheme for Significance of Perceived Support (Theme, Category, Quote)

A Magic Wand

Responses to the question, "If you had a magic wand, what would the ideal scenario look like to be successful at home and at work? What would you need?" added additional context around participant experiences and how their ideal scenario would be. Excerpts included "work full time while not missing my kids activities or routines," "childcare in hospitals," "a year paid family leave," "childcare subsidies and free preschool, all those things that would help take stress

off women in the workforce to allow them to do both," and "all around more support." One physician spoke to the importance of current students considering their family goals early when deciding on a medical specialty because although the training and knowledge with high acuity settings can feel rewarding, such as emergency medicine, they are realistically not going to be family-friendly.

Despite the tremendous challenges faced by this specific population, most felt proud of their professional accomplishments and how hard they worked. Participant B0218 mentioned "I think there's a strong core group of moms in medicine that really ignite together" and although "it takes a lot of effort and energy" it is okay "to want to be a working professional that contributes to society," but significant changes are needed to prevent a mass change in staff or even exits from hospitals.

Application of the JD-R Model

Participant interview responses demonstrated that the higher demands on healthcare providers in this post-pandemic era are fueling significant burnout rates and prompting thoughts of exit strategies from the specialty for many, in the interest of their health and their family's well-being.

A career in emergency medicine was shown to impact emergency medicine physicians and physician assistants personally and at home with their families. The first JD-R Model construct of demands portrayed in the interviews were primarily of the specialty alone due to the acuity of illnesses, the large number of patients daily, the healthcare system's expectations with metrics, unpredictable and destabilizing schedules with no control, inability to pump due to workflow expectations, meeting patient satisfaction requirements, and even enforcing abrupt relocations upon returning from maternity leave. Many reflected that they knew this career

choice had an overall arduous culture, which meant they were away from home for long days, sometimes for stretches of days, and missed out on many family moments.

The JD-R construct of resources was identified as organizational support in two different ways, employee benefits and practical support from leadership. The first was organizational support in the form of employee benefits, which included employer benefits (PTO, sick days, 401k, maternity leave) and even the option to work part-time with full-time benefits. Although these are essential household needs, all participants contended that they need more. Several expressed a need for genuine understanding and support from their leadership; as one physician stated, being a leader is more than "a robot constantly seeing patients."

Negative outcomes, the third JD-R construct, was portrayed as high burnout, feelings of inefficiency as a mother and provider, ending their breastfeeding journey prematurely, and constantly suffering from mom guilt/anxiety/worst case scenario possibilities. Varying demands influenced the emergency department providers' health, contributed to fertility challenges for two participants, and embedded a constant mental state of "mom guilt" for all. Over half made the decision to work less or completely leave the specialty; and many had considered alternate non-clinical roles for additional income, so they have the freedom to work less in the ER. There were a few participants who felt leaving emergency medicine was the only way they could improve their personal well-being and the health of their family unit.

The last JD-R construct of positive outcomes included a sense of gaining greater sympathy for parents with sick children, gaining clarity on their needs and priorities, improved well-being through working less and making necessary changes, and some with greater career motivation and commitment directly because of organization support/flexibility to their needs. Several shared that a career in medicine is not the question, as the majority of participants felt

proud of their accomplishments, of their contribution to society in their professional roles, and that they could take better care of their families being healthcare providers themselves. Furthermore, several mentioned that they felt the importance of their continued work so that they can inspire their children (especially their daughters) to be independent and essential to the future workforce.

Key Considerations

Several important considerations must be taken into account during this research study. During data collection, the CDC (2025) declared the current Influenza season to be the worst in over a decade. Emergency departments were overwhelmed, struggling to handle the influx of patients, which resulted in even longer shifts, fewer resources, and accelerated burnout among all staff. Every participant in both counties reported working longer hours, staying later, and managing critically ill adults and children. Most also reported multiple illnesses, rotating through their immediate families for several weeks; many went to work even when sick themselves. Therefore, the perspectives shared may portray increased exhaustion, burnout, and internal conflicts with their professional choices.

All 17 participants were at different points in their lives and careers. The most satisfied participant has all children over the age of 5 and enrolled in school, works part-time, and has a spouse who is retired. She now has an abundance of resources, which she admits she did not have when she first started her career and became a mother. The next most satisfied participant mentioned that her organization had changed its policies to make all physicians independent contractors. With this change came the ultimate freedom for her to control how much maternity leave she took, encouraging her to request and receive the desired set schedule she wanted while maximizing her time at home. Two participants were pregnant during the data collection process,

so they expressed their limitations with work and managing their children while feeling ill daily. Unfortunately, one miscarried in the process, which impacted her greatly. Two participants had just given birth and were on maternity leave, sharing some of their anticipated fears upon returning to work during this season. One had returned to work two weeks before the interview and was initially allowed to return to a modified schedule, but instead, they were scheduled full-time and relocated to a new emergency department. She was also just one year out of graduation and felt she was still growing in her role, so the challenges felt more impossible to manage. A listing of participants' overall satisfaction (most to least) is shared in Appendix G.

Finally, it is noteworthy to mention that the primary researcher of this study is an emergency medicine physician assistant and a mother to two small children. Therefore, she is also a part of the study population that has experienced most of the same challenges shared. It is essential to note that the researcher was not a participant in this study but can relate to the participants' experiences and provide a unique interpretation of results that will be discussed in the following chapter. In Chapter 5, an interpretive analysis of the four themes will be discussed as it relates to the evidence in current literature shared in Chapter 2. Suggestions for future research and clinical practice implications will also be shared in the next chapter.

Chapter 5

Discussion

Women are the predominant caregivers of the U.S. population, providing nearly 78% of all care amongst hospitals, health services, and social care services since 2021 in various roles (Day & Christnacht, 2019; U.S. Bureau of Labor Statistics, 2022). Therefore, women with careers as healthcare providers are rapidly becoming an essential part of the workforce due to the potential of nearly 90,000 US physicians that will exit the field by 2036 (Dudley et al., 2022; Spoehr, 2024; Yeluru et al., 2022). This exit will further contribute to the shortages that already plague the country, making women providers the powerhouses of the U.S. healthcare system. However, literature continues to show that this population is consistently challenged with the motherhood penalty and forced to prioritize career over family life for the sake of reaching professional fulfillment, all while jeopardizing essential relationships with their support systems at home (Brown, 2010; Edú-Valsania et al., 2022; Hoffman et al., 2020; Kricheli-Katz, 2012; Petrino et al., 2022). Research shows this sentiment is appreciated internationally across the field of medicine, but there is limited research on the challenges faced by the "non-traditional women" of emergency medicine; a field that is, and will continue to, face the brunt of the shortages in primary care physicians (Spitzmueller et al., 2016; Wear & Castellani, 2002). To date, there is no literature concerning women emergency medicine healthcare providers in Northern Virginia, a region facing some of the most significant shortages in primary care physicians in its history (Cicero Institute, 2024; Virginia Task Force, 2023).

The purpose of this qualitative study was to explore the impact of a career as an emergency medicine healthcare provider in Northern Virginia on the well-being of mothers and their families at home, as well as identify the influence organizational support has on career

burnout, commitment, and motivation. This was assessed via two research questions: “In what ways does working in emergency medicine impact the overall health and well-being of mothers and their families?” and “What organizational factors positively or negatively influence career commitment and motivation for mothers working in emergency medicine?” This chapter will discuss the four overall themes identified, providing insight into the challenges of merging motherhood with the realities of a career in emergency medicine and the sacrifice it takes to meet professional and personal goals. Findings also shed light on some of the advice participants had for current students seeking a high acuity medical career, as well as healthcare administrators for future generations of healthcare providers in their emergency departments.

In answering the first research question, results demonstrated the negative implications of a career in emergency medicine on the well-being of mothers and their families, especially as they expand their families. Therefore, hypothesis 1 and hypothesis 4 that working in emergency medicine negatively impacts the health and well-being of mothers and families, respectively, are accepted. Alternate hypothesis 2 and 3 are rejected because they state the opposite of the findings, and hypothesis 5 and 6 are rejected because they state a career in emergency medicine has no impact on mothers and their families. In answering the second research question, results demonstrate the comforting influence that the presence of organizational resources and leadership/colleague support has on career commitment and motivation, but does not always impact their level of engagement at work. Therefore, hypothesis 1 and 2 that organizational factors positively influence career commitment and motivation, respectively, for working mothers in emergency medicine are accepted. Furthermore, hypothesis 3 and 4 suggest that the lack of supervisory/peer support, family-friendly policies/resources, breastfeeding/pumping support, rigid scheduling, and on-call shifts negatively influence career commitment and

motivation for working mothers in emergency medicine are also accepted. Alternate hypothesis 5 and 6 are rejected as they falsely imply that neither the presence or lack of organizational resources, supervisory/peer support, family-friendly policies, breastfeeding/pumping support, rigid scheduling, and on call shifts have no influence on career commitment and motivation.

Summary of Findings

There were four themes identified in this study, with direct connections between the first and third as well as the second and fourth. The themes were: (1) the clashing realities of motherhood and emergency medicine, (2) the juggling act of seeking professional and personal fulfillment, (3) the impact of a high acuity medical career on the family unit, and (4) the significance of perceived support.

The first theme (clashing realities of motherhood and emergency medicine) identified that the responsibilities and mental effects of a career in emergency medicine are without a doubt brought home and cause a ripple effect on family life. Reciprocally, the guilt of putting patient needs before personal and family needs over time challenges the mothers' motivation at work, especially when the support she needs is absent. Research has shown that female providers spend more time with their patients providing higher quality care, even with all the challenges and complexities of emergency medicine, at the cost of higher burnout rates, greater dissatisfaction within their marriages, and negative self-parenting perceptions (Cujec et al., 2000; Lyubarova et al., 2023; McMurray et al., 2000). A physician assistant, participant B0218, who would often work well over contracted hours and is now only working on an as-needed basis, shared her changed realizations after becoming a mother despite truly loving the specialty:

> I don't feel every person that I see deserves the full amount of empathy and heart that I try to give to my job. And so it's really upsetting when I come home and I've given that to somebody else instead of my kids and my family.

Leaving work overstimulated by the day, to come home to a family with their own needs, leaves the working mother at full capacity far too often. Negativity from the specialty can spill into home life with the mother feeling guilty, anxious, incapable of succeeding in both roles, and constantly trying to catch up.

The second theme (juggling act of seeking professional and personal fulfillment) shared participant attempts at achieving contentment while in the chaos of it all, and the changes explored when it is not achieved. One important way for this population to achieve professional fulfillment is by providing them with useful resources they actually need such as emergency childcare that isn't costly, increased schedule flexibility or some level of control in shifts, the ability to cut back working hours without being penalized by withdrawing benefits or having to pay more to get them, and allowing mothers to exercise their reproductive right to pump at work without judgement. An ideal scenario for the working mother would be to advance professionally while maintaining financial security with affordable childcare but working in emergency medicine can be a barrier to each point (Gitis, 2022). A survey of over 2000 women in healthcare conducted by Bipartisan Policy Center (2022) found that making any career advancements, even if it is a professional aspiration, that requires less pay, an unpredictable schedule, less flexibility, less security, or fewer benefits is significantly less likely amongst working mothers. Overall, participants felt their needs were hardly identified or acknowledged, as they were never asked. This included a first-time mother newly returning to work, as well as multiple other APPs and

physicians with infants and toddlers at home, a PA currently pregnant with her second child that became strictly per diem, and two PAs who completely left emergency medicine in this study.

Over time, unpredictable and inflexible scheduling, rising costs of childcare, and a lack of organizational understanding or empathy for mothers become harder to navigate when paired with worsening burnout or upon expanding the family with more children. Women who find workplace challenges harming their physical and mental state of health may feel forced to change their employment contracts or leave their organizations for a better work-life balance. Notably, the organizations in this study where women were allowed part-time employment with full-time benefits were more satisfied. These women felt the time they spent at work was adequate enough to financially support their families, feel valued at work, and have a sense of professional fulfillment internally, while also managing their household. Participant A0128 said that all physicians in her group were changed to independent contractors a couple of years ago, and with this came great ease because she was “not limited by the rules of a W2” by her group. She mentioned that being an independent contractor gave her control over when and how long she worked. She said she was able to create a permanent schedule for herself so she could maximize her time at home with her children. Working as an independent contractor status allows for greater autonomy for the providers when it comes to scheduling and time off, however it comes with individual responsibility of taxes, malpractice insurance, and healthcare plans (Livingstone, 2024; Palikuca, 2019). If converting to an independent contractor group could result in higher retention of this population, then it is worth considering for healthcare organizations.

The third theme (impact of a high acuity medical career on the family unit) demonstrates how unsettling this chosen profession can be on family life. Achieving work-life balance was felt

as more of an illusion due to the mother's exhausted time and energy, highlighting spouses' significant role. All participants shared that they would not be able to hold their careers without their husbands' flexibility and ability to step in and take over, because leaving work is rarely an option for this population. They felt essentially inaccessible anytime they were at work. It is essential to understand that women are the predominant gender in the current healthcare system, especially in the provider role, and most either have families or aspire to someday (Collie et al., 2022; Day & Christnacht, 2019; Hoffman et al., 2020; U.S. Bureau of Labor Statistics, 2022). Therefore, family-friendly policies can no longer be a luxury in healthcare; it must become a requirement to limit burden on families.

Aside from the mental impacts of their career choice, some participants shared personal health challenges surrounding expanding their families. Pregnancy and postpartum holds their own set of challenges that can be exacerbated when paired with a medical career. Participant B0211 who worked in emergency medicine for six years after graduating and suffered two miscarriages during that time, shared that it wasn't until after she chose to change specialties that she was able to conceive her second child: "it took 5 years, I got pregnant right after I left the ER." This aligns with previous literature findings that work-related stressors from such high acuity specialties result in many women delaying parenthood and commonly experiencing perinatal complications, infertility, and loss (Collie et al., 2022). Unfortunately, one participant who was pregnant during the time of her interview recently miscarried at the start of the data analysis phase of this study, an experience also encountered and shared by several other participants. Time and time again, pregnancy and postpartum phases prove to be some of the most vulnerable and emotionally charged times in a woman's life.

The fourth theme (significance of perceived support) illustrate the increased need for support on multiple levels, personally and professionally, and that the extent of support received can highly influence engagement at work. One key measure of support was the presence of colleague/peer support and supervisory/organizational support, as they were directly linked to career commitment. Those participants who felt they were supported and understood by the immediate people around them at work shared being more committed to their organization. This was especially true for participants who felt their teams granted the flexibility they needed in the early years of motherhood, which was also seen in the literature depicting supportive and family-friendly work cultures, with accommodating schedules or giving providers with some control of their work days, making managing this career easier for mothers to stay employed (Hwang, 2019). Similar statements were made by several participants who felt their organization tried their best to improve the well-being of their team by honoring their requests, for example participant B0227 shared, “I don’t think I could ever find a place that was quite so accommodating. Whatever I need to do flexibility-wise, they do to support my family. I don’t think that’s the case in most healthcare settings.”

Even if the final schedules don’t completely meet the flexibility that was requested, participants appreciated the effort. The mothers who felt supported understood that the organizations they worked for provided an extra layer of support not often found in emergency medicine, furthering their commitment to their company and their appreciation towards their administration.

Another major maternal need identified for participants was their ability to pump at work so their infants could remain breastfed in their early postpartum phases, as participant A0127.1 shared:

> Unfortunately, we're not given dedicated time to do this during work time. Even though it's a federal mandate, they should be providing us room and time. But that's absolutely not even like a topic of conversation in the emergency department, where you are required to see patients constantly.

Several studies have demonstrated that physician mothers have the desire and initiate breastfeeding after childbirth, but low success rates in maintaining it for a multitude of reasons including, not receiving the protected time, the space, or even the consideration to meet this need (Ortiz Worthington et al., 2023). Studies have highlighted the importance of breastfeeding for women, and found most could only pump for a few months due to the inability, "inconvenience," and insufficient support of pumping at work (Collie et al., 2022; Juengst et al., 2019; McDonald et al., 2017; Ortiz Worthington et al., 2023;). One of the complications of not pumping routinely for the breastfeeding mother is mastitis, inflammation or infection of the breast tissue from a blocked duct (Blackmon et al., 2023). Several participants of this study, unfortunately, reported getting mastitis repeatedly. Organizations must inherit a greater understanding of this need, and its inherent value cannot be overemphasized in the first year of an infant's life, as the benefits of breastfeeding include reduced rates of infectious diseases, metabolic diseases, and even sudden infant death syndrome (Ortiz Worthington et al., 2023).

Overall, research findings demonstrated that a career as a physician or APP providing emergency services can be very challenging on a personal and professional level. And it can impact on every facet of life. Several mothers shared that they are proud of their professional accomplishments, as it took years of training to obtain their license to practice medicine and then years of clinical experience to feel confident with their acquired skills in the specialty. They feel proud to serve their communities and proud to help people at a critical time; it's why they made

the career choice to begin with. Although they expressed fear that missing out on things will negatively impact their children, most mothers admitted that they want their children to understand that their mom has an important role, and that's to save lives. One repeating phrase by interviewees was "I want my daughter to…," be independent, understand the value of hard work, and what that looks like. Mothers never wanted their daughters to feel like they had to choose; their message was clear: You can have both, and even if it's hard, it's possible. Nevertheless, it's the systematic barriers they face daily that can force them to choose between paying substantially more for childcare to work or working less so that their families are not too affected by their career choice. Providing onsite or emergency childcare for physicians has been a topic of interest for decades, especially amongst residency programs across the country (Snyder et al., 2013). Literature continues to show that between 70% and 87% of women physicians report having to re-arrange their work schedules to meet their childcare needs, with the majority who work in hospitals or with irregular hours recommending that their employers offer childcare facilities (Balch, 2024; Snyder et al., 2013). Childcare barriers must be better understood, accepted as challenges, and appropriately addressed by administrators so this valuable population can continue to do what they love.

Theory Integration

Utilizing the JD-R theory in this study was useful in answering the research questions, as its constructs connected demands (as challenges and/or barriers) and resource availability connected to the overall well-being of the mother, her life at home, and experiences at work in early motherhood. Some of the challenges encountered included a lack of work-life balance due to high demands at work, such as unpredictable shift work with irregular hours, high burnout, lack of any control paired with the general culture of emergency medicine that is tainted with

multitasking in a high-pressure environment, with high patient volumes and critical cases. More often than not, as nearly all the participants shared, emergency medicine physicians and APPs stay much later than they are scheduled to finish their work, unpaid. This resulted in missed opportunities with family, difficulty with routine childcare given the unpredictable provider schedules, the lack of available resources when personal emergencies came up, and inconsistent benefits. For the postpartum mother returning to work, adequate maternity leave, protected time and space for pumping, as well as a lack of understanding in scheduling with an infant at home were the biggest challenges encountered. These challenges align with previous research conducted by Cardenas and Major (2005), Collie et al., (2022), Juengst et al. (2019), and Lyubarova et al. (2023). Organizational strategies for this vulnerable time of motherhood include providing greater control over work schedule, affordable childcare options, advocating for maternal mental health, removing the motherhood penalty, improved benefits with PTO/sick leave/maternity leave, and gradual return to work options (Sachs et al., 2021).

Utilizing the JD-R theoretical model in qualitative research provides a theoretical framework and insights administrators need to set the groundwork for more positive outcomes in the professional experiences of working mothers in emergency medicine, their needs, and strategies for improving their commitment, retention, health, and well-being. As previously applied to healthcare professions, findings of this study also aligned with the JD-R model with the premise that adequate resources can serve as buffers in high-demanding careers and promote employee engagement and motivation (Kaiser et al., 2020; Tummers & Bakker, 2021). Table 4 summarizes the application of the JD-R constructs with the study's categorical findings and provides recommendations for healthcare organizations in the applicable constructs, which will be discussed in the next section.

Table 4

JD-R Constructs Applied to Research Findings With Recommendations for Healthcare Organizations

Constructs	Definition	Research Application	Recommendations
Demands	Work load and responsibility (deadlines, notes, training, patient care, shift work, on call, call out culture)	Unpredictable, destabilizing schedules Taboo call-out culture Location change upon return No work, no pay, no benefits Metrics No breaks (even for pumping)	Schedule flexibility Suggestion box Anonymous surveys assessing health and well-being amongst providers
	Psychological or emotional load (abuse, discrimination, biases, pay differences)	Comments from leadership about having kids while in ER Women in medicine Motherhood penalty Mental load of motherhood	Annual in-person meetings scheduled with the director just to check-in Bi-annual department get togethers Monthly wellness meetings
	Family demands (child rearing years)	Breastfeeding challenges Missing milestones sick days, emergencies, etc. at home Spouse's role	Improving workplace culture and attitudes to family needs through open conversations Allowing the time, space, and resources to adequately pump on shift
Resources	Organizational support (family friendly policies, flexible scheduling)	One group has part time with benefits Employer benefits (PTO, 401k, sick days, leave)	FT with adequate benefits, and not revoking them or charging more if work hours are decreased PT with FT benefits Annual bonus
	Family support (extended family for childcare)	Spouse Au pairs, nannies, extended family	On-site childcare services

	Personal sources (gym, therapist)	Personal resources were not discussed other than maintaining or increasing finances to keep their roles	
Negative Outcomes	Declining personal physical and mental health	Rising burnout Thinking of worse case scenarios, raising kids in a bubble, high strung/anxiety Can't breastfeed anymore High burnout, lowered empathy, resentment Feelings of not being successful or not contributing to work force	Wellness programs targeting burnout Encouraging breastfeeding by allowing time and providing space/resources needed (private clean room, table/chairs, pump, clinical coverage, refrigerator to store milk)
	Career dissatisfaction & attrition rates	Leaving the ER, finding exit strategies, contract changes Losing benefits/incentives/bonus Leaving medicine, negative outlook on medicine in USA	Addressing them as they come up appropriately, and making the necessary changes to recruit and retain talent
	Poor patient experiences and bad patient outcomes	Lawsuits Decreased satisfaction scores Returning patients	
Positive Outcomes	Improved well-being	Improved well-being by leaving the ER More sympathy towards parents Clarity on personal needs, priorities, boundaries	
	Career motivation/ Career commitment	Don't anticipate leaving due to flexibility & support received Meeting metrics	Continuously re-assessing the personal and professional impact current institutional practices & policies have amongst staff, and addressing them appropriately Asking what is needed and honoring requests when a change is requested

Recommendations

Several areas for future recommendations were identified for healthcare administrators, clinical practice, and future research. These recommendations would benefit the healthcare providers and organizations within Loudon and Prince William Counties. Hospital leadership administrators who are seeking policy changes for the betterment of their emergency department staff could consider the results and recommendations to foster an institutional culture change welcoming family-friendly etiquette amongst the team. Even the smallest efforts could improve engagement and commitment amongst physicians and APPs who are mothers within these counties. Although the recommendations provided are for the institutions, participants of this study work for them, so there is potential for broader dissemination of the practices to create a healthier work environment for current and future generations of emergency medicine healthcare providers.

Future Clinical Practice

Healthcare administrators should identify practices that target work-life balance, which will be essential as this proved to be a challenge for every participant of this study. The child-rearing years of a woman's life coincide with the most significant years of career advancements (Collie et al., 2022). Citing one of the largest studies in the country examining the experiences amongst physicians in the first decade of their career, "having children is central to the health, well-being, and work-life balance for a large number of women in medicine," and that adequate policies to support these women are imperative to maintain quality patient care (Juengst et al., 2019). Given the early motherhood years are some of the most challenging personal and professional phases, the extent of organizational support and understanding received is highly impactful to the woman's well-being (Chesak et al., 2021; Collie et al., 2022; Pace & Sciotto,

2021). Of all the organizations participants of this study worked for, there was one group in Loudon County that offered the option for part-time employment with full-time benefits, which allowed mothers the opportunity to work less but still obtain benefits essential to the family, which resulted in greater commitment amongst this population compared to the other organizations. Additional practices to mitigate the demanding experiences lived by participants of this study include institutional support with paid leave, adequate benefits, on-site childcare, and schedule flexibility.

The most impressionable subpopulation within this group was the newly postpartum mothers. Therefore, exploring practices that make their transition to work easier is monumental in their engagement and future commitment as they grow their families. Administrators should consider incorporating a gradual re-entry in the first three months upon returning to work, reducing overnight/on-call shifts, and allocating time and space for pumping to encourage longer breastfeeding as ideal starting points for the postpartum mother (Calder & Cwinn, 2014; Collie et al., 2022; McDonald et al., 2021). In fact, having adequate time to pump on shift is perhaps one of the most essential maternal needs upon returning to work (Ortiz Worthington et al., 2023). At the bare minimum, policies can be implemented allowing clinical work coverage for healthcare providers on shift, along with a guaranteed private and clean lactation space that is close to the department and easily accessible. Additional appreciable resources would include a sink for cleaning purposes, a refrigerator to store expressed milk, hospital-grade pumps available for use, and a table with chairs.

The final recommendation for leadership members should be to really get to know the providers that make up the emergency team and their families, and the numerous silent battles they face daily with shift work scheduling, feasibility of on-call or overnights responsibilities,

how they are managing burnout, and what supportive measures leadership could take to help. Supervisory support is another strategy that could reduce maternal exits from the workforce, as a pertinent link exists between supervisory support and maternal career motivation and commitment (ALobaid et al., 2020; Altaş et al., 2024; Halliday et al., 2022; Sahni, 2020). The only way to improve the work culture and efficiency of patient care in the department is to have happier and healthier workers. By adopting a value-on-investment approach to providers' well-being, healthcare organizations could nurture a higher quality of life with more work-life balance, yield greater career satisfaction and retention amongst staff, increase productivity, and more efficient workflow in the department (Ozminkowski et al., 2016). Distributing anonymous surveys that assess the health and well-being amongst providers, a suggestion box, annual in-person meetings scheduled with the director just to check-in, annual bonus, bi-annual department get togethers, monthly wellness meetings at local coffee shops are simple practices that can be considered to foster personal connections between leadership and providers, and can change healthcare providers' entire perception of support and their personal of value to their organizations.

Future Research

This study should be repeated with more participants and expanded to include all five counties in Northern Virginia, and for longer than 6 weeks. Another recommendation is to include participants with children up to 18 years old. Maternal needs with younger children could differ from those with older, more independent children, and their retention in the workforce is just as essential, which makes their needs just as important to identify and understand. A third research recommendation is to explore the benefits offered, which are significant enough to make a difference in retention, and what else could improve commitment.

Stemming from the benefits, more research could be performed among other organizations in which physicians and APPs are independent contractors to observe if this employment contract is the superior one for working mothers in emergency medicine. It would be interesting to learn, on the broader spectrum, if being an independent contractor allows for greater work-life balance with increased individual schedule control/flexibility, improved engagement, improved retention rates, and an overall healthier lifestyle with improved well-being amongst this population.

Strengths

The greatest strength of this study is that its findings on challenges, barriers, and even the needs of mothers working in emergency medicine came directly from this specific population within this specific specialty of medicine. Despite how challenging it can be to raise a family and maintain a career in medicine, experiences will differ across the various specialties and positions. This study provides supporting evidence for emergency medicine administrators considering cultural practice changes or implementing new group policies. Another strength of this study is that it was implemented in a very resourceful region where there was limited literature available on this population's needs. Therefore, findings of this study add to the current literature of working mothers in emergency medicine in Northern Virginia.

Limitations

Convenience sampling and researcher bias were two limitations of this study. The researcher is employed by the same healthcare systems as the participants, which were selected to allow for easier access to the population group in the recruitment phase at the five departments. By being part of the same healthcare system, the participants seemed more comfortable in being a part of a study and delving into their personal lives. Northern Virginia has several healthcare organizations that provide emergency care services to the region, but this

study was conducted only in two counties. Therefore, some of the research findings could be specific to the areas studied, as details of the extent of organizational support/resources and their impact on the same population groups are unknown. However, the two systems selected are the largest in the region, and the acuity of medical care, general culture of emergency medicine, and inconsistent scheduling are basic foundations of emergency medicine. Therefore, results from this study may apply to other groups of healthcare providers who are mothers to small children and provide insights to organizational change strategies for similar healthcare systems. A study broadening the sample size and geographical location could strengthen these results and shed light on other challenges faced by this group on a larger scale.

Another limitation of this study is that all participants were married and heavily dependent on spousal support. This study does not explore the unique and potentially more challenging experiences of single mothers with young children. Therefore, a study that includes single mothers within its participant sample could identify even more challenges with pressing needs and provide additional recommendations for organizations.

Delimitations

One delimitation is that there was only one coder in this project, so categories and themes were based on the interpretive process of the researcher. However, the coding process and thematic analysis were shared with the committee chair, and quotes were transparently allocated to codes, categories, and themes using Dedoose. Another delimitation is that data collection took place over a short six-week window, which coincided with one of the worst influenza seasons in the country. As a result, healthcare staff were at higher stress levels and even more tense environments within hospitals, emergency departments, and urgent care settings nationally. A

study over a longer time period during the "slower" months in the specialty could result in larger population sizes and different experiences.

Conclusion

This study showed a positive correlation between the well-being of emergency medicine healthcare providers, who are mothers to small children, and healthcare systems that provide higher organizational support. The greater the level of support perceived, the greater the career retention for this specific population. There was greater consideration in leaving emergency medicine amongst the participants who felt they were not as professionally supported in early motherhood years, especially the APPs, who have more flexibility in changing specialties than physicians. The organizational demands for emergency healthcare mothers seep into life at home with negative impacts on them and their families, impacting their engagement, motivation, and retention.

Gradual changes can be explored, adjusted, and implemented by healthcare organizations to recruit and retain talent, and improve the work culture for mothers, especially postpartum mothers. Organizational policy considerations that participants requested included: allocated breaktime into shifts, more flexibility and control of their work schedules, leaving on time, emergency childcare assistance, changing the taboo call-out culture, and an appropriate space with allocated time to pump for the postpartum mother, all without the guilt factor embedded. Removing systematic barriers to improve the well-being of mothers and their families does not equate to abandoning healthcare organizations' metrics or aspirations. The first step for improving the work environment or culture for mothers working in emergency medicine is to ask these women: *What do you need*? Understanding their needs can help influence the types of institutional policy and cultural changes needed to improve the well-being of working mothers

and their families. Furthermore, if the goal of healthcare is to have healthier communities, then the providers who serve them must be taken care of as well. As the feminization of medicine continues, the more pertinent goal is to have healthy mothers with healthy families, who are motivated and committed to working for supportive organizations while practicing good medicine.

Parting Thoughts

"You can be a mom, and you can be a doctor, and you can do other hobbies that you love." – *Physician*

"I think there's a strong core group of moms in medicine that really ignite together." – *Physician Assistant*

"No matter what your choice is, you are not a bad mom. You just got to do what works for you. The kids will see it, and they'll thrive for it." – *Physician*

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Appendix A

IRB Approval Letter

Radford University | Research Compliance Office

Institutional Review Board

January 10, 2025

TO: Jenny Hall
RE: Initial Expedited Approval
STUDY TITLE: Always On Call: Navigating Motherhood and a Career in Emergency Medicine
IRB REFERENCE #: 2024-176
SUBMISSION TYPE: IRB Initial Submission
ACTION: Approved
APPROVAL PERIOD: January 10, 2025 – January 09, 2028

The above-referenced study has been approved by Radford University's Institutional Review Board (IRB). Your study has been approved under **Expedited Category 7: Research is on individual or group characteristics of behavior (including, but not limited to research on perception, cognition, motivation, identity, communication, cultural beliefs or practices, and social behavior) or the research employs survey, interviews, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies).**

Please note that if your research includes stamped materials, they will be provided with this letter and must be used when conducting your research. A copy of your approved IRB protocol is available for your records in IRBManager under your dashboard of active protocols.

You are approved for the enrollment or review of 100 participants/charts.

Note: The number approved is the number of study participants is defined as the number who enroll in the project and NOT the number of subjects with usable data for analysis. If this should change, you must submit an amendment to increase the number of study subjects.

Your IRB approval period ends on January 09, 2028. If the study remains ongoing after the project end date, you must submit a three-year check-in application no later than ten (10) days prior to the expiration of this approval. If the project is no longer being pursued, a closure report must be submitted.

Should you need to make changes in your protocol, you must submit a request for amendment for review and approval before implementing the changes. Amendments must be submitted via the IRBManager system.

As the principal investigator for this project, you are ultimately responsible for ensuring that your study is conducted in an ethical manner. You are also responsible for filing all reports related to this project.

If you have any questions, please contact the Research Compliance Office at 540.831.5290 or irb-iacuc@radford.edu. Please include your study title and reference number in all correspondence with this office.

Good luck with this project!

Radford University Institutional Review Board (IRB)
Research Compliance Office
540.831.5290
Irb-iacuc@radford.edu
https://www.radford.edu/content/research-compliance/home.html

Appendix B

IRB Approved Informed Consent

Department of Public Health and Healthcare Leadership
Informed Consent: Interview

You are invited to participate in a research interview entitled, "Always On Call: Navigating Motherhood and a Career in Emergency Medicine"

The study is being conducted by Shabnam Prophet, PA-C, within the Department of Public Health and Healthcare Leadership of Radford University 801 East Main Street, Radford, Virginia 24142 and Jenny Hall, EdD, in the Department of Public Health and Healthcare Leadership of Radford University 101 Elm Street SE, Room 102, Roanoke, VA 24013, jlhall2@radford.edu, 540-831-2562.

You were selected as a possible participant because of your role as an emergency medicine healthcare provider in Loudon and/or Prince William Counties in Northern Virginia and you are over the age of 18. We ask that you read this document, review the informed consent, and ask any questions you may have before agreeing to be in the study. Participation is completely voluntary.

The purpose of this study is to explore the experiences of working mothers who are healthcare providers in Emergency Departments in Northern Virginia; and the impact their career has on their well-being and family through an interview. Organizational support will also be explored to determine how it influences burnout, career commitment (intent to leave, employment status change), and motivation (level of engagement). The goal is to collect 20 complete interviews.

Your participation in this study will contribute to a better understanding of this population's unique experiences and needs to help develop strategies and policies that could improve their well-being, enhance their professional commitment and motivation, and hopefully maintain them in the emergency medicine workforce. Your participation is 100% voluntary.

Participation includes a brief interview, either virtually, in person, or by telephone. We estimate that the interview will take no more than 30 minutes. You are free to contact the investigator at the above address and phone number to discuss the interview. If you choose to not participate or decide to withdraw, your relationship with the researchers will not be affected in any way and there will be no impact on your professional career.

No personally identifiable information will be collected during the interview. Emails used to schedule the interviews will be stored separately from your interview and all interview recordings and documents will be saved using a de-identified code. Participation is confidential.

With your permission, interviews will be recorded using Zoom for virtual interviews and Otter.ai for telephone interviews. This will help facilitate data recording and transcription so the researcher gives you their full attention. The recordings will not be shared with other researchers or the general public. All collected data will be stored on the researcher's password-protected laptop. Once the study is complete, all study data, including de-identified interview recordings, word documents of handwritten notes, and data transcriptions, will be stored for a minimum of 3 years on a password-protected laptop or in a locked cabinet in the locked office of the principal investigator. You do not need to agree to be recorded in order to participate in this study. If you prefer not to be recorded, the researcher will type up notes immediately following the discussion and save the notes in a Word document using a de-identified code.

This study has no more risk than you may find in daily life. You may decline to answer any or all questions and terminate your involvement at any time. Although unlikely, if this interview or discussion would cause you to feel stress or uncomfortable, it is recommended that you contact your primary healthcare provider or dial 988, the suicide and crisis line. The research team will work to protect your data to the extent permitted by technology.

If you have any questions or wish to update your email address, please contact Shabnam Prophet at sprophet@radford.edu.

This study was approved by the Radford University Committee for the Review of Human Subjects Research. If you have questions or concerns about your rights as a research subject or have complaints about this study, you should contact Dr. Jeanne Mekolichick, Institutional Official and Associate Provost for Research, Faculty Success, and Strategic Initiatives, jmekolic@radford.edu, 540.831.6504.

By emailing the research and scheduling a date/time, you are consenting to the information above. You will also have another opportunity to provide consent at the beginning of the interview.

To schedule an interview, please provide your preferred contact information, how you prefer your interview to be conducted, and the best days and times of the days for the next several weeks.

Preferred Interview modality (Zoom, In person, or Telephone)

Preferred Contact Information: _____

Preferred Dates/Times to schedule the interview: _____

Do you consent to audio recording? (Yes, No)

Do you consent to video recording? (Yes, No)

By proceeding to schedule the interview, you voluntarily agree to participate in the study. Further, you agree to allow direct quotation if the research team removes identifying information and uses a pseudonym. By proceeding, you acknowledge that you understand your participation is voluntary and that you may withdraw at any time.

Thank you for your interest and I will be in contact within 1 business day to confirm the date and time of the interview.

Shabnam Prophet, PA-C, DHSc Candidate
Radford University

Appendix C

IRB Approved Recruitment Email

Hello,

I am currently a doctoral student at Radford University, and I am conducting a research study for my capstone project to explore the lives of women who work as healthcare providers in Emergency Medicine while navigating the demands of motherhood with small children.

For this study, I am conducting 30-minute interviews via Zoom, in person, or by telephone. If you work in emergency medicine in Northern Virginia and are a mother of a child less than 13 years old, I am interested in your perspective. Results will be used to develop organizational strategies to better support mothers working in emergency medicine. Participation is voluntary, and responses will be completely confidential.

If you are interested in learning more about participating in this study, please click on this ResearchInformedConsent. There, you will find informed consent information and the next steps for scheduling an interview.

Thank you for considering this opportunity to contribute to this research study.

Best Regards,
Shabnam Prophet, PA-C, DHSc Candidate

Mobile: 571-723-1148
Email: Sprophet@radford.edu

Appendix D

Interview Script

Introductory opening:

Hello, good morning/afternoon/evening! Thank you for agreeing to participate in this interview for my capstone research project. I am hoping to gain insight into your experiences as an Emergency Department physician/APP while being a mother to small kids. My research is focused on understanding the experiences of how working mothers navigate everything while maintaining a career in medicine. I would love to learn how your professional role impacts home life, and how being a mother impacts you professionally. I would also love to learn about some of the organizational cultures and practices in your environment that is influencing your professional motivation and commitment to medicine.

I did want to share that I have already received IRB approval from Radford University for this project and the questions I plan on asking. Your participation is completely voluntary, and you can decline to answer any questions that you wish. Additionally, the information you share is confidential and your hospitals/organizations will not be named. Does all of this sound okay?

I also wanted to ask, are you comfortable with me recording our interview? (*If yes,* thank you – I will now push start and we can begin. *If no*, that is not a problem. I will simply hand write notes, and we can get started.)

Before we proceed, I want to confirm you have reviewed and agree with the informed consent. (*If yes,* thank you – we can proceed. *If no,* I will go over it now and answer any questions. If you do not provide consent, this will conclude participation. Thank you for your time.)

Before we begin the actual interview questions. Could you please share:

- your professional role
- employment status (FT, PT, PRN/as needed)
- marital status
- if you have any children (how many, how old)

Interview questions:

1. How does working in Emergency Medicine impact your role as a mother outside of work?
    a. Probe: what are some of the unique barriers you are challenged by in your professional role?
2. Could you share how you manage both roles, or if and how you gain the flexibility to meet the needs of both roles?
    a. Probe: how are you meeting the demands of both roles?
    b. Probe: Does your professional engagement change as a result?

3. How does your organization support or not support your roles and responsibilities, as a healthcare provider in Emergency Medicine and as a working mother?

   a. Probe: What are some organizational resources you found that help mitigate your professional demands?
   b. How did your level of engagement change with the extent of support you have/had?

4. Have you ever had to change your employment status or change your professional contract with the department to meet the demands of daily life as a mother and healthcare provider?
   a. Probe if yes: what did you have to change?
   b. Probe if no: what resources did you find helpful to meet the demands of both roles?

5. Was there ever a time you considered leaving the field?
   a. Probe: if yes, could you elaborate?
   b. Probe if no, could you elaborate?

6. If you had a magic wand, what would the ideal scenario look like to be successful at home and at work? What would you need?

7. Is there anything else you would like to add or share about your experiences as a mother working in Emergency Medicine?

Interview closing:

Thank you so much for sharing your thoughts and experiences with me today! Your shared experiences are so important, and incredibly valuable. Before we conclude this interview, I wanted to ask if you knew of anyone else who may be interested in participating in this study? If yes, if you would please share my email with them or send me their contact information, I would really appreciate it.

If you have any questions or think of anything else you would like to share after today's interview, please feel free to contact me.

Thank you again for your time and for contributing to this important research. Your participation is appreciated.

Appendix E

Detailed Participant Demographics

Participant ID	Profession	Specialty	Employment Status	County	Marital Status	Number of Children	Age of Children
B0113	Physician Assistant	ER	Part time	Loudon	Married	2	3.5 y/o 1.5 y/o
A0114	Physician	ER	Part time	Loudon	Married	3	9 y/o 7 y/o 3 y/o
A0217	Physician	Pediatric ER	Full time	Loudon	Married	3	3.5 y/o 1.5 y/o 2 mon.
A0124	Physician	Pediatric ER	Full time	Loudon	Married	2	2.5 y/o 10 mon.
A0206	Physician	ER	Full time	Prince William	Married	2	10 y/o 8 y/o
B0207	Physician Assistant	ER	Full time	Prince William	Married	2	7 y/o 3 y/o
B0211	Physician Assistant	Surgery (ER previously)	Full time	Prince William	Married	2	7 y/o 2 y/o
B0201	Physician Assistant	ER	Full time	Prince William	Married	2	9 y/o 7 y/o
B0227	Physician Assistant	ER	Full time	Prince William	Married	3	4 y/o 2 y/o 1 mon.
B0217	Physician Assistant	ER	Part time	Prince William	Married	1	3 mon.
B0219	Physician Assistant	Cardiology, ER	Full time	Loudon	Married	2	4 y/o 2 y/o
B0218	Physician Assistant	ER	Per Diem	Loudon	Married	1	2 y/o
A0127.1	Physician	ER	Full time	Loudon	Married	3	6 y/o 4 y/o 1 y/o
B0127.1	Physician Assistant	Urgent Care, ER	Full time	Prince William	Married	2	5 y/o 3 y/o

A0128	Physician	ER	Part time, 1099	Prince William	Married	2	3.5 y/o 1.5 y/o
A0127.2	Physician	ER	Part time	Loudon	Married	2	6 y/o 3 y/o
B0127.2	Physician Assistant	ER	Full time	Prince William	Married	2	12 y/o 9 y/o

Appendix F

Research Study Coding Scheme

Category	Code	Subcode
Career Choice	Better mom, better provider	Relating to patients
	Pros & cons	
	Work-life balance	
	"Always the nurse"	
	Administrative duties	
	Barriers	Employment barriers Outpatient barriers
	Forever career	
	Leaving medicine	Realizations Is the grass greener? Leap of faith
	Hobbies	
ER culture "organized chaos"	Survival	Unpredictable Expectations Sacrifices Acceptance Resentment Frustrations Punishment
	Family importance	
	Ethical dilemmas	
	Gender roles	
	No change	High turn over
	Call out	
Mothers in medicine	Mental load of motherhood	Mom guilt Missed opportunities Mental health struggles Preplan everything
	Compartmentalize	
	Internal conflicts	Repeating questions
	Role significance	
	Perceptions	More than a mom Negative self-perception Misunderstood
Burnout	Declining mental health	Fatigue Depersonalization Defeat
	Responsibilities	
	Acceptance	
	Impact	Personal Family
	Unanticipated expectations	
Family	Family advice	

	The Children	Daughters
	Spouse role	
Postpartum phase	Return to work	The schedule
	No consideration	
	Taking back control	
	Breastfeeding challenges	Space Permission Breastfeeding journey Federal Mandate Health problems (Mastitis)
Benefits	Employer benefits	Unexpected (never on call, PT with FT benefits)
	Realities of employer benefits	No real maternity leave Pay back health insurance Can't use what you have (sick days)
	Consequences of stepping down	Punishment
Work schedule	Inconsistent shifts	
	Unpaid work	
	No breaks	
	Staying late	
Priorities	Boundaries	
	Morals	
	Speaking up	
Working moms	First time mom	
	Repeating mom	
	Employee guilt	
	Night owl	
	Positive self-talk	
	Missed opportunities	
	Expensive working in healthcare	
	Needs vs Wants	
Childcare	Trust	Family Neighbor "Reinforcements"
	Financial cost	Pay extra for inconvenient hours and holidays
	In home vs daycare	Au pairs Nannies
Managing the chaos	Non-negotiable things	
	Making a change	
	Internal conflicts	
	Priorities	Compartmentalize
Engagement	How engagement is impacted	
	How to improve engagement	
	Positive impacts	
	Lost identity	
	Compartmentalize to stay engaged	
Motivation	Professional ambitions	

	Role in society	
Spouse role	"Super dad"	
	More flexibility with work	
	Emergencies	
The children	How they are impacted	Stronger Can't hide it Real life lessons Raising good people
Resources	Employer benefits	
	Desires	Asking for too much
	Only place with decent maternity leave	
COVID	An act of war	
	What job security?	
Contract/job change	Working less	Ask for it Have the ability to work less More work life balance What happens to benefits?
	Independent contractor	
	Reality vs desires	
	Financial consequences	
	Change is good	
	Normal hours/Non-clinical	
Calling out	Expectations	Taboo
	Reactions	
Additional personal challenges	Reproductive	Fertility Miscarriage
	Isolated	What village?
Organizational support	Corporate	
	Supervisory support	
	Colleague support	
	Resources available	
	My expectations	
	Incentives/emergency pay	
	Knowing my needs	
Impact of support	Allegiance/retention	
	Quit/step down	
Needs	Ask me	
	Affordable childcare	In hospital care
	Understanding	
	Mom group	
	Organizational support	
	More staff	
Negative experiences	Supervisor comment	
	Healthcare today	
Self-reflection	My choice	
	Validation	
Magic Wand	Employment	
	Family life	

	Self-care	
	Schedule	
	Support	
	Future generations	

Appendix G

Participant Overall Satisfaction (from most to least)

Participant ID	Profession	Specialty
A0114	Physician	ER
A0217	Physician	Pediatric ER
B0227	Physician Assistant	Urgent Care, ER
B0127.2	Physician Assistant	ER
B0207	Physician Assistant	ER
A0128	Physician	ER
A0127.2	Physician	ER
B0217	Physician Assistant	ER
A0206	Physician	ER
B0113	Physician Assistant	ER
B0201	Physician Assistant	ER
A0124	Physician	Pediatric ER
B0218	Physician Assistant	ER
B0127.1	Physician Assistant	Urgent Care, ER
A0127.1	Physician	ER
B0219	Physician Assistant	Cardiology, ER
B0211	Physician Assistant	Surgery (ER previously)