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Research Presented in Partial Fulfillment

of the Requirements for the

Executive Fire Officer Program

by

Tanya Reynen

National Fire Academy

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Abstract

The research study intended to discover barriers for employees entering the fire and EMS workforce as a full-time employee. A second component was discovering what solutions may exist for Fire and EMS departments to reduce the effects of barriers on potential employee recruitment and hiring. Fire and EMS agencies across Wisconsin, and nationwide, are reporting a continued downward trend of applicants resulting in positions being left unfilled. The researcher utilized a generic qualitative approach to gather data from recently hired full time Fire and EMS employees, hiring managers, and reviewed hiring policies and procedures from agencies across Wisconsin. After collecting and analyzing the data, the barriers discovered from new employees include stress over time management and financial responsibilities as well as variances in the hiring processes. Organizations reported adjusting hiring processes, certification requirements and investments in employees to continue recruiting trained talent into the workforce. This support is mostly through low paying internship programs. Recommendations from the research suggests supporting registered apprenticeship programs or alternative training pathways and promoting a safe, inclusive, and diverse work environment.

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CHAPTER 1. INTRODUCTION

Inadequate staffing has been experienced throughout many fields over the past decade, and the Fire and EMS profession is no exception (Fahy et al., 2022). The US Chamber of Commerce reports nearly five million open jobs in the United States in 2022 (Ferguson & Lucy, 2023). According to the National Fire Protection Agency, US Fire Department Profile 2020, the number of volunteer firefighters nationwide continues to drop with 2020 reporting the lowest number of volunteer firefighters since 1986 (Fahy et al., 2022). In Wisconsin, news reports of organizations merging with neighboring departments have become more prevalent. Alternative attempts to ensure a department is adequately staffed include adding additional paid full-time positions or lowered the education requirements for employment (Morales, 2022). Recruitment and retention remain a top priority for the fire and EMS field, along with increased funding and support for employee health and wellness programs (Allen et. al., 2020). Even with increasing the number of paid positions in the Fire and EMS Field and merging organizations, successfully staffing and funding departments with certified, quality candidates is a growing challenge in the state of Wisconsin (The Wisconsin Taxpayer, 2021).

The following research explored various barriers that potential employees entering the Fire/EMS field experienced and examined the qualities of successful individuals obtaining employment. This research also gathered insight on what organizations have done to remove barriers and what hurdles they had to overcome to do so. This research was conducted utilizing the generic qualitative inquiry approach with the constructivist worldview. The data collection process was triangulated between participants who were recently hired (within 1 year) fire and EMS employees, as well as Chief Officers of fire departments in Wisconsin. Finally, a document analysis process concluded the triangulation of the data analysis.

Background

In the aftermath of the terrorist attacks on September 11, 2001, Fire Departments experienced an abundance of candidates willing to volunteer or work in the Fire and EMS field to serve their community. Some departments experienced over three thousand applicants for just a few job openings, forcing departments to develop processes that sorted applicants efficiently to manage the high competition in applicants (Lexipol, 2013). Hiring practices evolved to include additional process steps, increased minimum certification levels and some organizations added college credits to help filter through the applicant pool. Applications might have been eliminated for the smallest reason such as a box being left unchecked. Written exams were completed in large public gathering places with limited testing date opportunities. Organizations would hire the most "qualified" person based on the hiring process and candidates navigating it successfully. Each portion of a hiring process was given a score and the person who scored the highest composite score from the various stations was highest on the list.

Many processes were drawn out over months just to place candidates on an eligibility list for a chance at receiving an offer of employment in the future. The candidate pools were bountiful with individuals willing to stay in the hiring process for the "long haul" for the chance to obtain stable employment with generous health insurance and pension benefits. Applicants would sometimes wait two years for a full-time job offer to come through, and while they waited, they may have worked in a part-time or volunteer capacity. This long wait for full time employment helped support area volunteers and part time organizations with staffing. Candidates were waiting to be hired full time and benefited from working part time to gain experience and skills as they waited for that possible job offer. A major shift in the workforce overall, however, has occurred throughout the United States over the past decade, and specifically the Fire/EMS

applicant pool. Departments are now being forced to reconsider recruitment, past hiring practices, and retention efforts due to having far fewer applicants. The extensive hiring practices used in the past are no longer effective.

The literature indicates that retention and turnover rates of EMS workers nationwide range on average from 15-30%, many of which do not complete more than one year of employment (Moore, 2022). Additional literature reviewed focuses on increasing diversity in the fire/EMS field of work. Affirmative action, increasing diversity and recruiting women and minority races has been heavily researched in the field. One study suggests recruitment should focus on increasing outreach to a more diverse population, bringing truth to the misperceptions of the fire service, improving the current employee work environment to include competitive wages, advancing an inclusive culture and providing positive mentorship (Koeppel et al., 2022). While focusing on recruitment and retention of women and minorities will help with increasing the candidate pool, it does not address general barriers for all potential employees wishing to obtain the required education for entering the field, or to be hired at an organization.

Significance of the Study

Previous studies and articles do not address prohibitive barriers in hiring processes which limit the applicant pool within the fire and EMS field (Juan, 2018 & Toon et al., 2014). The Fire service is known for following tradition and resisting change; however, the current staffing climate in Wisconsin is forcing the administration and hiring managers to reconsider the past practices surrounding the hiring processes seriously and quickly. Arguments exist surrounding the idea that by removing hiring requirements, organizations are lowering the standards, which is concerning for members and may even cause resistance from Unions. Funding limitations due to

levy limits and budget cuts may also hinder creative hiring practices, this addresses the need for more data-driven decisions on hiring processes. As quoted from the 21st Century Fire and Emergency Services White Paper: "…there has to be a transformation of mindset and culture to leverage data for effective decision making" (Allen et al., 2020). By researching and identifying actual barriers for potential Fire & EMS applicants, as well as determining the best way to navigate the barriers, organizations will ideally have a data supported argument for adjusting hiring practices and obtaining appropriate funding.

Problem Statement

The problem that the following research addressed was identifying the barriers within the recruitment and retention processes of the fire and EMS field which have resulted in a significant shortage of "qualified" applicants for Fire and EMS job openings. The shortage of applicants who are deemed qualified leaves organizations with unfilled vacancies, inconsistent hiring requirements, and increased turnover of personnel. In southeast Wisconsin, departments are recruiting for lateral transfers, inflating wages to compete against area departments and lowering requirements for obtaining employment. The recruitment tactics are short-term solutions for each independent department and do not solve the problem of bringing more applicants to the pool overall.

Discovering realized barriers for individuals entering the fire/EMS field of work provided clear direction on upstream changes that must happen to continue supplying employees within the field. Understanding the barriers that exist could aid in allowing hiring teams to remove the barriers and develop plans to professionally develop potential employees. This comes with a long-term vision to ensure this field of work remains desirable for current and future generations.

Purpose Statement

The purpose of the following research was to provide data in the form of real-life lived experience of those entering the Fire/EMS field to identify over-arching recruitment and retention barriers, thus allowing employers to develop a plan to develop sustainable recruitment, retention, and hiring practices.

Research Question

This research utilized the term 'barriers.' Barriers, for the purpose of this study, is defined as "anything that restrains or obstructs progress, access, etc." (Dictionary.com, 2023). The research questions asked for the study included the following:

1) What type, and to what extent, were barriers experienced while working to gain employment at a Fire/EMS department?

2) What solutions may exist for Fire and EMS departments to reduce the effects of employee recruitment and retention barriers on potential employees?

Summary

In the past, the Fire and EMS field relied on volunteers and a plentiful applicant pool of individuals who were highly motivated with the desire to serve their community. As more paid positions became available with generous benefits, the applicant pool remained plentiful due to the job market, economic status, and population. In recent years, however, with the applicants in the workforce pool and volunteerism declining across the nation, fire and EMS organizations are facing a shortage of employees. There are ample articles on recruitment and retention with

various ideas and suggestions, however, little is found to be reported on the actual and experienced barriers that exist for a potential employee when choosing to enter the fire/EMS field (Koeppel, 2022 & Marques, 2022). This research sought to understand the barriers that existed for new fire/EMS employees obtaining education, certification, and employment. It also identified best practice approaches for what hiring managers are currently doing to address the barriers. Moving forward into Chapter 2, a comprehensive literature review will investigate previous research on the topic and Chapter 3 will provide an explanation of the methodological approach utilized. Chapters 4 and 5 will review the results of the study and offer recommendations for addressing the barriers presented in the study.

CHAPTER 2: LITERATURE REVIEW

Introduction

Fire and EMS services have historically been staffed on a volunteer basis in the United States; however, the aging population, changing economic conditions and workforce has left the fire service with declining numbers of people willing or able to volunteer on organizations (Fahy et al., 2022 & Leider et al., 2023). The fire and EMS field has faced a decline in qualified staff to fill positions with an increased need to convert to more paid positions. Little research is provided on artificial barriers for potential employees to enter the fire and EMS field of work. Organizations are currently recovering from the brief, but challenging, recession in 2020, due to COVID-19. Data pulled from the US Bureau of Labor Statistics (2023), showed that Wisconsin suffered a decrease of over 1,400 career firefighter positions filled when compared to 2019. According to Projections Central (2021), the fire service in Wisconsin is expected to have 730 job openings annually through 2030, with a 6% growth annually. The gap in the labor market is pushing organizations to rethink hiring approaches and operational adjustments. The United States Fire Association (2022) recognizes staffing as a critical issue that must be addressed and is committed to seeking solutions:

> Issue: In recent years there has been a steady decline in the number of firefighters in the nation. This decline is impacting both career and volunteer departments, leaving the communities they serve vulnerable to threats and increasing the stresses among firefighters and the municipalities. It is imperative that we invest in programs to incentivize individuals to join volunteer and career fire departments.

The following literature review gathered information from studies within the healthcare field, trades industry, and the military. The three disciplines have many similarities from which

the fire and EMS field may draw information regarding employment trends, training and education requirements, diversity, and workplace culture. Connections and ties to each of these industries allow for comparisons of how other fields of work addressed concerns that mirror those of the fire service.

The connections each of the fields have with the fire and EMS field are varied. The nursing industry is closely related to the fire and EMS field because EMS is part of the healthcare system, integrates care with the receiving hospitals, and is the first to respond to public health emergencies. The COVID-19 pandemic impacted the Unites States workforce significantly, the healthcare and public safety industry is no exception (Dubina et al., 2021).

The fire service is often perceived as a masculine trade with a culture that is male dominated much like the construction and trade industry. Addressing training, increasing the numbers of women in the field to promote diversity, and creating an inclusive culture is a focus for both the fire & EMS services and the construction trade industry (Norberg, 2021). As a government agency, the military has a close connection to directives and initiatives that are replicated in the fire and EMS field. Fire and EMS agencies are most commonly public organizations that function as local government agencies with very few private fire and EMS agencies in Wisconsin. The requirements and limitations for government agencies can have similar limitations on removing barriers to hiring and funding staff. This literature review will explore each of these areas in depth to provide insight into possible barriers to hiring and funding appropriate staff for fire & EMS services as well as explore potential ways to address these barriers.

Existing Literature

This research focused on exploring perceived barriers in place for all people who have recently gained employment in the Fire and EMS field to also discover what employers may be doing to address the barriers. There is little research published on recruitment that addresses both males and females, nor the barriers overcome to gain employment. While researching "barriers" for entry into the Fire and EMS field, numerous reports on recruitment of women and increasing the diversity of the Fire and EMS field were found. Trends were discovered between different fields of work that can be analyzed to gather a basic idea of what barriers may exist. By reviewing the emphasis placed on recruitment and the means to improve it, barriers can be inferred by the recommendations.

Recruitment Barriers

First, the literature review focused on inclusion, recruitment, and retention. These topics are a major focus of the fire and EMS field as noted in the 21st Century Fire and Emergency Services white paper. Inclusiveness is listed as a critical issue with removing economic, social, and non-validated physical barriers for employment was outlined as a subset to the first initiative in the white paper (Allen et al., 2020). "Initiative 1: Make it an organizational priority to recruit, select and promote members who reflect the demographic makeup of the community they serve." (Allen et al., 2020). The United States workforce is near 47% female, while the percent of female career firefighters remains at 4%, trailing behind the military and police force with the percentage of females serving ranging from almost 9% to 20% (Koeppel et al., 2022). This is a large gap in female representation in the career field, even with increased focus and support in diversifying the field over the past 40 years or more (Marques, 2022). Calculations show that a

pool of potentially 40% more candidates would be available if the female applicant pool increased to match that of the male applicant pool.

Increasing diversity of the fire and EMS workforce is easier said than done, otherwise the numbers would show progress and success. Research suggests increasing recruitment efforts for females by hosting "firefighter camps" for girls, especially for those ages 10-12-years-old (Koeppel et al., 2022). There are successful camps that have increased diversity for the departments running and investing in the future of their organization. This style of recruitment involves investing in and mentoring and empowering youth, exposing them to the fire service as a possible career, and keeping them engaged with the field as they get closer to being eligible for certification and hiring into the field. Long-term recruitment is a term utilized that appears to have the most success for organizations. The construction industry is also promoting "pre apprenticeship training" opportunities for women, minorities, and youth as an approach to increasing diversity and recruitment into the field (Wagner & Kulwiec, 2020).

Not only is recruitment important once a hiring process has begun, but it is also important to consider the barriers in place with the process itself. The labor market is in high demand with more departments opening full-time employment opportunities than ever before, outpacing the qualified candidates applying. This is not specific to the fire and EMS field, as the military also has difficulty recruiting when the economy is strong with low unemployment rates (Reynolds, 2019). The long hiring processes the fire service conducted in the early 2000's is no longer allowing organizations to hire an ideal candidate. Candidates are likely to be in multiple processes at once and will take advantage of the first offer of employment received. Not only is this long tenacious process a point of concern in the Fire/EMS field, but also in the healthcare field. Public Health employment requires college degrees, certifications and has inconvenient,

long hiring processes in comparison to the private sector (Leider et al., 2023). This mirrors the process requirements for full-time fire and EMS career employment in Wisconsin in the last two decades. The healthcare field has been exploring apprenticeship programs as a possible solution to these extensive educational requirements and hiring processes.

Apprenticeship programs are supported and utilized in every state across the nation to assist in filling open positions for high-demand jobs (Anderson & Keily, 2021). States support the concept of paid, on-job training apprenticeships which are usually a partnership between the State, employers, and vocational schools or registered training sites. While many fields of work require college degrees for employment, most can start with on-the-job training and support the employee through the continuing education process towards a completed apprenticeship program. Research shows that some programs are building stronger partnerships with colleges so when individuals complete an apprenticeship program, they may continue to obtain higher education degrees at colleges as well (Anderson & Keily, 2021). While apprenticeship programs are popular in the trade industry already, the healthcare field is also adding apprenticeship programs as a pathway for employment. This has been thrust into the forefront as the workforce shrinks and healthcare employment demands produce more job openings (Bates et al., 2018). While the nursing and healthcare industry previously moved towards requiring traditional two- and four-year degrees, apprenticeship training programs are beginning to be developed as one approach to address the staffing gap (Bates et al., 2018).

Work Environment Barriers

The literature reviewed thus far discussed recruitment recommendations found in research. The following literature review explores research into the work itself, as a potential barrier. The two main points considered include the work life or family dynamic, as well as the

culture within the work environment itself. As the US workforce ages and the boomer generation, who traditionally committed to an organization for a long period of time and valued additional pay for additional work, continues to retire from the workforce, generation Y & Z are taking hold. The number of employees entering the workforce is smaller than the boomer generation and their values are different. The incoming generations prioritize self over service, time off, and a "work-life balance" (Yoon et al., 2013). These values also affect service-focused careers such as healthcare, fire & EMS. Employees no longer wish to work extensive amounts of overtime, lose their identity to work, or be away from home for long periods of time. All of which the fire service relied on from those working in the field.

Two journal articles reported conflicting information on retention of employees, one stating females leave the fire service to raise a family, while the other claimed that no females left for reasons outside of retirement and medical disability (Koeppel et al., 2022 & Lantz, 2020). There is more research supporting the idea that work-life balance and self-identification are more important than salary when referring to retention, both within the fire & EMS field and other fields of work (Koeppel et al., 2022 & Leider et al., 2023). Suggestions for addressing the concern of work-life balance and family planning as a "recruitment concern" or barrier include having strong policies supporting parenthood, increased flexibility and a mission folks believe in (Leider et al., 2023). Reynolds, in his research stated that employees want "scheduling control and predictability" (2019). This is a difficult barrier to overcome in fire and EMS due to the nature of late calls for service, sick calls, and mandates. Adequate staffing to allow for an employee to be off ill and not cause overtime for another employee is an option, although an expensive one.

As the workforce continues to shift in both values and size of interested potential workers, the literature indicates that the hiring practices that were in place in the early 2000's must be re-evaluated for artificial barriers for employment into the field. In the 2022 Annual Review of Public Health, ongoing issues of staffing and training are discussed (Leider et al., 2023). A pathway of development discusses a transition from "cumbersome hiring practices and relatively low compensation compared to the private sector" (Leider et al., 2023). This report also discusses that very few undergraduates of public health degrees are working in public agencies, rather they are working in private industry. To work as an EMS provider in any state, employees must have an EMS license issued within the state they work. Employees must overcome various hurdles to become licensed in a different state which may be prohibitive to maintaining licensure and working in the field. The military has an interest in addressing these licensure reciprocity barriers as well to improve work stability for the spouses of those serving in the military as they move across the United States (Reynolds, 2019).

Various studies indicate that the internal workplace culture must be addressed for recruitment and retention practices to be successful (Perket, 2022 & Reynolds, 2019). Othering and out-group are two terms utilized in recent studies that describe how females are treated differently, excluded from workplace nuances, or protected from perceived dangers. The different treatment is detrimental to inclusion and success within an organization. Not only are the concerns reported in the fire & EMS service, but also the construction industry (Marques, 2022 & Norberg and Johansson, 2021). If females and minorities are being treated differently, the perception that a particular type of work is not for them is then perceived, as is the case in both the construction trades and the fire service. Reports of sexual assault, rape and other traumatic misconduct make headlines on local news and fire EMS service websites. The

publication addressing such misconduct must also be noted as a potential barrier for recruitment into a perceived or actual unsafe workplace (Perket & McQueeney, 2022). Fostering and promoting a culture of actual inclusion and safety for all employees will open the door for others to join.

Concerns about the work itself is a potential barrier found in research discussing recruitment and retention. The fire and EMS field has risks that are known and unknown that may be prohibitive to folks exploring possible career paths. Time demands, increased risk of cancer, higher than average suicide rates, and risk of injury or death on emergency responses may outweigh the benefits of comradery and pay benefits (Lantz & Runefors, 2020). Not only is the work of responding to incidents and higher call volumes causing a stressful work environment, the culture within an organization can also have an impact on employee health and wellness. A study completed in 2022 discussed the probationary year of employment especially concerning practical jokes and bantering of new employees crossing the line into a hostile work environment (Perket & McQueeney, 2022). The work done in the fire and EMS field is stressful enough and to not have a safe place to decompress after a call due to workplace bullying and stress has a major impact on employees' health and wellness, as well as job satisfaction. These incidents are seen throughout headlines of the news and fire service-based websites creating a barrier for folks looking for a safe and welcoming workplace.

The impact of a stressful job and workplace does not end with the employee. Carryover stress and mental health impacts the families of those serving in the field. A systemic review of mental health and well-being of spouses, partners and children of emergency responders found that work stress for police, fire, and EMS providers influences responders' home life (Sharp et al., 2022). Impacts on the responder's home life include an increased strain on the other parent,

emotional dysregulation on the children, and emotional strain on both partners. The increased workload for child-rearing responsibilities impacting one parent is due to the responder's long shift hours which includes nights and weekends. The report further explains that partners of emergency responders compensate for their partner's increased stress from work by adjusting their emotional response at home. This may decrease effective communication and increase stress in the home by avoiding conflict. (Sharp et al., 2022). This research also made the connection to the healthcare industry, specifically emergency room staff, to first responders based on schedules and the strain on home life. This article expands on both fields to show the withdrawal of partners and the emotional burden that has a negative impact on marriages and family life (Sharp et al., 2022). The fire and EMS field is not all negative, the report suggested the importance of a strong social support system for emergency responders and their families affected by significant traumatic events and calls. The fire service is known for its brother and sisterhood which might explain the resiliency of responders to continue serving in the field, even after traumatic incidents. This social network is important for the family members of responders as well to ensure a network of support in times of need.

The fire and EMS service, while inherently dangerous in certain situations, can also provide an opportunity to work for an organization that is community-based, and service driven. While sometimes the dangers and risks can present as a barrier for employers to overcome when recruiting employees, promoting a workplace that is invested in employees may help overcome this. The United States Airforce faces similar challenges to the fire and EMS service. By requiring extensive training, long atypical hours, adrenaline driven work with some risks involved, the fire service and air force can be easily related. A report from the Air & Space Power Journal discusses a framework that can improve employee recruitment and retention

entitled "individual-centric framework" (Reynolds, 2019). Within this framework, Reynolds described the importance of compensation, advancement opportunities, and recognition as significant factors to consider when building an organizational culture to recruit and retain talent. Fortunately for the fire and EMS service, compensation is not a singular factor in recruitment. A livable wage is imperative, however, a wage that outcompetes the private sector is not required to recruit and engage employees (Reynolds, 2019). Non-financial adjustments can be made within an organization to promote employee engagement. Reynolds' article discussed the importance of interesting work and employee enjoyment while at work as imperative factors for the retention of current employees where if this is not managed properly could become a barrier for recruitment of potential employees (2019).

Reynolds further explained that opportunities for development of individuals and their careers is an important factor when choosing a workplace, especially millennials (2019). While some costs can be incurred by investing in employees to attend training, organizations can also develop mentoring and development programs within. Having strong mentorship, internal training, and development of future leaders within can build a stronger more inclusive workforce that has succession resilience with a lower turnover of trained employees. Apprenticeship programs too, could offer similar feelings of development and career advancement by hiring employees at entry level, training them through the apprenticeship program to be highly trained. Unfortunately, Reynolds' paper discussed how companies are not able to invest in their own employees because the cost to do so may be prohibitive (2019). This barrier for employers will need to be explored further to address the issue.

Synthesis of the Existing Literature

This literature review found articles from various fields of work, including nursing, public healthcare, military, and the construction trades. The fields of work have similar traits to the fire and EMS field with work schedules, risks involved and demands of employees. Exploring their recruitment, retention and industry concerns can lead to insight as to potential barriers, issues and answers within the fire and EMS field. Recruitment of minorities, staffing shortages and how to address these shortages was a priority amongst all trades. While some causes for staffing issues may be attributed to a current decline in workforce size secondary to the COVID-19 pandemic and baby boomer requirements, there are possible solutions being considered. Apprenticeship programs, investing in employees' training and career development, and adjusting employer expectations to allow for greater flexibility are all being considered and explored further in each field (Anderson & Keily 2021, Bates et al., 2018, Reynolds 2019).

Summary

It is helpful to understand that the perceived issues of the fire and EMS field are not special nor unique to just this field. The shortages of staff and funding are felt throughout the industries, leaving each field on a near level playing ground. The extensive amount of research on recruitment and retention makes this known, and the solutions are not all subject to finding additional funds. Solutions to recruitment, retention, and gaining adequate staffing are suggested in each article that discusses workplace culture. Investing time in new employees and allowing the incoming generation to be heard and have an impact on the direction of the work holds value in addressing the staffing concerns. While accomplishing the adjustments is difficult due to time, organizational priorities, and the abilities of current employees, it can be done. The following

research will look to further explore the perceived barriers faced by those entering the fire and

EMS field and examine what employers have been able to do to successfully overcome the

concerns. This literature review provided guidance on existing research gaps to aid in

formulating research questions that may provide a more specific discussion on barriers that still

exist in the fire and EMS field.

CHAPTER 3: METHODOLOGY

Research Design

This research was completed utilizing a generic qualitative inquiry approach. The generic qualitative approach best matches the scope of research by allowing the researcher to understand the human experience of entering the fire and EMS field of work (Kostere & Kostere 2022). This research was conducted utilizing qualitative methods due to the individualized and unique perspectives necessary to understand the barriers that qualitative data cannot adequately address. The problem the following research addressed was identifying barriers within the recruitment and retention process of the fire and EMS field which have resulted in a significant shortage of "qualified" applicants for Fire and EMS job openings in Wisconsin. The shortage of applicants who were deemed qualified leaves organizations with unfilled vacancies, inconsistent hiring requirements and increased turnover of personnel. This research utilized the term "barriers" and for the purpose of this study, a barrier is defined as "anything that restrains or obstructs progress, access, etc." (Dictonary.com).

Population and Sample Size

The population included for participation in the research was separated into two categories, hiring managers, and recently hired full-time employees. Inclusion criteria for recently hired career fire and EMS professionals included those between the ages of 18 & 45 and those who had been hired full time on a fire or EMS agency within the last 18 months. For hiring managers/officers of fire and EMS organizations, participants must have been directly involved with the hiring process procedures for their organization. This included development or implementation of the hiring process, implementation or had influence on changes made to the

hiring or recruitment processes. Eight hiring managers and nine recently hired employees were interviewed, totalling seventeen participants.

Instrument(s)

The instrument utilized for this research was a semi-structured interview with one main question for each population interviewed. Guided questions were also utilized as necessary to facilitate conversation and obtain the data necessary for this research. The main question for recently hired career fire/EMS workers was:

1) What was your experience for obtaining employment as a career firefighter/EMS provider?

Guided questions to facilitate as necessary included:

1) How did you learn of fire/EMS field as a career option?

2) Describe your experience getting started in the field such as obtaining initial education/certifications or affiliated with an organization.

3) Describe your experience of obtaining certifications/school experience.

   a. How did you balance work, school, and home life?

4) Describe any challenges you had to overcome to obtain education or employment such as outside work, childcare, transportation, financial or other.

5) Describe your experience seeking and obtaining employment.

   a. What steps were included in each process? IE Interview, assessments, physical agility etc.

   b. How long did the process(s) take? 1-3 months, weeks?

6) Describe your probationary period or first 12 months on the job regarding challenges overcome. Work/home life scheduling, childcare, additional certification/course work, inclusivity with crew etc.

    a. How did you overcome these challenges?

The main question utilized for hiring managers/officers was:

1) Please describe your organization's experience with the following:

    a. Recruiting employees

    b. Hiring employees

    c. Retaining employees.

Guided questions to facilitate as necessary included:

1) How has your organization approached recruitment in the last five years.

    a. Has this impacted hiring employees?

    b. Has this impacted the retention of employees?

2) Has your organization adjusted the hiring process in the last 5-10 years, if so, in what ways?

    a. How has that impacted the recruitment of employees?

    b. How has that impacted the retention of employees?

3) What has your organization's experience been with new hires from these changes?

Interview questions were formulated for this research and reviewed via a field test by three experts in the field familiar with the methodology and research topic. Questions were kept open-ended to ensure the interviewee could expand on the topic to explain in depth their lived experience. Guided questions were utilized as necessary to prompt a full detailed explanation.

Research Process

This research process included recruitment of participants, obtaining permission, conducting interviews, and data analysis. The first step was recruitment of participants based on inclusion criteria. Recruitment for both newly hired career fire/EMS employees and hiring managers or officers both consisted of reaching out to the administration of area departments and organizations with a cover letter. Contacting departments and organizations was completed in a variety of ways. The administration of fire and EMS organizations were contacted via email with a standard cover letter clearly stating the purpose of the research. The emails were sent to personal connection at organizations as well as through email trees for the Wisconsin State Fire Chiefs Association and Waukesha County Fire Chiefs Association. The letter inquired if the organization had newly hired employees and/or hiring managers/officers who met the inclusion criteria who had their permission to participate and were willing to participate in the research with the organization's permission. The administration was requested to share the contact information of potential participants to coordinate interviews. This information was kept confidential, secured in a password protected document that was deleted one year after completion of the research. The cover letter also requested for the departments/organizations hiring procedure policy or similar documentation to be shared.

Once permission was granted from the administration, potential participants were sent a cover letter was sent to each individual restating the purpose of the study, privacy protections utilized and the request to schedule an interview. The participants were given the choice to conduct an in person or virtual interview within a set timeline. All participants were requested to complete a form that requested general demographic information. General demographic information that was collected included the following:

1) Name

2) Date of birth/age

3) Gender

4) Department affiliation

5) Role(s) within organization

6) Number of years as a certified fire/EMS provider

7) Education levels/certifications

As consent forms and demographic information were returned to the researcher, the interviews were scheduled and confirmed via email. Interviews were conducted on the dates selected in the format requested. These interviews were audio-recorded and typed notes were taken during the interview session. Portions of the interview sessions were manually transcribed for direct quotes and accuracy.

Data analysis was completed utilizing theoretical analysis as outlined in Kostere & Kostere's text (2022). Data analysis and review took place in three categories, new hire lived experiences, hiring managers experiences, and hiring policies. Notes from the three categories were analyzed separately. Interview sessions were reviewed, and the researcher became familiar with all content from each set of interviews, any confusing notes were compared to the recorded audio, and transcriptions for clarification and accuracy. Content that was interesting and related to the topic was highlighted and non-related content was noted in a separate file. The highlighted content was then coded and clustered into related areas. These clusters were then divided into themes, both known and new themes that arose. Direct quotes supporting important themes were also captured for deeper understanding and accuracy.

Data analysis and themes from each category was then analyzed for categories where the recently hired employees expressed concerns, barriers, or obstacles they needed to overcome to gain employment in the fire & EMS field. Data was also analyzed for where the hiring managers reported addressing hiring concerns. The data showed perceived barriers of the newly hired employee and steps hiring managers are taking to adjust the hiring processes. The data was then compared against fire and EMS departments' hiring procedure and policies to discover potential areas of improvement in removing barriers for entering the fire/EMS field.

Participants in the research were separated into two categories, hiring managers, and recently hired full-time employees. Recently hired employees must be full-time employees and must be hired within 18 months. Eight hiring managers and nine recently hired employees were interviewed.

Ethical Considerations

This research had two known ethical considerations to address, minimizing bias and dual relationships. From the literature review and observing the changes in hiring practices in Wisconsin, some barriers that could be limiting for gaining employment were known. This included potential biased physical agility testing, a negative stigmatism of the fire service work life balance and concerns about health risks associated with the job (Koeppel et al., 2022). Additionally, personal bias on recruitment, hiring processes and retention of employees was reflected on and recorded. These pre-understandings were analyzed when present in the data, but personal bias was avoided as new themes were also sought out.

The second ethical consideration is dual relationships. Due to the nature of work, fire and EMS employees often know one another and assist with various aspects of hiring

processes, this provides a high risk of dual relationships and the risk of coercion. In all aspects of the research, it was made explicitly clear to participants that participating in this research project would not in any way affect professional or personal relationships outside of this project. It was ensured that participants understood their decision to participate was voluntary and had not negative impact on the participant.

Participant confidentiality was maintained throughout the entire process. All identifying information recorded during the initial interview was coded before data analysis to prevent bias and conflict of dual relationships. Personal identifying information was kept on a secure device that was password protected. The data will be destroyed after research is completed, submitted, and approved by the National Fire Academy.

Summary

The research conducted via the generic qualitative approach allowed for gaining insight into the lived experiences of recently hired fire and EMS employees and the work completed by hiring managers to ensure rosters remain filled with competent professionals. Interviews conducted with guided research questions allowed for complete data collection for further analysis. The population studied included recently hired career fire & EMS employees and the hiring managers or officers of the organizations. Ethical concerns for the research were addressed so there was no impact on the research validity and confidentiality of all participants was protected throughout. The themes discovered in research were analyzed and compared for opportunities to further remove barriers for future employees and are provided in chapters 4 and 5.

CHAPTER 4: STUDY RESULTS

Introduction – Demographics of the Participants

Participants in the research were separated into two categories, hiring managers, and recently hired full-time employees. Recently hired employees must be full-time employees and must be hired within 18 months. Eight hiring managers and nine recently hired employees were interviewed.

All eight hiring managers identified as white males who worked full-time on career and combination fire/EMS departments. Their age ranged from 41 to 62 years old and all, but one had at least 20 years of experience in the field, the youngest hiring manager had nine years of experience in the field, with an average of 4.5 years working in the position of hiring manager for their current organization.

Of the nine participants for the recently hired group, all of them worked full time at a career or combination Fire/EMS organization for under 12 months with an average of 6.8 months at their current position. Two identified as female, seven identified as male. Two participants identified as African American and seven identified as White. The participants' ages ranged from 22 to 37 years old with an average age of 24. Three participants obtained full-time employment certified as an EMT, six were required to obtain Paramedic certification prior to full-time employment at their organization. All are IFSAC firefighter 1 certified at a minimum aside from one participant who works at an EMS only agency full time.

Hiring managers were asked to describe their experience with hiring processes at their organization and what, if anything, has changed in their hiring and recruitment practices for new employees. Recently hired employees were asked to describe their experience in obtaining necessary qualifications for employment and their experience obtaining employment. These

guiding questions sought out barriers removed by the organizations hiring practices and barriers experienced while working to gain employment in the field of Fire/EMS. Interviews were conducted in person or virtually via Microsoft Teams. All interviews were audio recorded with permission, hand transcribed and analyzed for themes using theoretical analysis.

Research Results

Recent Hires

Recently hired employees were asked a series of guided questions to provoke responses regarding their experience and any barriers crossed while working to gain full-time Fire/EMS employment. Nine participants were asked six guided questions to explore each part of obtaining education and employment at a Fire/EMS agency. Table 4.1 shows the main themes discovered during interviews.

Table 4.1

Themes developed from research, new hires.

Theme	Participant Response
Internships	6 reported working as an intern.
Stress & Time Management	6 reported stress and time as a factor.
Support Network	9 participants discussed the importance.
Hiring Process	3 participants described issues.

Internship

The term internship or intern was discussed in six of the nine interviews with new hires. The term internship did not have consistent meaning. One participant was an intern for an

organization and worked with a crew for 8 hours a month. Three participants were interns and worked scheduled shifts or worked hours equating to full time hours along with a crew once certified in firefighter 1 or EMT. Two participants reported they were brought into an internship program with no certifications and had their education paid for, and one participant was required to obtain at least one fire or EMS certification for consideration into the intern program. For the two participants with no certifications, one had full-time benefits, wages, and insurance from the date they started, the other was paid a stipend with no other benefits other than flexibility for school and living quarters. One participant stated, "it was difficult figuring out where to go and what each organization offered for getting started." The participant with full-time benefits and wages stated, "having this opportunity to work and learn while living a wage has changed my life's path, without this opportunity I was unable to afford education while working and caring for my family." A third participant stated, "intern wages, along with culture was a deciding factor for where to begin." Interns who worked full-time scheduled intern shifts did not need to find coverage for their class time, they reported being able to leave whenever they had class to attend. One participant did state they were "not allowed to study while on shift because of emergency calls and other duties to complete." However, they were able to make time to study outside of the organization. Three participants in this study never participated in any style of internship. These three participants paid for their education on their own and obtained part time employment at an organization prior to working full time. One participant stated, "I had considered an internship, but needed the freedom and flexibility of time to care for my pets, the pay of only $2.50/hour wasn't going to work."

Stress & Time Management

Stress and time management was a second theme that emerged from six of the nine participants. This category includes self-care, financial, education, family, and harassment experienced and communication from hiring organization. Balancing work, school and home life was an obstacle all participants had to navigate in one way or another. While obtaining paramedic certification, three participants moved back home with their parents to pay for tuition and other financial obligations. One described the pay earned while obtaining paramedic education, "it wasn't enough to live on, even with scholarships and working four days a week." Childcare was a large concern for one participant who had to move back in with their parents to assist with childcare while they were in paramedic school full-time (four-five days a week). This participant was only able to work on nights and weekends.

Selecting a workplace and navigating the hiring process was another area of stress described. Three participants described excellent communications from their organization during the hiring process, one stated "I always knew what step was coming and when." One participant described delays and lapses in communication from their hiring organization stating, "after the initial interview I was ghosted and never heard back from the organization, I didn't know if I should apply elsewhere or wait longer." Two participants described stress in decision making and understanding the career field. One participant described how it was difficult to select an organization to apply for without having a clear understanding of each option available and used the term overwhelming. "(it was) overwhelming not knowing where to start as so many departments were hiring and I didn't know what each department was like." Another participant didn't know that working as a firefighter/EMS provider was even an option, so they joined the military and only after four years serving did they discover fire and EMS as a potential career

path. This participant stated, "if I had known I could be trained and gain employment I would have left the army a long time ago."

Cases of harassment and difficult work environments were described by four participants, both male and female. One participant described instructors calling them out for every question and demonstration and making inappropriate joking remarks. One notable comment from an instructor was "Methel Ethyl death, kill _(name)_." This participant also experienced sexual harassment at their previous organization and feared pursuing charges due to concerns of repercussion and being negatively labeled for standing up for themselves. Another participant described harassment from a previous Chief giving negative information when contacted for backgrounds, they described that once that particular Chief retired, they were hired at the first organization they applied at afterwards. The oldest participant in this research, 37, describes their probationary period as discriminatory. This participant stated they are "expected to perform and do the same exact functions as my co-workers, but I need to dress differently and am subject to additional work that doesn't apply to the job."

Support Network

In this research, a support network is described as family support, especially parents, and coworkers at their organization. All participants described the significance of the support they received from current fire & EMS professionals, family and friends which helped them in the process of obtaining education and employment in the fire service. Support that was offered included financial support, coaching & mentoring, childcare, and flexible work schedules.

Three participants described having to move back home while gaining required certifications for employment. Reasons described for this were needing childcare, not being able to afford food, tuition, and housing while in school and working at an organization. One

participant described their experience of obtaining education and supporting themselves as the most difficult time "I had three scholarships and was still unable to afford gas to drive 40 minutes to school without my parents support because there wasn't enough time to work and study." Participants who did not move back home were either interns at a department in which they were provided with living arrangements free of cost or had military financial support.

Coaching and mentoring from department co-workers was described as an imperative aspect to their success in achieving certification and employment. One participant described the hours invested in them by department members in tutoring and guidance for success in the career. One participant stated, "having peer and coworker support was imperative, it made it so much easier to navigate school and the pathway to success." Mentors at their organization helped guide them through their educational and hiring journey, eliminating confusion of the processes. The participant from the EMS only agency who was paid full-time wages to earn initial education described group study sessions, ride time with mentors and additional personal tutoring available while in EMT class, stating this was an essential aspect to their success.

Hiring Process

Testing processes represented for full time employment usually include a combination of interviews, physical assessment, and cognitive exam followed by a medical and psychological exam after an offer of employment is made. All participants of this study had no issues or concerns with passing the psychological exam or physical assessment which was either a Candidate Physical Agility Test or a medical physical where participants complete numerous movements simulating the work of Fire and EMS providers in a healthcare setting.

Regarding the hiring process itself, six of the applicants had no issues, describing open and consistent communication, a short timeline from application to job offer which also allowed

for some flexibility in testing and interview dates or locations. Three applicants described timelines that were over six months long, had delays in communication, or overlapped with other hiring processes. In these instances, the participants reported periods of frustration, confusion and had to make decisions regarding which department they wanted to pursue further or drop from other processes. One participant described the process to be hired at their full-time organization took almost two years "due to budget cuts, changes in administration and miscommunications." One participant described the hiring processes as "overwhelming figuring out where to apply due to not knowing what other departments were like." One applicant described having two job offers withing 24 hours, they chose the organization that had invested in them with training & mentoring stating, "how do you leave a department that helped me grow?"

Hiring Managers

Eight hiring managers were asked to describe their organization's experience with recruiting and hiring employees and any changes to their processes, if any. Each organization had different needs, levels of service and staffing models, however they all discussed a variety of approaches taken to maintain adequate staffing. Table 4.2 gives an overview of these themes and results.

Table 4.2

Themes developed from research, hiring managers.

Theme	*Participant Response*
Internships	5 have internships, various definitions.
Adjusted Requirements	6 have adjusted requirements for full time.
Hiring Process	7 reported adjusting the hiring process.
Recruitment	8 discussed increased recruitment strategies.

Internships

Internships were utilized in five organizations to improve staffing and supply the organization with a candidate pool for full time positions. Internship programs are set up differently for each organization. One organization created a "cadet" program in which applicants are hired either full or part-time with no training and are paid to obtain initial education and work along crews until they are fully certified to work on their own. The hiring manager reported:

"We had a significant need to increase staffing and no assistance from the colleges to

send cohorts of students through, so we brought our initial education in house. After four

years of running this program, we have more staff than we have open shifts. There is cost

involved, but how can we afford to not invest in our future?"

Two intern programs are set up where participants are paid an hourly wage while on shift, have

tuition reimbursement and given a place to live at the department. One organization started an

intern program last year, paying interns nothing other than reimbursement for education, it

focuses on the ability for interns to complete ride time with that organization. The hiring

manager for this organization stated, "in no other blue-collar industry would an interested

applicant come to an employer and be sent away." One hiring manager described an informal

program where employees are hired with an EMS certification and supported and sent to school

for fire certifications.

These programs have a wide range regarding time in place at the organization and

number of people who went through the program. The fully paid program has over 150

employees that have been hired while two programs have under five participants. Three of the

programs have had 10-15 participants since inception of the program. One hiring manager

whose organization supports dual enrollment programs and historically sent interested people to

other organizations for initial training states the concern with internships is financial, "we need

to have a careful balance of how much do you pay for someone who isn't able to fill the seat

yet?"   All five organizations have hired, or retained staff from their program and reported the

program has had a positive impact on the organization. The hiring managers report little to no

pushback from current full-time staff, one states "the line staff are willing to put the time into

training interns knowing that it will help with staffing shortages and forced additional shifts in the future."

Adjusted Requirements

Six organizations have adjusted the requirements for full-time employment. One dropped all certification requirements and hired based on interview and background check. One organization required specific associate degrees and now accepts 60 college credits in any area, while still requiring fire & EMS certifications. Two organizations dropped Paramedic as a requirement and will hire Emergency Medical Technicians with fire certifications; "We have a lot of flexibility in how we utilize our paramedics, so we can afford to hire EMT's and maintain staffing" cited one hiring manager. Two organizations reported removing the Candidate Physical Agility Test certification as a requirement and now have candidates complete a physical exam in a healthcare setting and one has dropped the requirement to pass a psychological exam, stating that it has no prediction of a candidate's future ability to handle the stress of the job. The organization that dropped all requirements for hiring reported increased diversity, higher pass rates for initial education and has all entry level positions filled.

Hiring managers that reported changes to the requirements for full-time employment did not affect the retention of current employees and the candidate pool did increase slightly. Hiring managers reported having significantly less applicants in the last 3-5 years than they had 10 years ago, which prompted these changes and attempts at increasing applicants. One hiring manager stated, "Ten years ago we required numerous certifications and only hired paramedics as the applicant pool allowed for this, we recently lowered the requirements to only firefighter and EMT certifications." A hiring manager for another organization stated, "as other

organizations also lowered the requirements for hiring, the advantage of a larger pool of potential applicants diminished quickly."

Hiring Process

The hiring process is described as the steps completed by candidates to obtain employment. Four organizations reported streamlining or shortening the hiring process itself. They reported changes such as shortening the time it takes from application to job offer, adjusting when jobs are posted and increased frequency of job posting. One participant stated, "We knew we had to post the job and complete the process before the larger department near us completed their process so we could hire first." One hiring manager reported keeping the candidate list from previous processes and adding to it rather than starting a fresh list; "this allows for previous candidates to be resynched into the list with fresh candidates without having to go through the whole process again." Three organizations run hiring processes two or more times a year rather than once a year or every other year, citing running out of candidates on the list before it expired. One hiring manager reports "We used to run a process every four years when the job market allowed, now high-quality candidates are hired full time quickly on organizations, forcing us to run a process every six months".

Hiring managers have also increased communication and flexibility with the hiring process. Two hiring managers reported offering multiple or alternative dates for interviews and assessment stations. One organization allows for the written exam to be taken online from any location. Three hiring managers discussed no longer eliminating candidates based on incomplete applications and backgrounds with minor citations. One hiring manager stated they are more open minded about the applicants, they are asking "what have you done to improve since" for any mistakes applicants made in their past preventing them from having a clean record.

Recruitment

Every hiring manager described recruitment and staffing as a major focus for their organization. Recruitment included topics such as high school outreach, partnerships with dual enrollment programs, Scouting Explorer posts and other advertising for jobs. Various approaches were discussed with hiring managers outside of internship programs to recruit employees into this field of work. Two organizations have a program that is geared towards teenagers ages 14-21 to learn about the fire/EMS field. These programs were either an Explorer post through the Scouts of America, or a department sponsored program. Four of the hiring managers reported active engagement with the High Schools, either working with the counselors to connect students with this line of work or supporting Dual Enrollment programs with the college. Four organizations reported a robust ride along program for not only EMS students but also for youth interested in learning about Fire and EMS for a career. Another area for recruitment that was strongly supported was having line fire and EMS providers working at the technical colleges in the fire and EMS classrooms. One hiring manager described the recruitment from working in the college and sending students there that are sponsored by their organizations as an "organic recruitment tool, they speak highly of our organization which in turn creates a curiosity and interest for working here." Hiring managers from three organizations discussed the culture of their department as an integral aspect of recruitment as well. Two stated that they focus on training everyone up to the standards they expect, which builds team dynamics, job satisfaction for all employees and aids in retention.

Hiring Protocols

Upon review of the hiring protocols for five organizations only one hired non-trained employee's full time. This is an EMS only organization that pays cadets to be employed while trained to the certification level necessary to work in the field. All the protocols for fire/EMS agencies posted minimum and preferred certification requirements necessary for employment. Not one fire/EMS department hiring protocol or job posting outlined a process to be trained to those required levels. Internships, cadet and explorer programs, no matter the format is not outlined in any of the documents provided for full-time hiring processes. While the interviews with hiring managers found that interns typically do better in hiring processes for that specific organization, there is no data or documentation to support preference points given or that it is true. The timelines for hiring process range from two to seven months long. The shortest timeline was for hiring non-trained employees for the EMS only agency, the longest timeline had the most certification requirements and assessment stations.

Summary

The data provided a few consistent messages for recruitment, hiring practices and removing barriers for hiring. The participants shared in-depth experiences and shared expertise with their role in their organization to give a comprehensive view of the hiring processes found in their workplace. With a ride range of service levels for each organization and areas served range from a rural combination department in northern Wisconsin to busier all career organizations in urban settings, staffing is a major focus for all.

Organizations show the continued need for competent trained staff and that they are open to reviewing current practice to ensure employees are hired. This is mainly seen in hiring processes by adjusting requirements, timelines, and communication. Internships were discussed

frequently by both the hiring manager and recently hired employee as a major recruitment and training tool utilized for organizations. Chapter 5 will interpret the data that was collected and provide a conclusion from the results of the data. Chapter 5 will also provide recommendations from the data analysis and explain limitations on this research.

CHAPTER 5: CONCLUSIONS AND RECOMMENDATIONS

Summary of the Results

Recruitment to meet the staffing needs of organizations has continued to gain more attention and effort from not only fire & EMS organizations, but for many industries requiring skilled employees. The supply of skilled fire & EMS workers has not kept pace with the demand for them across the nation as volunteerism drops while training requirements and number of full-time positions increase (Fahy et al., 2022). The research sought to find solutions for barriers to employment in full time fire and EMS positions in Wisconsin. The instrument utilized for the data collection produced results that provided the researcher with themes that led to a conclusion with a recommendation forward.

One aim was to discover what barriers were experienced to gain employment in a fire/EMS agency. While all recently hired participants have overcome any barriers experienced, difficulties were discovered along with suggestions for their success in obtaining employment. Recently hired participants discussed the importance of internships, support network, navigating the hiring process, and managing stress and time. Hiring managers have discussed the importance of adjusting to the workforce market, intern programs, adjusting the approach to recruitment, hiring requirements, and hiring processes. The most common theme that emerged from both groups was internships and hiring processes. Many of the recently hired employees had been a part of an internship program of some design and had issues to overcome with the department's hiring processes. Hiring managers reported their organization utilizing internship programs to recruit employees into their organization and had been working to streamline the hiring process. This overlap was analyzed and will be discussed further along with the themes discovered that did not overlap.

Conclusions Based Upon Results

The purpose of this research was to provide data on the real-life lived experience of those entering the fire/EMS field, identify recruitment and retention barriers and develop a plan for sustainable recruitment, retention and hiring of employees. The research focused on two research questions:

New hires: What type, and to what extent, were barriers experienced while working to gain employment at a fire/EMS department?

Hiring managers: What solutions may exist for fire & EMS departments to reduce the effects of employee recruitment and retention barriers on potential employees?

Internships and hiring processes were the two most significant impacts on recruitment and hiring full time Fire or EMS employees. Stress & time management along with adjusted requirements for hiring are closely related themes that tie into internships and hiring processes at a high level. Many of the organizations relied on some form of internship, paid or unpaid, to recruit, train, and employee future full time employees for their organization. Recently hired employees discussed the importance of exposure to the job, support, work experience and continued training experienced during their internship as an imperative aspect for their ability to gain full time employment at an organization. However, many discussed the financial implications of working at an organization for little to no pay while attending school and supporting themselves. Hiring managers discussed intern programs, but what an actual intern program consisted of regarding hours, wages, and expectations of the intern varied greatly. The variety results from the departments mixed ability to fund and utilize interns within their organization.

The hiring process itself was also a barrier discovered in this research for both the newly hired employee and the hiring managers. Hiring managers reported updating the hiring process to shorten the timeline, send out offers before other organizations and alter the tolerance level for applicants' mistakes. Hiring managers' reports support the fact the supply and demand of highly trained qualified employees is more competitive than it has been in the last 10-15 years and some organizations have lowered their minimum required certification levels to hire staff. In removing higher level certification levels, organizations are showing they can run a department without the employee starting work with all desired certifications and they can invest time and training in their new hires. Hiring managers adjustments to hiring requirements show they are responsive to the employee market. New hires reported having to make employment decisions based on hiring process timelines and sometimes limited historical knowledge of the organization. Communication and process timeliness was an imperative aspect to an applicant's experience in obtaining employment.

While employers are shortening hiring processes, eliminating superfluous barriers of the past such as specific associate degrees, higher-level certifications, and allowing for lateral transfers; once other organizations start to do the same thing the staffing crisis remains. An upstream investment in staffing must still be completed for true staffing sustainability to be accomplished. Full-time hiring policies and job postings collected in the research did not reflect the organizations' ability or willingness to invest or train employees other than the one job posting for non-certified applicants.

Diversity and maintaining a safe working and learning environment were noted topics in the stress and time management theme. These topics were also noted in the literature review as possible barriers for entering the fire and EMS workforce. Hiring managers discussed their

investments into youth camps, explorer programs and high school outreach. Outside of showing the public and youth what the fire and EMS work is, little was discussed about actively adjusting the workplace culture or training environment. One organization discussed the importance of inclusivity and that by enforcing that culture it worked as a recruitment tool organically.

Limitations

This research utilized generic qualitative inquiry to answer what barriers exist for entering the fire and EMS field of work. Data was collected and analyzed with answers provided to the research question. There was an appropriate sample size for a qualitative study that provided a range of participants as far as sex, age of employee, time on the job and department location and service level. The small number of participants is a limiting factor that doesn't allow for a large population generalization. Another limitation of the study is the pool of participants interviewed consisted of recently hired employees asked to discuss barriers to employment in the field. These participants had navigated those barriers to the point where they were not true barriers, as they were able to overcome them. This study did not allow for recruitment of participants that have not been hired full time by an organization which may show additional barriers to employment.

A second limitation is the comparison of organizations hiring managers to one another. Combination services versus career services, advanced EMS services versus basic life support services and the size of the organization play a crucial role in an organization's ability to adjust hiring practices, recruitment, and utilization of staff. Additional research into each of these variables would provide more accurate data on which level of service could utilize the opportunities available to remove barriers.

Implications and Recommendations to the Field

The research did indicate that hiring managers and organizations are open to adjusting

hiring practices and requirements to maintain or recruit adequate staff. The research also

indicated that newly hired fire and EMS employees can navigate various barriers to obtain

employment. Fire and EMS agencies are utilizing unique tools such as internships and investing

in employees to complete certification training requirements. Registered apprenticeship

programs, utilized across various professional trades, could be a solution for the fire service that

can give a respected, consistent process for recruitment and training new employees. This could

remove the confusion on how to enter the field, how to navigate training and steady the

competition between organizations in hiring employees. "In addition to ensuring employers

have a well-trained workforce with the right mix of skills, registered apprenticeship programs are

seen as an effective way of promoting workforce diversity" (Bates et al., 2018). The investment

in training, the department's financial support and mentorship for the employee are barriers that

are eliminated with a registered apprenticeship program. The financial impact of hiring an

employee before they can obtain the minimum training requirements such as firefighter and

EMT certifications is negligible when these courses can be completed relatively quickly.

Funding opportunities are available through the Department of Labor and additional grant

funding initiatives (Bates et al., 2018). The United States Fire Administration has also announced

its commitment to solutions in the staffing crisis felt across America.

> The creation of a national fire service apprenticeship program would assist local
>
> communities in addressing the shortage of firefighters in both career and volunteer
>
> departments and help make the fire service become a more diverse and inclusive
>
> vocation. The fire service apprenticeship program should be designed to mirror the

Department of Labor's Registered Apprenticeship and the Industry-Recognized

Apprenticeship Programs. (United States Fire Administration, 2023).

This financial support, through grants or other federal funding, would minimize the financial

barrier for organizations supporting apprentice programs.

Stress and time management was a common theme described by recently hired

employees which mirrors the literature review regarding long hours, workplace stress and

harassment. Increasing the diversity of the fire and EMS workforce and adding staff to the

rosters as desired by the hiring managers can address these concerns. Apprenticeship programs

could be designed to incorporate more training in the soft skills necessary for success in the fire

and EMS field. The organization could hire non-trained employees and schedule additional time

for training that supports these needs. The training could prepare staff for leadership positions in

the future and train them in resiliency and communication skills. Apprentice programs will also

eliminate barriers for women and minorities looking to enter the fire and EMS field because of

increased support and removed financial implications. By increasing the pool of potential hires

for the fire and EMS workforce, more staff would be available to fill vacancies, minimizing the

overtime and mandatory shifts that currently sway employees away from organizations.

Increasing diversity in an organization can naturally increase the recruitment pool for future

applicants when minority groups see more people like themselves working in the field of fire and

EMS.

Recommendations for Future Research

The conclusions from the data collected in this study suggest that apprenticeship

programs are a viable consideration for the fire and EMS field to recruit and train employees.

Further research on funding opportunities, and alternative means of conducting fire and EMS

initial training and education should be researched. Quantitative studies on the financial impact of hiring untrained personnel versus trained staff could provide more data into the value of apprenticeship programs or other recruitment and training models. A third recommendation for future research is to seek what qualities or values employees who are hired have compared to those who don't make it full time in this career.

Conclusion

The research focused on discovering barriers for entering the fire and EMS workforce and what solutions may exist to reduce these barriers. Utilizing the generic qualitative inquiry approach, lived experiences of recently hired employees and hiring managers for organizations was collected. The data was analyzed, and themes were discovered, showing some barriers and some alternative approaches to recruitment and hiring practices. A complete literature review explored closely related fields of work such as the trades, military, and nursing field. The literature review showed work environment and training as barriers for recruitment and hiring. Fire and EMS organizations are open to adjusting hiring practices and requirements to accommodate the workforce market. Recently hired employees in this study could navigate barriers such as stress from financial shortfalls and education requirements as well as navigate hiring processes. Many participants participated in a version of an intern program with an organization to gain insight, education, and support for pursing employment. An organization's investment into an intern program depends on the financial means and workforce ability to support employees that are not fully trained. These programs closely mirror registered apprenticeship programs in a variety of ways such as supporting an employee's education and on-the-job training with some financial support. The research supports further consideration and exploration of registered apprenticeship programs for increased recruitment, diversity and

training in the fire and EMS field. Secondly, the research recommends organizations actively

pursue inclusive, safe environments to continue strengthening diversity and recruitment into the

workforce.

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APPENDICES

Appendix A

Deputy Chief Tanya Reynen
115 Main Street
Delafield WI 53018
treynen@lakecountryfire.com
262-337-9751

I am conducting a research project as part of the Executive Fire Officer program at the National Fire Academy. I am hoping to identify barriers that impede entry into a career in the fire service and what organizations are doing to address these barriers. My two main research questions are below.

For new hires:
What was your experience for obtaining employment as a career Firefighter/EMS provider?

For hiring managers:
Please describe your organization's experience in the last five years with the following & discuss any changes to your processes:
Recruiting employees
Hiring employees
Retaining employees.
I am seeking participation in my research from employees who have been hired in the last 18 months as a career fire/EMS provider and hiring managers/officers at career fire/EMS organizations. I am also seeking documents outlining hiring processes for career organizations.

If your organization has people that meet this criterion and are interested in participating in my research project, I would greatly appreciate your permission and their contact information. Participants will be asked to complete a brief questionnaire covering general information and to complete an interview that will take approximately one hour. These interviews can be in person or virtual and all identifying information will be kept confidential and not included in the research paper.   If you are willing to share your hiring policies/practices that would also be beneficial.

Thank you for your consideration of this request. If you agree, please respond to this email with their contact information. Please alert the participant to expect contact from me within two business days. The research conducted will help identify best practices in hiring processes to relieve staffing shortages being experienced in the field.

Sincerely,

Deputy Chief Tanya Reynen

Appendix B

Identification of Investigators & Purpose of Study

You are being asked to participate in a research study conducted by Tanya Reynen from the National Fire Academy (NFA). The purpose of this study is to develop a better understanding of barriers for starting a career in the fire and emergency services. This study will contribute to the researcher's completion of their final project.

Research Procedures

Should you decide to participate in this research study, you will be asked to sign this consent form once all your questions have been answered to your satisfaction. This study consists of an interview that will be administered to individual participants. You will be asked to provide answers to a series of questions related to your experience. **An audio recording of the interview will be taken for transcription purposes. The audio file will be deleted at the conclusion of the study and will not be shared with anyone other than the researcher.** You may ask to turn off the audio recording if you do not wish to be recorded.

Time Required

Participation in this study will require approximately 60 minutes of your time.

Risks

The investigator does not perceive more than minimal risks from your involvement in this study (that is, no risks beyond the risks associated with everyday life).
The NFA and its contractors take no responsibility for the actions or outcomes of the research study.

Benefits

There are no direct benefits to the participant; however, information from this study may benefit your and other communities in the future.

Incentives

There are no incentives (financial or otherwise) associated with participation in this study.

Confidentiality

The results of this research will be presented to NFA program faculty and students. The results of this project will be coded in such a way that the respondent's identity will not be attached to the final form of this study. The researcher retains the right to use and publish non-identifiable data. While individual

responses are confidential, aggregate data will be presented representing averages or generalizations about the responses as a whole. All data will be stored in a secure location accessible only to the researcher. Upon completion of the study, all information that matches up individual respondents with their answers, including audio recordings, will be destroyed. Final aggregate results will be made available to participants upon request.

Participation & Withdrawal

Your participation is entirely voluntary. You are free to choose not to participate. Should you choose to participate, you can withdraw at any time without consequences of any kind.

Questions about the Study

If you have questions or concerns during the time of your participation in this study, or after its completion, or you would like to receive a copy of the final aggregate results of this study, please contact:

Tanya Reynen   **Christine Spangler**
Student   Branch Chief, Leadership and Community Risk
National Fire Academy   National Fire Academy
treynen@lakecountryfire.com   Christine.spangler@fema.dhs.gov

Giving of Consent

I have read this consent form, and I understand what is being requested of me as a participant in this study. I freely consent to participate. I have received satisfactory answers to my questions. The investigator provided me with a copy of this form. I certify that I am at least 18 years of age.

☐ I give consent to be filmed and audio recorded during my interview. _____ (interviewee initials)
☐ I give consent to be audio recorded during my interview. _____ (interviewee initials)

Interviewer Signature		Date:	

Interviewee Signature		Date:	
Interviewee Signature		Date:	

Please continue to next page

General Demographic Information Request

Please complete the brief survey to collect general demographic information. All information will be kept confidential and destroyed after research is completed.

Full Name	
Age	
Gender Identity	
Department Affiliation	
Role(s) within the organization	
Number of years in the organization	
Education level or Certifications	

Appendix C
New Hire Interview Guide

Date:		Location:	
Interviewer:		**Contact Information:**	
Interviewee:		**Contact Information:**	
Time Began:	AM / PM	**Time Ended:**	AM / PM

Introduction

Interviewer:
"Thank you for meeting with me.
I'm currently enrolled in the National Fire Academy's Executive Fire Officer Program and am completing a course focused on leadership within our communities. The purpose of this interview is to help me develop a better understanding of our community.
I have 15 questions I'd like to ask you today, and I want you to feel free to share your honest opinions with me. Before we begin, do you have any questions?
May I record our conversation to assist in my notetaking?"

Interviewer:
"Thank you again for participating in this interview. I'll be asking questions about you and your community. There are no right or wrong answers, so please just share whatever comes to your mind. I will be taking notes, but please don't let that distract you."

Question 1: Pease share your name, current position, and organization.

Response	Interviewee's Reaction

Question 2: What was your experience for obtaining employment as a career Firefighter/EMS provider?

Response	Interviewee's Reaction

Question 3: How did you learn of Fire/EMS field as a career option?

Response	Interviewee's Reaction

Question 4: Describe your experience getting started in the field such as obtaining initial education/certifications or affiliated with an organization.

Response	Interviewee's Reaction

Question 5: Describe your experience of obtaining certifications/school experience. How did you balance work, school and home life?

Response	Interviewee's Reaction

Question 6: Describe any challenges you had to overcome in order to obtain education or employment such as outside work, childcare, transportation, financial or other.

Response	Interviewee's Reaction

Question 7: Describe your experience seeking and obtaining employment.
What steps were included in each process?
    IE Interview, assessments, physical agility etc.
How long did the process(s) take? 1-3 months, weeks?

Response	Interviewee's Reaction

Question 8: Describe your probationary period or first 12 months on the job in regard to challenges overcome.

Work/home life scheduling, childcare, additional certification/course work, inclusivity with crew etc. How did you overcome these challenges?	
Response	**Interviewee's Reaction**
Question 9: Do you have anything else you would like to add that you feel would add value to this research?	
Response	**Interviewee's Reaction**

General Interview Notes

Appendix D
Hiring Manager Interview Guide

Date:		Location:	
Interviewer:		Contact Information:	
Interviewee:		Contact Information:	
Time Began:	AM / PM	Time Ended:	AM / PM

Introduction

Interviewer:
"Thank you for meeting with me. *I'm currently enrolled in the National Fire Academy's Executive Fire Officer Program and am completing a course focused on leadership within our communities. The purpose of this interview is to help me develop a better understanding of our community.* *I have 6 questions I'd like to ask you today, and I want you to feel free to share your honest opinions with me. Before we begin, do you have any questions?* *May I record our conversation to assist in my notetaking?"*

Interviewer:
"Thank you again for participating in this interview. I'll be asking questions about you and your community. There are no right or wrong answers, so please just share whatever comes to your mind. I will be taking notes, but please don't let that distract you."

Question 1: Pease share your name, current position, and organization.

Response	Interviewee's Reaction

Question 2: Please describe your organization's experience with the following:
    a. Recruiting employees
    b. Hiring employees
    c. Retaining employees.

Response	Interviewee's Reaction

Question 3: How has your organization approached recruitment in the last five years.

      a. **Has this impacted hiring employees?**

      b. **Has this impacted the retention of employees?**

Response	Interviewee's Reaction

Question 4: How your organization adjusted your hiring process in the last 5-10 years, if so, in what ways?
      a. **How has that impacted the recruitment of employees?**

      b. **How has that impacted the retention of employees?**

Response	Interviewee's Reaction

Question 5: What has your organization's experience been with new hires from these changes?

Response	Interviewee's Reaction

Question 6: Do you have anything else you would like to add that you feel would add value to this research?

Response	Interviewee's Reaction

General Interview Notes