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Assessment of the Navy Security Forces through Evaluation of Recent Data Trends

March 2025

LT Stephan A. Munari, USN

Thesis Advisors: Dr. Ryan S. Sullivan, Associate Professor
Dr. Maxim Massenkoff, Assistant Professor

Department of Defense Management

Naval Postgraduate School

Prepared for the Naval Postgraduate School, Monterey, CA 93943

ACQUISITION RESEARCH PROGRAM
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ABSTRACT

This thesis examines civilian police officers and enlisted Master at Arms (MA) in the Navy Security Forces (NSF). Data is compiled through Defense Manpower Data Center (DMDC) records from 2017–2024 for police officers and 2001–2024 for MA personnel. The research identifies several patterns in the NSF police force, including high turnover rates with new hires comprising up to 22% of the force annually. Research also shows that comparing 2024 to 2017, the NSF police force is 15% less experienced, 7% younger, and its share of police officers with prior military service is 26% less. Most notably, the study exposes a substantial pay disparity between NSF police officers and other police officers. Law enforcement officers nationally earn approximately 33% more than NSF officers. This gap is even more profound in states where NSF personnel are predominantly stationed. Officers in California, Florida, and Hawaii earn 76%, 58%, and 55% more respectively than NSF officers. This disparity is particularly problematic considering NSF officers are commonly stationed in expensive coastal areas in these states. The thesis also tracks changes within the MA force, growing by 418% between 2001 and 2005 before reaching a nearly constant size. Significant findings in the MA community include a force that is pursuing college more often, the proportion of females increasing from less than 15% to almost 25%, and the average age dropping about five years when comparing pre- and post-9/11 data.

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ABOUT THE AUTHOR

LT Stephan Munari is a native of Cody, WY and attended the University of Wyoming. He graduated in 2018 with a bachelor's degree in mechanical engineering. After graduation, he completed Officer Development School at Naval Station Newport, Rhode Island and received his commission as a Nuclear Power School instructor. From 2018 to 2023, LT Munari was assigned to Naval Nuclear Power Training Command where he taught enlisted sailors and officers Heat Transfer and Fluid Flow and Reactor Dynamics and Core Characteristics while serving as the division officer until 2023, when he reported to Naval Postgraduate School. LT Munari will earn a master’s degree in management before reporting to Navy Manpower Analysis Center where he will be assigned to the command's Aviation Manpower Requirements department.

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TABLE OF CONTENTS

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LIST OF FIGURES

LIST OF TABLES

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LIST OF ACRONYMS AND ABBREVIATIONS

ASF	auxiliary security force
ASVAB	armed services vocational aptitude battery
CWO	chief warrant officer
DMDC	Defense Manpower Data Center
DoD	Department of Defense
FBI	Federal Bureau of Investigation
FLETC	Federal Law Enforcement Training Centers
LDO	limited duty officer
MA	master at arms
MEPS	Military Entrance Processing Station
MHS	Military Health System
NSF	navy security forces
NTTC	Naval Technical Training Center
OPNAV	Office of the Chief of Naval Operations
RMC	regular military compensation
RTC	Recruit Training Command
USD	United States dollars
WO	warrant officer

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I. INTRODUCTION

Every day, hundreds of thousands of Navy servicemembers and civilian employees commute to their respective Navy base to protect our nation. However, the very people working on these bases need to be protected along with the assets that make the Navy a lethal fighting force. The group that protects these Navy bases, sailors, and civilian employees working at Navy facilities is called the navy security forces (NSF).

This thesis investigates demographic trends of the NSF over time to help inform the recruiting efforts of both the enlisted Master at Arms (MA) and the police officers serving as a part of the NSF. It is also my desire that it will inform future studies specifically on the compensation of NSF police officers.

This thesis aims to analyze the recent trends associated with both the police officers and the MAs of the NSF as well as investigate what role compensation has in attracting candidates into the NSF. With this objective in mind, the following two research questions will be answered. First, what are the recent trends in workforce composition of the NSF? Second, how do the salaries of NSF employees compare to other law enforcement organizations?

Prior research indicates the importance of military pay in achieving recruiting goals and shows that military pay should be in approximately the 70th percentile of civilian pay rates when controlling for education (Maude & Ivory, 2002). Although recent studies have found that military pay is significantly above the 70th percentile (high 70s and low 80s), experts caution against lowering military compensation relative to civilian workers with similar education credentials (Asch et al., 2020).

Prior research in civilian law enforcement shows that starting salary is the most important factor in attracting new applicants (Wilson, Rostker et al., 2010), while other research shows how vulnerable police departments can be if their compensation packages do not keep pace with other organizations specifically within a relatively short distance (Wilson, Dalton et al., 2010). This lack of incentive for officers to stay at their current agency opens the door for officers to pursue other employment without relocating too far. Research also demonstrates the negative effects of major events involving law

enforcement agencies have had on college students potentially pursuing a career in the field (Morrow et al., 2019).

Prior research also points to problems of police discrimination happening in the United States and the sentiment surrounding law enforcement agencies nationwide. Although most of the research points to officers using elevated levels of nonlethal force on minorities compared to White citizens (Goncalves & Mello, 2021; Hoekstra & Sloan, 2022; Knox et al., 2020), there is also evidence to suggest that when lethal force is used, officers are not discriminatory in their actions (Fryer, 2017). Although there is conflicting evidence when speaking to police discrimination, polls also suggest that public perception of policing agencies has become more negative in the recent past (Gallup, 2024). Polls also indicate that the general public views police as being stricter towards minorities than towards White members of the community (Quinnipiac University, 2021).

This thesis adds to prior literature by showing that the NSF police officers are shifting to a force with high turnover and a large percentage of newly hired officers, as well as a force that is less experienced, younger, and has less prior military experience than ever before. In addition, this thesis exposes the pay disparities that exist between the average NSF police officers and the police officers of other agencies and encourages additional, and more exhaustive studies to be performed on this finding. This thesis also adds to research on the MA community of the NSF and shows that the force is pursuing more education, has increased the proportion of females, and has seen a significant reduction in the average MA age since the massive ramp up of the force starting in 2001.

Data for this study is provided by the Defense Manpower Data Center (DMDC) and includes data on NSF police officers from 2017 to 2024. Data was recorded in September of every year except in 2024 when it was recorded in July. Important variables to the police office portion of the study includes age, sex, race, salary, education level achieved, years of service, prior military service, and duty location and includes 18,962 observations throughout the eight years of observation. Data also includes information on the MA force. In this case, data was collected from 2001 to 2024 in September of every year and includes age, sex, race, education level achieved, years of service, pay grade, and duty location.

The research identifies several patterns in the NSF police force, including high turnover rates with new hires resulting in up to 22% of the force annually. Research also shows that comparing 2024 to 2017, the NSF police force is 15% less experienced, 7% younger, and its share of police officers with prior military service is 26% less (77% compared to 57% in 2024).

The biggest finding of this thesis exposed a substantial pay disparity between NSF police officers and other police officers. Law enforcement officers nationally earn 33% more than NSF police officers on average. This gap is even more profound in states where NSF personnel are predominantly stationed. Law enforcement officers in California, Florida, and Hawaii earn 76%, 58%, and 55% more respectively than the NSF officers in these states. This disparity is particularly problematic considering NSF officers are commonly stationed in expensive coastal areas in these states.

Significant findings among the MA force include showing the MA force grew by 418% between 2001 and 2005 before reaching a nearly constant size. Other significant findings in the MA community include a force that is more educated, the proportion of females increasing from less than 15% in 2001 to over 20% in 2024, and the average age dropping about five years when comparing pre 9/11 and post 9/11 data.

This thesis is presented in six separate chapters. Chapter I introduces the thesis and forms its structural basis. Chapter II gives relevant background on the NSF to include a description of the personnel involved in the NSF, and major events that have involved law enforcement in recent history. Chapter III explores prior literature on military recruiting and pay, police recruiting and pay, and police discrimination and perception. Chapter IV describes the data and descriptive statistics being used for the study. Chapter V shows trends of the force overtime and analyzes those trends. Chapter VI concludes the paper with the main results and recommendations for further studies.

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II. BACKGROUND

This chapter is broken into two sections. The first section focuses on the personnel who make up the NSF to include both military and civilian members of the force. It also discusses the training they go through to become part of the force. The second section discusses major events in the United States that have directly affected the NSF community, or events that have contributed to the American public's perception of law enforcement.

A. PERSONNEL AND TRAINING

1. Enlisted Master at Arms

Like all enlisted members of the Navy, those pursuing the Navy MA rating start their journey of joining the Navy by talking to a recruiter (Navy Recruiting Command, n.d.-c). The recruiter will determine eligibility, but basic requirements include being either a U.S. citizen or a legal permanent resident, being at least 17 but no older than 41, having a high school diploma or GED, and meeting the physical, mental and moral standards of the Navy (Navy Recruiting Command, n.d.-c). Those interested in joining the Navy must also undergo a medical exam at a Military Entrance Processing Station (MEPS) and achieve the required armed services vocational aptitude battery (ASVAB) score required for the rating the applicant is interested in (Navy Recruiting Command, n.d.-c).

After being processed into the Navy, recruits will attend a 10-week course at Recruit Training Command (RTC), commonly known as boot camp where recruits learn the basics of being in the military with other recruits from all over the country (Navy Recruiting Command, n.d.-b). Navy boot camp is located in Great Lakes, Illinois where those attending bootcamp will be given instruction to include naval history, watch-standing, physical training, firearms, firefighting, and line handling before reuniting with their families after 10 weeks with little to no communication with their loved ones (Navy Recruiting Command, n.d.-b).

After graduating boot camp, sailors hoping to become a MA are sent to Naval Technical Training Center (NTTC) located in San Antonio, TX where they will attend another 10-week course known as "A" school (Navy Recruiting Command, n.d.-a). This school provides initial training to sailors to prepare them to fulfill their job duties. Sailors are trained in the basics of the MA duties to include techniques in antiterrorism, armed sentry, and physical restraint as well as courses in military and civil law and firearms (My Navy HR, 2024). Once students graduate from A school at NTTC, they are given the title of "Master at Arms." After completion of A-school, sailors may be sent to perform their duties in the fleet, or may be sent to additional Navy training to obtain advanced skills (My Navy HR, 2024).

2. Limited Duty Officers, Warrant Officers, and Chief Warrant Officers

Limited duty officers (LDO), warrant officers (WO), and chief warrant officers (CWO) are all officers who have made a transition from enlisted service to service as an officer due to their strong leadership and technical skills (Office of the Chief of Naval Operations [OPNAV], 2024). The big difference between WOs and CWOs is the name of the rank, otherwise they belong to the same type of officer designation. For example, WO refers to the first rank in that designation (W-1) whereas CWO refers to the ranks of W-2 through W-5). To be eligible for either of these officer programs, candidates must have achieved the rank of E-7 or senior or be selection board eligible for E7 (OPNAV, 2024). However, for WO positions (W-1), those who are E-5 and senior may apply (OPNAV, 2024). These positions have other eligibility requirements, however, because all of these positions are being filled by those who are currently senior enlisted personnel, they are quite similar to the requirements maintained by the enlisted communities.

The differences between the two can seem very subtle due to the LDOs, WOs and CWOs having a background in enlisted service and becoming an officer. However, the official instruction (Office of the Chief of Naval Operations [OPNAV], 2009) guiding applicants to apply for thesis programs and describing their jobs states,

> LDOs are technically-oriented officers who perform duties limited to specific occupational fields and require strong managerial skills. CWOs are technical specialists who perform duties requiring extensive knowledge and skills of a specific occupational field at a level beyond

> what is normally expected of senior enlisted personnel. WO1s are technical specialists who perform duties requiring extensive knowledge and skills of a specific occupational field. (OPNAV, 2024, p. 2).

To summarize, LDOs, WOs, and CWOs are the technical experts in their field who have been screened to accept more responsibility than their previous position as a member of the senior enlisted community and although all of these positions require leadership skills, LDOs are thrust into more of a managerial position than the WOs or CWOs (OPNAV, 2024).

There are dozens of fields that comprise the LDO, CWO, and WO communities. However, these officers are supposed to be technical experts in their field and therefore enlisted members cannot apply to any community they wish, but only the communities that are related to their enlisted service occupation (OPNAV, 2024). For the case of MAs, they are only allowed to apply for the 649X designator (security) within the LDO community and the 749X designator (security technician) within the WO and CWO community (OPNAV, 2024). Once these enlisted members are accepted to their respective communities, LDOs are committed to at least 10 additional years of service and CWOs are committed to an additional 6 years of service (OPNAV, 2024).

3. Auxiliary Security Forces

The vast majority of the NSF is comprised of enlisted MAs, civilian police officers, and civilian gate guards. There are other enlisted members of the NSF, however, who are associated with the NSF but who only serve in a security role as needed (OPNAV, 2009). These are called the auxiliary security force (ASF). They are made up of enlisted sailors of varying ratings who serve alongside the MAs and other components of the NSF during contingencies, natural disasters, civil disturbances, exercises, during increased threat conditions or whenever directed by the chain of command (Stenberg, 2013). To qualify as a member of the ASF, servicemembers must attend a two-week training course training them on the basic skills needed to assist the MAs and the police officers if needed (Stenberg, 2013). Although armed for the period for which they are standing watch with their NSF colleagues, this is not their specialty, and they do not have the full authority that the NSF does.

Due to the fact that those serving in the ASF still have their normal jobs to do, the problems of recruiting in the NSF are only exasperated when the Navy is having problems recruiting other ratings that may eventually serve alongside the NSF in the ASF.

4. Civilian Gate Guards and Police Requirements

Although many people tend to think of the enlisted MAs as the security force of the Navy, they are complimented by civilian gate guards and police to help keep our bases and personnel safe and secure. These threats may come from either outside threats, or threats of personnel who are authorized to be on base such as the active shooter who committed violent acts at Naval Air Station Pensacola in December of 2019.

Eligibility for a security guard position begins with a combination of experience, education and training. To meet the minimum requirements needed to apply for a gate guard position, candidates must have at least three months of general experience and a high school diploma (U.S. Office of Personnel Management, n.d.-b). With increasing experience, education, and training, gate guards are eligible for a higher pay grade (U.S. Office of Personnel Management, n.d.-b).

The experience relevant to the 0085 gate guard position is broken up into both general and specialized experience (U.S. Office of Personnel Management, n.d.-b). General experience is work that involves enforcing written policies with both community members and colleagues alike (U.S. Office of Personnel Management, n.d.-b). General experience also is defined as providing some kind of assistance and could take place in a variety of areas of work (U.S. Office of Personnel Management, n.d.-b). Specialized experience is needed to apply for higher pay grade jobs and is gained from jobs that involve protection of property in a government or private setting (U.S. Office of Personnel Management, n.d.-b). These roles must have also prepared applicants for the job of gate guard by providing knowledge of techniques and protective systems (U.S. Office of Personnel Management, n.d.-b).

In addition to experience, education, and training, candidates may be required to undergo a character investigation to assess an applicant's moral character and devotion to

the U.S. government (U.S. Office of Personnel Management, n.d.-b). In addition to a character investigation, there are also medical requirements to apply for gate guard jobs pertaining to applicant's vision, hearing, and the ability to perform the duties that may require high levels of physical exertion and hazardous job conditions (U.S. Office of Personnel Management, n.d.-b). Once applicants for civilian gate guard positions are hired, they can begin work and start the qualification process at the base they are hired for.

The primary duties of the civilian police officers of the NSF are to prevent and investigate crimes, apprehend violators, and provide assistance to those in emergency situations. Similar to the gate guard positions, civilian police officers must have a minimum requirement of three months of general experience as well as a high school diploma or equivalent to apply for the lowest pay grade of police officer (U.S. Office of Personnel Management, n.d.-a). General experience for police officers consists of work in a broad range of fields but must consist of protecting property, equipment, data, or materials (U.S. Office of Personnel Management, n.d.-a). General experience could also consist of a job that involves using one's best judgement grounded on directions, rules, regulations, and laws (U.S. Office of Personnel Management, n.d.-a). Specialized experience consists of previous jobs that are directly in law enforcement or security that would have provided knowledge in basic laws and regulations, operations, policing techniques, and maintenance of order and protecting property and lives (U.S. Office of Personnel Management, n.d.-a). Additionally, civilian police officers must also undergo an investigation into their character and loyalty to the U.S. Government as well as be eligible physically for a job that may involve extreme physical requirements and the need to perform in harsh environments (U.S. Office of Personnel Management, n.d.-a).

One major difference between the gate guards and police officers of the NSF is the advanced training the police officers must go through. After being hired as a NSF police officer, officers are sent to a Federal Law Enforcement Training Center (FLETC) in Glynco, GA, Artesia, NM, Charleston, SC, or Cheltenham, MD (Federal Law Enforcement Training Centers, n.d.). This training is mandatory and essential for the duties the civilian police of the NSF may be asked to do during their time as a part of the NSF.

FLETC was created in the 1970s as a bureau of the Department of the Treasury with the mission "to train and support the training of federal, state, local, and tribal law enforcement officers and international partners that are responsible for enforcing laws, treaties, and regulations within the United States and abroad" (Federal Law Enforcement Training Centers, n.d.). It was created in response to studies conducted in the late 1960s that indicated consistent training across all federal law enforcement officers was needed due to the variety of quality and training received by federal agencies throughout the country (Federal Law Enforcement Training Centers, n.d.). In 1970, Congress authorized resources to plan and construct the first FLETC facility in Washington, DC, however due to construction delays, decision makers began to look elsewhere for a new location (Federal Law Enforcement Training Centers, n.d.). Five years later, the new headquarters location for FLETC was chosen as Glynco Naval Air Station, and in March of 2003, FLETC was transferred from the Department of the Treasury to the Department of Homeland Security to better reflect the department's mission following the September 11 attacks (Federal Law Enforcement Training Centers, n.d.).

B. MAJOR EVENTS

1. Pensacola Shooting

The NSF are the tip of the spear when it comes to keeping our bases, vessels, and personnel safe (Navy Recruiting Command, n.d.-a). One goal for the NSF is to keep those with unauthorized access out of Navy bases and respond as necessary to threats that occur within the scope of their work. However, when disaster strikes on Navy bases with active shooters or threats of any kind, they are the first to respond to the threat while backup rushes to the scene.

Fortunately, events that require the NSF's response, such as terrorist attacks, active shooters, or other life-threatening events are rare on United States military bases. The latest significant attack occurred on December 6, 2019, at Pensacola Naval Air Station when a member of the Royal Saudi Air Force, Lt. Mohammed Saeed Alshamrani, wounded eight Americans and took the lives of three U.S. sailors (Little, 2020). Within nine minutes of the first shots fired by Lt. Alshamrani, NSF entered the space occupied by Lt. Alshamrani and engaged him, resulting in an injury to one civilian NSF member.

(Little, 2020). During his press conference on January 13, 2020, Attorney General Bill Barr offered his thanks to base personnel to include the NSF for their rapid response to immediately engage the shooter, saving countless lives (Barr, 2020).

The active shooter incident in Pensacola resulted in numerous lessons learned and changes to Navy policy involving force protection as well as a change to the rules that pertain to international military students when they are training in the United States (U.S. Navy, n.d.). Most notably, all Navy personnel were ordered to complete active shooter training with additional trainings for servicemembers stationed overseas, and additional random antiterrorism measures were implemented at all Navy bases (U.S. Navy, n.d.). Additionally, the Navy recognized the need for improving their mass alert notification capabilities, other physical security measures, and policy changes (U.S. Navy, n.d.). Policy changes pertaining to international military students training in the United States included: enhanced screening, rules prohibiting them from handling firearms, and reduced access to areas where they have official military duties (U.S. Navy, n.d.).

Although Lt. Alshamrani was a student at Pensacola Naval Air Station and was authorized access to the base, many more lives could have been lost without the quick response of the NSF. The NSF's response time and effectiveness are undoubtedly a function of how well it is manned to complete their mission. If the NSF is severely undermanned this could result in loss of life or attack on Navy assets throughout our country. December 6, 2019, should serve as an example of why the NSF is of the utmost importance in protecting our personnel.

2. Michael Brown

On the morning of August 10, 2014, a 911 call was received in Ferguson, Missouri notifying police that 18 year old African American, Michael Brown, had just left a convenience store after assaulting a convenience store worker and stealing some cigars (Brown, 2014). Although Officer Darren Wilson did not stop Michael Brown because he thought he was a suspect in the robbery, Officer Wilson crossed paths with both Michael Brown and a friend of his walking in the road and stopped them (Brown, 2014). During the police stop, Officer Wilson claimed that Michael Brown physically

assaulted him and reached for his gun during a struggle in which Officer Wilson fatally shot unarmed Michael Brown (Brown, 2014).

Just two days later, protests started to take place outside of the Ferguson Police Department and continued for days (Brown, 2014). At this point, peaceful protesting had now been poisoned by rioting and looting (Brown, 2014). Due to the police department receiving death threats and multiple reports of looting, the issue had now elevated to a position where the St. Louis Mayor, Governor of Missouri, and even President Obama had publicly addressed the issue and asked for peace (Brown, 2014). At the same time, federal organizations such as the Federal Bureau of Investigation (FBI) and Justice Department had opened their own investigations into the matter (Brown, 2014). As tensions continued to build, silent vigils and protests started to gain momentum across the United States, but just over a week later on August 18, the national guard was ordered into the area after protesters shot and threw Molotov cocktails at police (Brown, 2014). As the protesting continued, protestors looted more businesses and coordinated and carried out an attempt to block roads and take over the command center of local police (Brown, 2014). Over the next weeks and months, the protesting subsided while authorities awaited the results of the grand jury hearing (Brown, 2014).

Although civil unrest in the days following the death of Michael Brown was at times hard for law enforcement to manage, on November 24, the author writes the "grand jury declined to indict officer Darren Wilson for firing six shots in the confrontation that killed Michael Brown" (para. 89) resulting in violent riots throughout the city (Brown, 2014). Many stores and police cars were set on fire, and police reportedly came under heavy automatic weapon fire resulting in the national guard being called back in to the area to respond to the threats (Brown, 2014). Eventually, the protests and riots dissipated, and the national guard was able to leave the area again (Brown, 2014).

In the case of Michael Brown's death, the people of Ferguson demanded reform from their public servants and used their voices and votes to demand change (Brown, 2014). In the year following the incident, voters chose to elect two more Black representatives to the city council, raising Black membership to three of the six total city council seats (Brown, 2014). In addition to the new city council, a new Black interim

police chief was named to the job, aiming to build trust with the community (Brown, 2014). Also, almost three years after the incident, the Brown family successfully reached an agreement to settle their lawsuit with the city of Ferguson for $1.5 million dollars (NBC News, 2017).

Although Black Lives Matter was a very new organization during the incidents in Ferguson, it had been created in 2013 in response to other police interactions with the Black community that they saw as unjust (Black Lives Matter, 2024). Just one year later with the Michael Brown incident, their organization gained tremendous momentum as it became a well-known organization to many Americans. The organization's name became a rally cry for protesters around the country and the world during the numerous incidents of African American deaths at the hands of police. Black Lives Matter continued to grow throughout the country and is still a well-recognized organization on racial issues involving police.

Although the NSF had no involvement in the controversy surrounding Michael Brown, the image of law enforcement officers across the nation was tarnished and trust among local communities was damaged. There is no doubt that this event has had an effect on not only local police departments' ability to recruit officers, but federal agencies like the NSF as well.

3. George Floyd

On the night of May 25, 2020, Minneapolis police officers responded to a call where Minneapolis resident George Floyd was accused of using a counterfeit $20 bill at a convenience store (The Associated Press, 2022). As a struggle ensued between police and George Floyd, Floyd "ends up handcuffed and face down on the ground. Officer Derek Chauvin presses his knee into Floyd's neck for about nine minutes" (The Associated Press, 2022). Several bystanders took videos of the incident and George Floyd is heard in the videos saying, "I can't breathe" (The Associated Press, 2022). Later that night he is pronounced dead at the hospital with police saying the death was the result of a medical issue (The Associated Press, 2022). The county medical examiner would later find that George Floyd's heart stopped as a result of police compressing his neck, but also noted

that George had other existing health issues contributing to his death (The Associated Press, 2022).

As the witnesses of George Floyd's death started to circulate their videos online, multiple entities including the Minneapolis Police Department and the FBI announced they would be investigating the incident (The Associated Press, 2022). Within one day, protests began in the city of Minneapolis and around the country, and there were reports of looting and fires (The Associated Press, 2022). As the protests continued, the Minnesota National Guard was activated, and the next day Officer Derek Chauvin was arrested and charged with third-degree murder that would later be changed to a second-degree murder charge (The Associated Press, 2022). As protesters continued in their pursuit of police reform, curfews were imposed in major cities and governors across the country activated a total of about 5,000 National Guard soldiers across 15 states and Washington, DC, to keep the peace (Khalil et al., 2020). By the end of the protests, more than 9,300 people had been arrested as a result (Khalil et al., 2020) and $1-2 billion in damages were reported across the United States including $550 million in the Minneapolis area (Polumbo, 2020)

In the aftermath of the protests in 2020, a majority of Minneapolis City Council members said they supported the dismantling of the Minneapolis Police Department (The Associated Press, 2022). However, this idea was ultimately rejected by voters in Minneapolis (The Associated Press, 2022). Although the idea did not gain traction in Minneapolis, it did spark a national debate and other cities seriously pursued replacing their police departments, reducing funding, or defunding altogether as an option as well (The Associated Press, 2022). In March of 2021, the city of Minneapolis agreed to pay $27 million to George Floyd's family (Karnowski & Forliti, 2021). Later in April of 2021, Officer Derek Chauvin was tried and convicted of both murder and manslaughter charges (The Associated Press, 2022). Two months later, Chauvin was sentenced to over 22 years in prison for his acts against George Floyd (The Associated Press, 2022).

Much like the events in 2014 surrounding Michael Brown, the NSF had no involvement in George Floyd's death. Yet again, the actions of a handful of police officers undoubtedly had an effect on the mindset and feelings the American public has

towards our law enforcement officers, again affecting the NSF's ability to recruit men and women into the force that protects the Navy's assets and personnel.

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III. LITERATURE REVIEW

This chapter provides a review of previous studies pertaining to military recruiting and pay, civilian law enforcement recruiting and pay, and racial societal strains involving law enforcement as well as an analysis of the strengths, weaknesses, limitations of each study. Due to the unique makeup of the NSF being partially military members and partially civilian members, it is appropriate to review the literature on both the military and civilian elements as well as recent studies involving racial tensions and disparities of how different groups are treated by police in the United States. By reviewing prior literature in three separate areas of the United States military—recruiting and pay, civilian police recruiting and pay, and recent societal strains involving police—I hope to widen the aperture into the current issues and trends of the NSF.

A. UNITED STATES MILITARY RECRUITING AND PAY

In 2023, the Navy had a difficult time maintaining its force. Although the Navy met and exceeded its recruiting goal of 40,600 for fiscal year 2024 (Stancy, 2024), the Navy failed to meet its recruiting goal in 2023 for the first time ever (Stancy, 2023). On the enlisted side, the Navy had a goal of recruiting 37,700 sailors in 2023 and fell short of this goal by 7,464 (Stancy, 2023). Although unsuccessful in recruiting enlisted sailors in 2023, Navy efforts aimed at recruiting officers were also unsuccessful. In fiscal year 2023, the Navy missed its officer recruiting goals resulting in a shortfall of 452 active-duty officers and 773 reserve officers (Stancy, 2023). Compensation could play a part in military recruiting challenges, however, the government generally tries to keep military compensation competitive with civilian wages. To keep wages competitive, military pay raises are tied to the employment cost index which shows changes to civilian wages (Department of Defense, n.d.-a).

Published in March of 2002, The Ninth Quadrennial Review of Military Compensation concluded that to maintain the size and quality of the United States military, the regular military compensation (RMC) received by servicemembers needs to be around the 70th percentile of comparably educated civilians (Maude & Ivory, 2002). RMC is a common way to compare military compensation to the civilian equivalent.

RMC accounts for the servicemember's base pay, housing allowance, subsistence allowance, and the tax advantage received due to the housing and subsistence allowances not being taxed (Department of Defense, n.d.-b). In response to this claim, one study examines military recruit pay when compared to similarly educated civilian jobs during 2016 (Hosek et al., 2018). To compare military pay to civilian pay with similar educational backgrounds, military pay data was compiled by Hosek et al. from the Department of Defense's (DoD) Selected Military Compensation Tables as well as from the DMDC, which provided active duty pay files. This military data was then compared to the Current Population Survey which contained data on civilian wages and status of the force survey was used to find education distribution. The Hosek et al. study showed that in 2016, the RMC of all enlisted military members was in the 84th percentile while officer compensation was found to be in the 77th percentile. The study also found that generally, the recruit quality increased as the ratio of RMC to civilian wage ratio had increased, indicating compensation is an important factor in recruiting quality recruits.

The study conducted by Hosek et al. (2018) was essentially repeated two years later by different authors, but the data was now for military members in 2017. Again, this study sought to compare military pay to civilian pay and found a similar result, as we might expect, with only one year between the studies (Smith et al., 2020). The report concluded that in 2017 the RMC for officers and enlisted personnel was in the 77th and 85th percentile, respectively.

In addition to comparing military and civilian pay, the authors also used the data to compare compensation controlling for geography (Smith et al., 2020). They concluded that there is no significant difference in compensation when comparing workers without a high school degree. However, wages do vary significantly for workers with at least a college degree when controlling for geographic differences. Smith et al. also discovered that during the first nine years of being enlisted, RMC is four to 10 percentiles higher in the most urban areas when compared to the equivalent civilian pay in the least urban areas. The observation is then reversed for years 10 through 30 of enlisted careers and the least urban areas become more competitive compared to equivalent civilian compensation by four to eight percentiles. The results for officers indicate that officer pay is always

seven to 15 percentiles higher in the least urban areas when compared to equivalent civilian compensation.

While these studies are useful in comparing military and civilian wages in periods when the military met its recruiting goals, it would be useful to assess these pay gaps during the COVID-19 pandemic or during 2023 when the Navy failed to meet its recruiting goal. Although no direct follow-on studies have been completed on compensation for Navy personnel, many military members inside the recruiting field chalk up the military's missed recruiting goals to the roll out of Military Health System (MHS) Genesis (Loewenson & Ziezulewicz, 2023). MHS Genesis is an electronic medical records system that allows military doctors to see past medical history of applicants. Loewenson and Ziezulewicz indicate that prior to the military using MHS Genesis, these medical conditions could have been undisclosed to the military. Although military applicants can still join the military, the authors say that applicants are being rejected at a higher rate due to the medical documentation MHS Genesis allows military doctors to see. The applicants that do eventually get into the military are waiting a longer time and many more applicants now require a service specific waiver.

What the research does show is compensation for military members has historically been far above average civilian workers controlling for education and easily exceeds the 70% benchmark (Smith et al., 2020). It is also eye-opening to know that generally enlisted members compensation is more competitive in the most urban areas in years one through nine of their careers and more competitive in the least urban areas in years 10 through 30 (Smith et al., 2020). For officers, their compensation is always more competitive in less urban areas for their entire career (Smith et al., 2020).

Now that the military's compensation in comparison to the civilian labor force has been discussed, we will investigate the precedent of measuring military pay against the 70th percentile of civilian compensation. We will also examine how recruiting changed during the COVID-19 pandemic.

A study conducted in 2020 sets out to expand the analysis of the previous papers by comparing the RMC to civilian wages back to the late 1980s and as recent as 2019 (Asch et al., 2020). The author's analysis shows that enlisted wages have grown from the

73rd percentile in 1988–1989 to the 88th percentile in 2018–2019. For officers, Asch et al. conclude a similar rise from the 71st percentile to the 78th percentile over the same time period. Their findings of growing and sustaining RMC levels far above the 70th percentile over the last several decades may be too high given the military was able to maintain its recruit quality and retention goals. However, the authors caution that the findings do not immediately imply that the growth of military compensation should be immediately slowed for two reasons (Asch et al., 2020).

First, the authors recognize a growing divide in the U.S. in families that have served in the military and those who have not (Asch et al., 2020). They suggest that the high RMC relative to civilian wages has helped achieve recruiting goals despite this divide. Second, the authors voice their concerns with the ongoing need for waivers for things such as obesity, marijuana, and behavioral health conditions needed for some applicants to join the service. The authors continue by stating the lack of qualified applicants and the nature of applicants needing such waivers makes the recruiting environment much more competitive and perhaps justifies the need for the RMC to be far above the 70th percentile (Asch et al., 2020).

Although we have looked at how recruiting goals and compensation have changed over the last few decades, we have yet to look into recruiting efforts during the COVID-19 pandemic. Calkins et al. set out to compare recruiting and retention goals from 2019 to 2020 (Calkins & Asch, 2022). Using data obtained from DMDC to include records from MEPCOM, Defense Enrollment Eligibility Reporting System, and Active Duty Master Files, the study showed that during 2020, the Navy was able to beat their recruiting goal by 6,020 sailors between the years of 2019 and 2020. The authors also concluded that Navy accessions rose by 2%, retention of first-term sailors was 12 percentage points above their goal of 57%, and recruit quality was slightly lower during the first half of 2020 when compared to 2019, but increased to similar levels in the second half of 2020 (Calkins & Asch, 2022).

The study shows the resilience of every branch of the military and their ability to get through the first year of the pandemic while reaching their recruiting goals (Calkins & Asch, 2022). The biggest limitation on the study was its lack of information for later

years of the pandemic, specifically 2023 when the Navy failed to meet its recruiting mission.

Due to the MAs, LDOs, WOs, and CWOs being a vital part of the NSF, it is very important that the results of the previous studies on military pay and recruitment are understood. Key findings include the struggles of recruiting in 2023 (Stancy, 2023) followed by the success of 2024 (Stancy, 2024) as well as the comparison of civilian and military pay and relevance of keeping military pay above the 70th percentile of military pay (Asch et al., 2020). Although the Navy has largely met its recruiting goals, calls to narrow the gap between civilian and military pay may not be a good idea due to a widening gap in society of families that have served and families who have not (Asch et al., 2020). Another key finding relevant to the NSF is the geographical differences between officers and enlisted personnel when comparing compensation to civilians. This shows that enlisted personnel have a higher relative compensation early on in their career in urban areas and later in their career have a higher compensation in rural areas (Smith et al., 2020). This may inform my study because the Navy tends to be concentrated in urban coastal areas that are expensive and have many other opportunities for those with the NSF skillset to be competitive for other employment opportunities. Lastly, the Navy remained resilient in recruiting through the beginning of the COVID-19 pandemic (Calkins & Asch, 2022) while other issues like MHS Genesis resulted in problems enlisting the required number of sailors into the Navy in 2023 (Loewenson & Ziezulewicz, 2023). All of these findings help inform my thesis of the NSF when comparing their salaries to other organizations who are competing for the same personnel.

Now that we have taken a comprehensive look at military compensation and recruiting, we will continue to the next area of literature.

B. CIVILIAN LAW ENFORCEMENT RECRUITING AND PAY

Due to the fact that the NSF is not only comprised of active-duty military members, but civilian police and gate guards, it is important to evaluate recruiting issues facing civilian law enforcement agencies. This assessment is especially important due to

the ease with which civilian police officers of the NSF can quit their jobs and work for a nearby agency that the NSF is competing with for talent.

In an effort to understand the nationwide recruiting struggles law enforcement agencies face, one study distributed surveys to agencies with at least 300 officers (Wilson, Rostker et al., 2010). The study, conducted in 2008, consisted of 107 responses out of 146 agencies (73% response rate) who were sent a survey. Using the responses from the 107 agencies, the authors used ordinary least squares regression to find that starting salary, size of the city, and crime rate were statistically significant in predicting the number of applications a department would receive. Wilson et al. found the coefficients on these terms indicated that for a 1% increase in starting salary, size of the city, and crime rate, the number of applications increased by 1.3%, 0.84%, and 0.49% respectively. This reveals that starting salary is the strongest predictor of the number of applications a department receives.

The Wilson et al. (2010) study targeted a relatively large number of police departments asking for both objective measurements of their force and subjective questions to understand how the leaders felt about their recruiting situation. By asking for both quantifiable metrics and qualitative insights, the study demonstrates that there is a discrepancy between how important departments believe starting salaries are and how important the regression shows them to be. The regression shows the statistical significance that starting salaries play in attracting applicants to the candidate pool. This conclusion may be useful when looking deeper into the NSF salaries and how they compare to the agencies in the local area. The biggest deficiency of the study includes an abundance of questions left blank and leaving the authors with incomplete data.

Police departments are also left vulnerable to recruiting problems when their compensation is not competitive enough. For example, the New Orleans Police Department struggled to maintain a department after Hurricane Katrina in 2005 (Wilson, Dalton et al., 2010). The New Orleans police department was 8% below staffing standards before Hurricane Katrina as recruiting was hindered by compensation and benefits lagged other departments in the area. After the storm, the department lost one-third of its force. It took another two years before the number of officers hired exceeded

the number of separations. The city of Houston is relatively close to New Orleans and offered some positions $30,000 more per year than New Orleans, which incentivized officers to leave the area and relocate. Although the case recognizes that Hurricane Katrina triggered a rapid migration of officers to the Houston area seeking better compensation, Wilson et al. argues that New Orleans police pay did not keep up with its competitors in the region and was a root cause of the migration.

Another issue impacting police recruiting in the United States is the public's perception of their civil servants. In the wake of major events such as police interactions with Michael Brown and George Floyd, criticism of our public servants has grown, and public perception has negatively affected police departments across the country. This shift in public perception has become problematic for departments trying to recruit young officers into the force throughout the country. A 2018 study of two unnamed American universities found that students who believed police were affected by negative media coverage were 1.49 times more likely to say scrutiny impacted their law enforcement career plans, while those who perceived increased danger were 2.27 times more likely to say that the scrutiny also impacted their career trajectory (Morrow et al., 2019).

The Morrow et al. (2019) study is valuable in showing how potential future law enforcement officer's willingness to serve may have changed. However, the survey is lacking in that it was only administered at two universities and was heavily focused on students in criminal justice programs. Due to this oversight in the survey design, it may not be representative of all university students across the country, and therefore lacks external validity.

Due to the civilian police officers and gate guards being a vital part of the NSF, it is very important that the results of the previous studies on civilian police pay and recruitment are understood. There are three main takeaways from the previous papers that will apply to my study of the NSF. The first is that salary is extremely important for attracting talent to the force and is the most statistically significant predictor of how many applications were received (Wilson, Rostker et al., 2010). The second is that police departments put themselves at risk when their salaries are not keeping pace with other agencies, specifically in areas where it is relatively easy to transfer between organizations

located in the same geographical area (Wilson, Dalton et al., 2010). This may be especially true when the NSF are highly concentrated in areas like San Diego, Seattle, and Honolulu where many different organizations exist, and the civilian police of the NSF could be hired. Thirdly, in the aftermath of high-profile police incidents in the U.S., young college students are becoming less likely to pursue a career in law enforcement (Morrow et al., 2019).

C. LAW ENFORCEMENT DISCRIMINATION AND PUBLIC PERCEPTION

Police treatment of minorities has been scrutinized for decades. In the last decade, the American public has demanded increasing oversight of their public servants due to high profile cases such as Michael Brown and George Floyd. This section analyzes literature both supporting and opposing the claim that discrimination is still a problem in American society.

The literature on law enforcement discrimination consistently reveals that citizens receive some level of different treatment based on their race. Although, the first study we will look at finds a disparity when analyzing confrontations resulting in the use of force, contrary to public perception, the author finds no disparity when the confrontation escalates to involve officer shootings (Fryer, 2017). In the first part of his study, Fryer (2017) uses data from New York City's Stop and Frisk program from 2003 to 2013 to conclude that individuals who are Black and Hispanic are over 50% more likely to experience police use of force than their White counterparts. The study also finds that Black individuals are 21% more likely than those who are White to be involved in a situation in which the officer draws their gun. However, using a dataset of officer-involved shootings in the Houston area, Fryer finds that "after controlling for suspect demographics, officer demographics, encounter characteristics, suspect weapon and year fixed effects, that blacks are 27.4 percent less likely to be shot at by police relative to non-black, non-Hispanics" (Fryer, 2017, p. 5). Although this result is not statistically significant, it may be practically significant because it is contrary to the public's perception of policing in the United States.

The Fryer (2017) study is valuable when speaking to racial discrimination is the United States, however, it does have its weaknesses. The major drawback in the study

(one that the author himself also recognizes) is that the data may not be representative of the country as a whole, the data are taken from self-reported police encounters, and that data may have been provided to the authors because the departments are open to criticism or were unafraid of what the data would reveal. However, after reading the literature surrounding the subject, it is clear that almost all of the data on the subject comes from reports from within law enforcement agencies themselves. Until there are other means to collect data, self-reported law enforcement reports are the best option available to researchers. Although the 2017 study by Fryer is a strong study on discrimination in the United States, my last criticism is that the data are not helpful in determining the probability that an interaction would happen in the first place. Rather, the study looks at lethal police stops conditional on a stop occurring in the first place.

Challenging Fryer's (2017) study on New York's Stop and Frisk data involving non-lethal interactions, authors criticize Fryer for dropping all observations that involved force below an unacceptably low threshold (Knox et al., 2020). Knox et al. goes on to say that this comprised 21.5% of all observations and 99.8% of all use of force observations. By dropping these observations, authors argue it severely skewed the data. Knox et al. conclude that this flaw combined with ignoring the selective process that generates police data dramatically underestimates the violence experienced by minorities. Using prior research as a guide, the authors estimate that almost four times as many observations involved discriminatory actions by police officers as was initially thought in the Fryer (2017) study of New York's Stop and Frisk data.

Although the research does offer a convincing argument that Fryer's study should not have dropped interactions with use of force below a certain threshold, the data does rely on some assumptions to make the estimations, concluding that there were actually four times as many observations involving discrimination (Knox et al., 2020). The assumptions are as follows: all encounters involving the use of force are recorded in administrative data, there may be encounters where minorities are stopped and Whites are not but the opposite is never true, use of force is at least as likely to occur during criminal events when compared to when police have more discretion over whether encountering the individual is necessary, and that race is as good as randomly assigned and the

circumstances that minority civilians are observed in are no different than the situations White citizens are observed in.

Another study investigating the differences in treatment by law enforcement examines the use of force used by White and minority officers when responding to 911 calls and how the use of force is scaled up when White officers respond to calls in minority neighborhoods (Hoekstra & Sloan, 2022). Using anonymous data from two American cities with populations of several hundred thousand people during a three-to-five-year period beginning in 2010, the authors found that, "White officers use force 60 percent more often than Black officers on average, and use force with a gun more than twice as often" (p. 829). The authors also found that "White officers scale up use of force 55 percent more than Black officers as they go to Black neighborhoods" (p. 829).

My largest criticism of the study is that although they answer their research question of determining whether White officers are more likely to use force, the study stops short of addressing if the officer's actions were ultimately acceptable. That is, maybe the White officers were put in a position where their higher rate of use of force is in fact justified. However, one of the strongest attributes to this study is that officers were randomly assigned to 911 calls by dispatchers due to the departmental procedures used to appoint officers to calls once the calls are received. This is important from an experiment design perspective because it does not give officers the opportunity to reject a request for their services in a neighborhood they would not prefer or give officers the opportunity to volunteer their services to a call in a neighborhood that matches their preferences.

Another example where racial differences are discovered uses data from all traffic citations issued in Florida between 2005 and 2015 (Goncalves & Mello, 2021). The study uses a difference-in-differences approach to compare White and minority drivers to officers who are lenient and not lenient. In the study, lenient officers choose to reduce the speed they record to below a threshold where drivers are not given a fine. Officers who are not lenient tend to not reduce the recorded speed where the interaction is more likely to result in a fine. Researchers found that White drivers are about six percentage points more likely to receive a discount on their ticket due to the officer recording a reduced speed.

Again, concerns with the 2021 study by Goncalves and Mello are consistent with the concerns in other literature in this section of the review. The first weakness is that the study only took place in one state which may not be representative of the country as a whole. The data in this study is also provided by law enforcement agencies and is self-reported. However, as previously discussed, these sources are really the only way to get mass amounts of this type of data. The research also does not include all the cars police saw during their patrol, or potentially every car that was even stopped. The data only reflects cars that were recorded as being pulled over by the officer and therefore is much like the study by Fryer (2017), which is conditional on a stop occurring in the first place.

Although the literature is rich with evidence pointing to a disparity in the way different races are treated in non-lethal interactions, the study by Fryer (2017) finds no evidence that minorities are treated more harshly when it comes to lethal police interactions. Although these studies are important to shed light on the perception that disparities still exist, whether they exist or not does not matter as much as the fact that the American public's confidence and perception of policing in America has been damaged. A Gallup poll surveying American's confidence in the police dating back to 1993 shows what percent of those surveyed would say they have a great deal of confidence or quite a lot of confidence in the police (Gallup, 2024). The poll shows a peak in confidence in the police in the mid 60% around the mid-2000s and slowly decreasing toward 40 to 50 percent confidence in the last few years. Another poll from Quinnipiac University conducted in 2021 shows about half of Americans polled view the police as being tougher on Black Americans than White Americans, and about 40% of respondents said that they believe police generally treat all races the same (Quinnipiac University, 2021). The Quinnipiac poll also shows a clear split along racial lines with 79% of Black Americans saying the police are tougher on Black Americans while about half of White Americans say the police are stricter towards the Black population.

By reviewing the literature surrounding U.S. military recruiting and pay issues, U.S. civilian police recruiting and pay issues, and racial disparities that exist between minorities and the police in America, we have discovered topics that may play a role in discovering trends that may affect the NSF. Specifically, we discussed the Navy's recruiting difficulties of 2023 (Stancy, 2023) and recruiting rebounds of 2024 (Stancy,

2024), the effort to keep the benchmark of military pay above the 70th percentile of civilian workers with similar education backgrounds (Asch et al., 2020), and how the COVID-19 pandemic changed recruiting (Calkins & Asch, 2022). We also looked into the topic of civilian police recruiting in the U.S. and examined the importance of a police officer's starting salary on recruiting throughout the country (Wilson, Rostker et al., 2010). This was especially evident in situations where officers are in close geographical proximity to similar organizations that require the same law enforcement skills but offer a far higher salary (Wilson, Dalton et al., 2010). The state of this review was also extended to recruiting college students into the police force. Morrow et al. (2019) concluded that students who thought criticism by the media made officers more cautious and less motivated, responded that they were less likely to pursue a career in policing. The last section of this review focused on police bias against minorities and discovered that the majority of the literature shows a significant difference between how police treat minorities compared to White Americans (Fryer, 2017; Goncalves & Mello, 2021; Hoekstra & Sloan, 2022; Knox et al., 2020). However, the literature is in disagreement when it comes to lethal interactions with the police with the 2017 study by Fryer showing that although non-lethal interactions are skewed to affect minorities negatively, lethal interactions do not show a significant result against minorities.

This collective understanding of the issues surrounding different aspects of the NSF provides a solid foundation for the data that will be used to examine the recruiting crisis of the NSF. Such data will include trends in sex, age, ethnicity, education levels, and prior military service with a focus on salary comparisons with nearby law enforcement agencies. By focusing on salary comparisons, this will inform both the military and civilian sides of the NSF and reveal any gaps between current salary levels and compensation from other competitors in highly concentrated and coastal areas.

IV. DATA AND DESCRIPTIVE STATISTICS

A. NAVY SECURITY FORCES POLICE OFFICER DATA AND DESCRIPTIVE STATICTICS

For this thesis, data was used from DMDC to include all NSF police officers. Data was recorded annually in September of 2017 through 2023 and in July of 2024. This data included variables of interest such as: age, sex, race, salary, education level achieved, years of service, prior military service, and duty location. The data provided shows 18,962 observations spread across eight years showing an average police force across the nation of approximately 2,370 officers. Descriptive statistics are found in Table 1.

Table 1. Police Officer Summary Statistics

	Observations	Mean	Std. Dev.	Min	Max
Male	18,962	0.917	0.277	0	1
Age	18,962	43.329	11.186	18	75
Salary	18,962	61,209	13,805	32,948	134,465
Years of Service	18,962	7.967	7.722	0	43
Prior Military Service	18,962	0.682	0.466	0	1
White	18,962	0.553	0.497	0	1
Asian	18,962	0.080	0.272	0	1
Black	18,962	0.221	0.415	0	1
Other Race	18,962	0.146	0.353	0	1
Less than High School	18,962	0.001	0.032	0	1
High School	18,962	0.509	0.500	0	1
Some College	18,962	0.297	0.457	0	1
Bachelor	18,962	0.157	0.363	0	1
Beyond Bachelor	18,962	0.036	0.186	0	1

Notes: Data are taken from DMDC records for all civilian NSF police officers in Sept. 2017, Sept. 2018, Sept. 2019, Sept. 2020, Sept. 2021, Sept. 2022, Sept. 2023, and July 2024. Salary variable shown in 2024 USD.

Although later I will discuss trends in the NSF over time, a good place to start is to get a grasp on the most recent data from July of 2024 indicating the most recent force breakdown. A breakdown of the 2024 NSF police officers can be seen below. Figure 1

shows that in 2024 the police officers of the NSF are predominantly male while Figure 2 shows the group is overwhelmingly White.

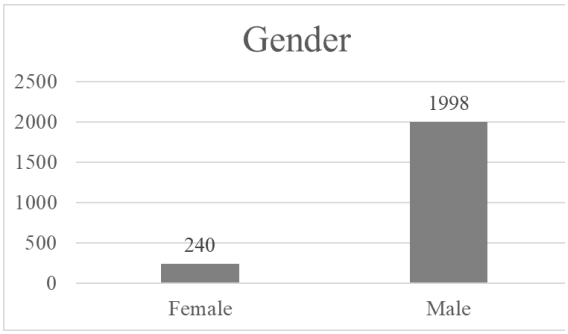

Figure 1. 2024 NSF Police Officer Gender Breakdown

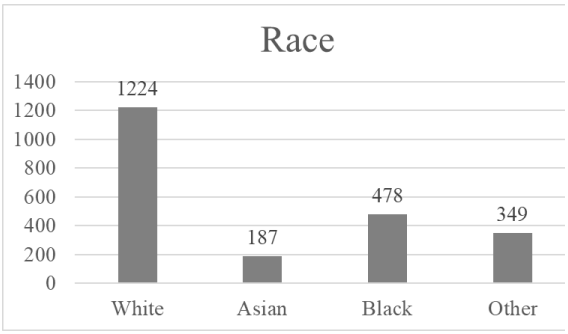

Figure 2. 2024 NSF Police Officer Race Breakdown

Figure 3 shows most officers only graduated high school as their highest education level achieved. However, there are a significant portion of police officers that had some college experience. The data for 2024 also shows that most police officers have prior military service displayed in Figure 4.

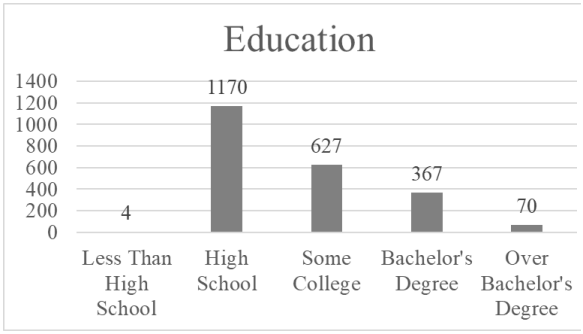

Figure 3. 2024 NSF Police Officer Education Breakdown

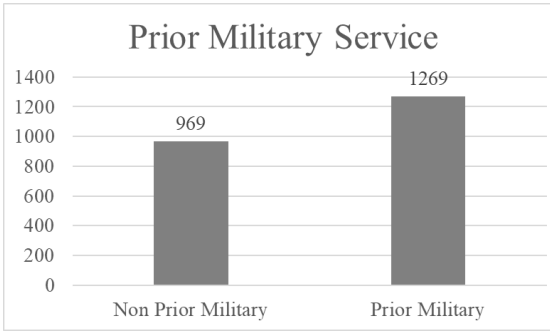

Figure 4. 2024 NSF Police Officer Prior Service Breakdown

When discussing age, Figure 5 shows the most populated age group is 25 to 34 year olds with the age group of 36 to 45 with almost as many officers. Salaries are displayed in Figure 6 range from under $40,000 to over $100,000, but the median officers make $55,000 to $65,000.

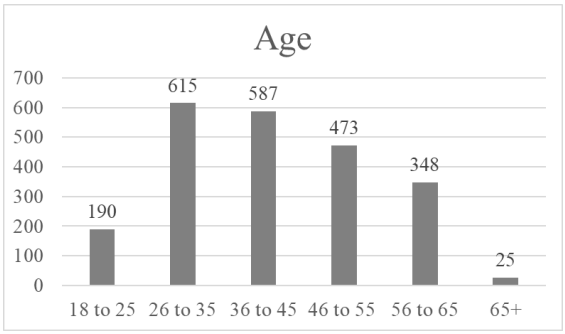

Figure 5. 2024 NSF Police Officer Age Breakdown

Figure 6. 2024 NSF Police Officer Salary Breakdown

Figure 7 shows the years of service of the NSF police officers. This graph is of the utmost importance because it highlights the inexperience of the force noted by the leftmost bar colored a darker shade than the others. With such a large investment in terms of time, money, and training to recruit police officers, Figure 7 indicates that officers are not staying for very long. In fact, in 2024 22% of all NSF police officers had less than one year of experience. This is extremely high considering one study conducted nationwide in 2021 that identified that only 17% of all non-NSF police officers who responded to their survey had less than 10 years of experience (Police 1, 2021). The figure also highlights the difficulty of keeping officers on the force as they are able to quit whenever they please as opposed to the enlisted MAs who are under an initial service obligation.

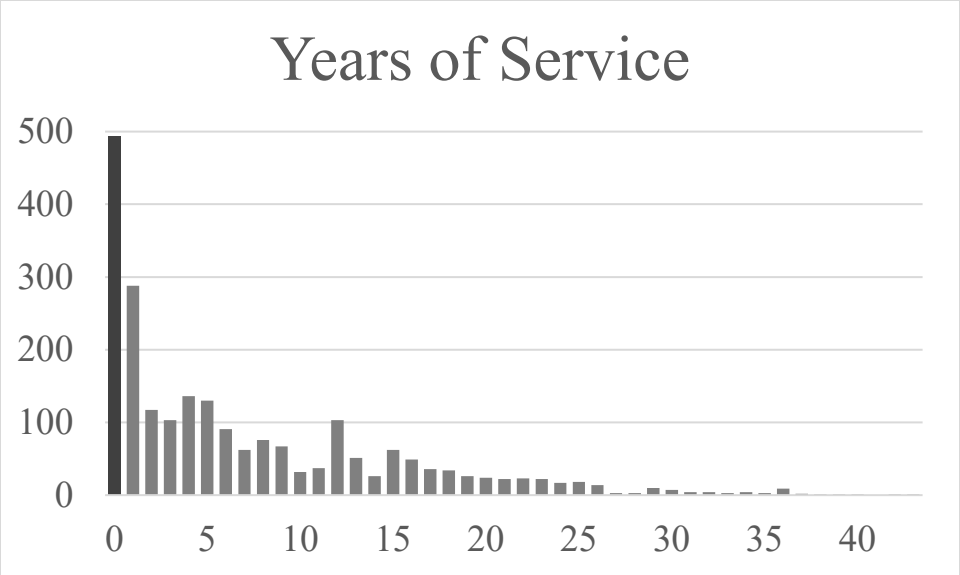

Figure 7. 2024 NSF Police Officer Years of Service Breakdown

While the variables described in Figures 1 through 7 are useful, it is also helpful to know where these police officers are located throughout the country as the Navy has a large presence in coastal and larger populated areas. Figure 8 shows a map of the United States, and the number of police officers employed in each state during July of 2024. It should be noted that there are 44 police officers serving outside of the United States, but the dataset does not provide an exact location, and they are therefore not included in the map.

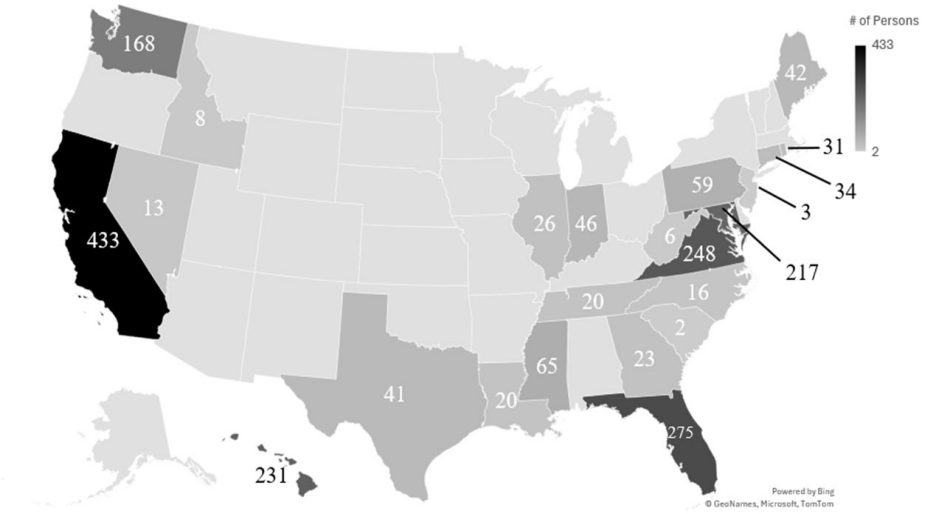

Figure 8. Map of Navy Security Forces Police Officers

It is no surprise that police officers are abundant in California, Florida, Virginia, Hawaii, Maryland, and Washington with some of the largest U.S. Navy bases in the

world located in San Diego, Jacksonville, Norfolk, Honolulu, the Washinton D.C. area, and the Seattle metro area. In fact, about 75% of all NSF police officers are located in these six areas.

B. MASTER AT ARMS DATA AND DESCRIPTIVE STATISTICS

Data was also collected from DMDC for all enlisted MAs. Data was collected in September of each year and data was more abundant for the enlisted MAs than it was for the police officers. Although data for the police force only contained the last eight years, data collected for the enlisted MA community included years 2001 through 2024. It included variables of interest such as: age, sex, race, education level achieved, years of service, pay grade, and duty location. The data provided shows 214,167 observations spread across 24 years showing an average annual MA force across the service of approximately 8,923 sailors. Descriptive statistics are found in Table 2.

Table 2. Master at Arms Summary Statistics

	Observations	Mean	Std. Dev.	Min	Max
Male	214,167	0.800	0.400	0	1
Age	214,167	27.702	6.824	17	63
Years of Service	214,167	6.939	6.191	0	30
White	214,167	0.653	0.476	0	1
Asian	214,167	0.027	0.161	0	1
Black	214,167	0.180	0.384	0	1
Other Race	214,167	0.141	0.348	0	1
Less than High School	214,167	0.029	0.167	0	1
High School	214,167	0.829	0.376	0	1
Some College	214,167	0.079	0.270	0	1
Bachelor	214,167	0.051	0.220	0	1
Beyond Bachelor	214,167	0.006	0.074	0	1
E1	214,167	0.025	0.156	0	1
E2	214,167	0.052	0.223	0	1
E3	214,167	0.143	0.350	0	1
E4	214,167	0.246	0.431	0	1
E5	214,167	0.276	0.447	0	1

E6	214,167	0.168	0.374	0	1
E7	214,167	0.065	0.247	0	1
E8	214,167	0.019	0.137	0	1
E9	214,167	0.005	0.070	0	1

Notes: Data are taken from DMDC records for all Navy enlisted Master at Arms in September of 2001 through 2024.

Again, with the ultimate goal to look into trends over time of the force, analyzing the force as it sits in 2024 is a good place to start. Figures 9 through 15 show the current snapshot of the force. Figure 9 shows that the enlisted force is predominantly male with approximately the same ratio as the police force while Figure 10 shows approximately the same race breakdown as the police force as well with White being the most frequent observation.

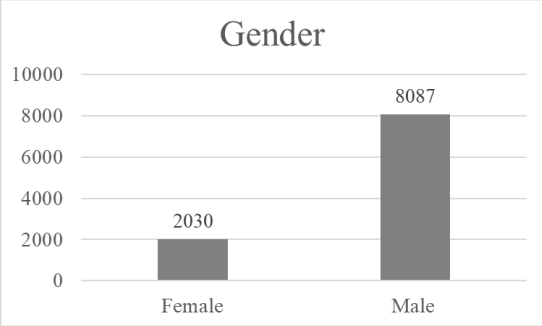

Figure 9. 2024 NSF MA Gender Breakdown

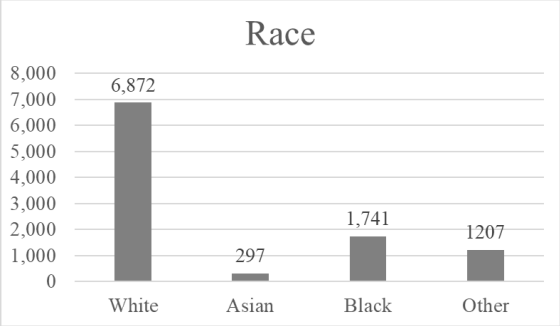

Figure 10. 2024 NSF MA Race Breakdown

The first observation in the MA figures that is drastically different from the police force is the education breakdown. The breakdown shows an overwhelming majority of the force having only a high school degree in Figure 11 whereas the police force has a sizeable share of its officers with some education past high school. This is to be expected due to requirements to enlist in the Navy not requiring higher education and many sailors enlisting at a young age. It should be noted that four of the observations had unknown education qualifications and were not included in Figure 11.

Another recognizable difference when comparing the distributions of the police force against the MA force is age. Shown in Figure 12, the MA force follows a distribution one might expect out of a military group where the majority of the group is just exiting high school or in their early twenties with older groups diminishing in numbers as age increases. Again, this is somewhat expected when viewing an age

distribution of a military group as many sailors view enlisting in the military as a short term (less than six year) plan while a smaller group extend their careers into the middle of their lives.

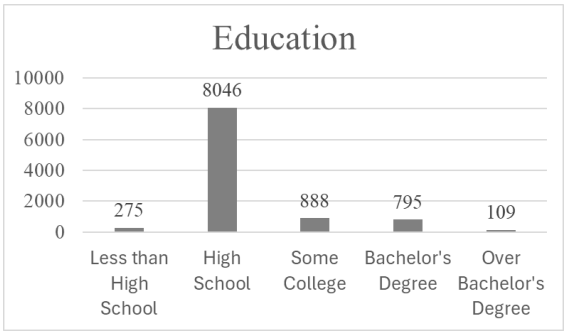

Figure 11. 2024 NSF MA Education Breakdown

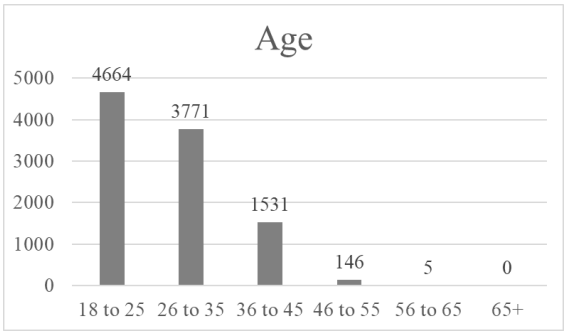

Figure 12. 2024 NSF MA Age Breakdown

Figure 13 further demonstrates that sailors in enlisted service do not typically stay in the Navy for very long. The figure shows large numbers of sailors in the Navy in years zero through four with a sharp drop off around year five. As expected, the graph continues to taper off as sailors progress through their careers and an observable drop can be seen at the 20-year mark due to sailors exiting the Navy via retirement. Figure 13 also offers a stark difference between the years of service shown for police officers in Figure 7. Comparing the figures shows that police officer years of service drop off steeply in the first few years likely due to the officer's ability to quit their job at any point. Unlike the police officers, the enlisted MA force is committed to their initial service contract which will last several years. This results in a more stable enlisted force in the first few years of service. Figure 14 shows sailors quickly promoting through the junior enlisted pay grades and then sharply dropping off at the E6 pay grade. This drop off at the E6 pay grade occurs because many sailors are choosing to exit the service, promotions become more competitive, and sailors must spend a significantly longer time in their current pay grade before advancing to the next pay grade.

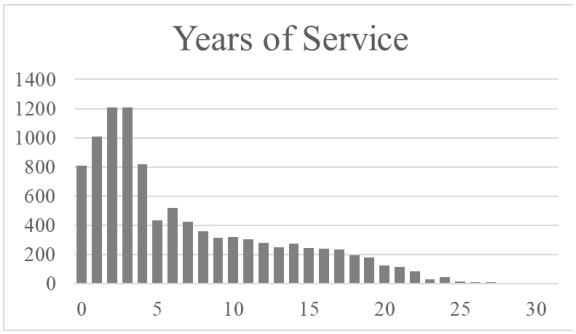

Figure 13. 2024 NSF MA Years of Service Breakdown

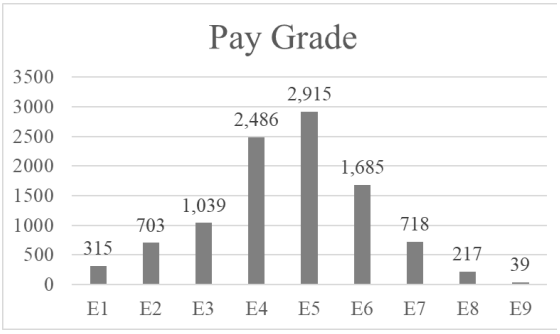

Figure 14. 2024 NSF MA Pay Grade Breakdown

Like the police officers, it is also helpful to see where the enlisted MAs are located throughout the country. Figure 15 shows the location of those members stationed in the United States. Again, it should be noted that 2,533 observations from 2024 are missing on the map due to the member being stationed outside of the United States and no specific location can be determined from the dataset provided. This fraction of personnel (25%) serving outside of the United States is significantly larger than the fraction of police officers serving outside of the United States (2%).

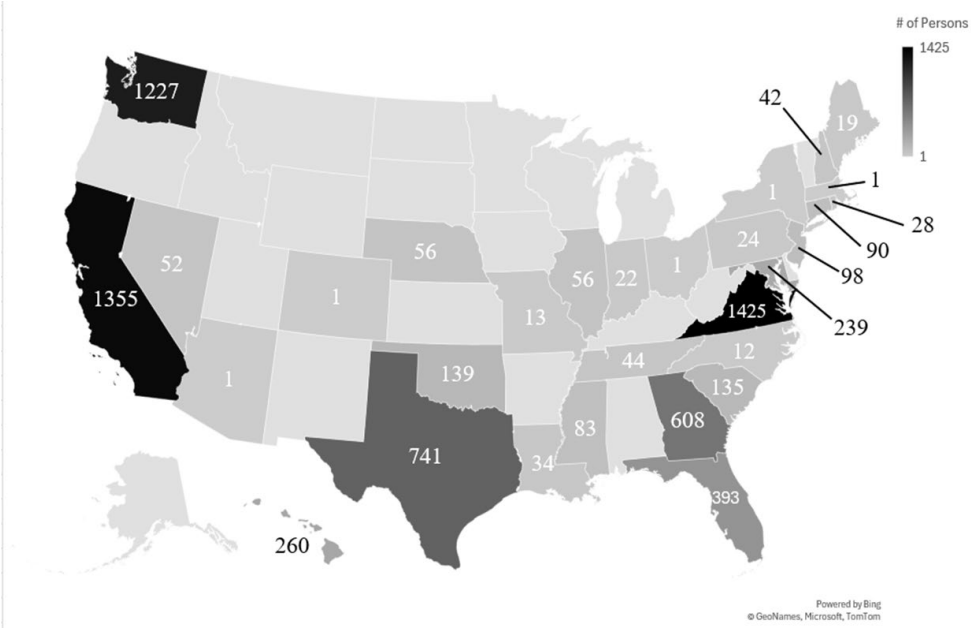

Figure 15. Map of Navy Security Forces Master at Arms

Many of the same states that had large numbers of police officers also have large numbers of enlisted MAs. However, Texas and Georgia stand out as having a significant population of MAs relative to the few police officers found in those states. In this case, the top six states possess about 57% of all enlisted MAs in 2024.

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V. ANALYSIS AND TRENDS

The findings and trends presented in this chapter are the result of analyzing data gathered for NSF police officers and Navy enlisted MAs. Data was gathered by DMDC and contained data for police officers from 2017 through 2024 and collected in September of each year except for 2024 when data was collected in July. Data for the MA component was collected in 2001 through 2024 and was collected in September of each year.

The chapter is broken into two sections to analyze the trends of both the police officers and MAs separately. The section of police officers shows trends of new recruits, total personnel, sex, race, education, prior service, age, years of service, and salary versus year for each variable. The section on police officers also includes a section on salary comparison of NSF police officers versus national and state averages. The section on MAs shows the trends for new recruits, total personnel, sex, race, education, age, personnel in each enlisted pay grade versus year for each variable.

A. NAVY SECURITY FORCES POLICE OFFICER TRENDS

One important trend that can be shown with the given data is the total force size and the number of new recruits per year. This emphasizes the years when recruiting lacked new hires and years when new hires were abundant. Figure 16 shows the trend of both new recruits and total personnel versus year.

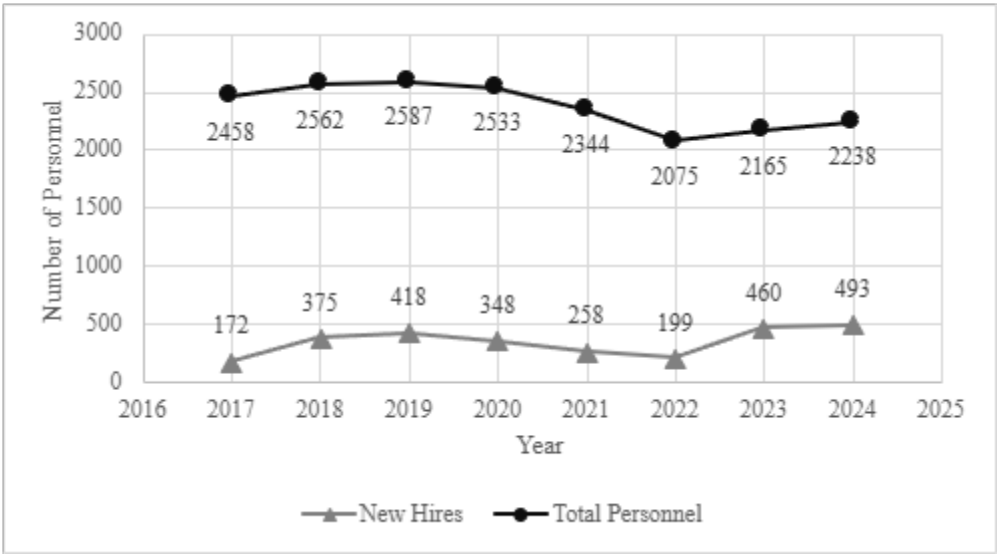

Figure 16. NSF Police New Recruits and Total Personnel by Year

New recruits fluctuated from a minimum of 172 in 2017 to a maximum of 493 in 2024. A difference of 321 and an increase of 187%. The total police force ranged from a minimum of 2,075 in 2022 to a maximum of 2,587 in 2019 representing a difference of 512 and an increase of 25%. Figure 16 also depicts the large percentage of the force that is made up of new recruits and previously emphasized in Figure 7. Looking at the years 2017 through 2024, new recruits made up between 6% and 22% of the total force.

Figure 17 shows the trend of male and female populations in the police force. The male population has decreased by several hundred officers while the female population has increased over the same period of time. In 2017, females made up about 7% of the force and the most recent data from 2024 shows that females make up almost 11% of the force.

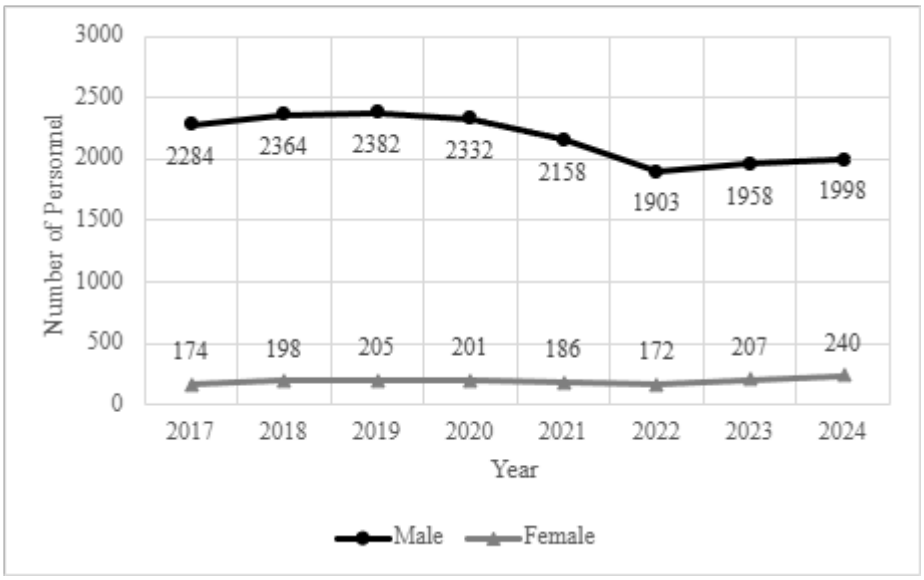

Figure 17. NSF Police Sex by Year

Race is another important demographic that could have changed over the last eight years. Figure 18 shows the breakdown of White, Asian, Black, and all other races. The police force is predominantly White (~55%) with smaller portions of Asian (~8%), Black (~22%), and all other races (15%). For reference, census figures show Whites constitute 75% of the American public, Blacks are 14%, and Asians are 6% (United States Census Bureau, 2024). Figure 18 also shows the same pattern between all races where each race increases slightly in numbers of personnel from 2017 and reaches a peak two to three years later and then reaches a minimum in year 2022. After 2022 all races follow the same trend of slightly increasing for the next two years.

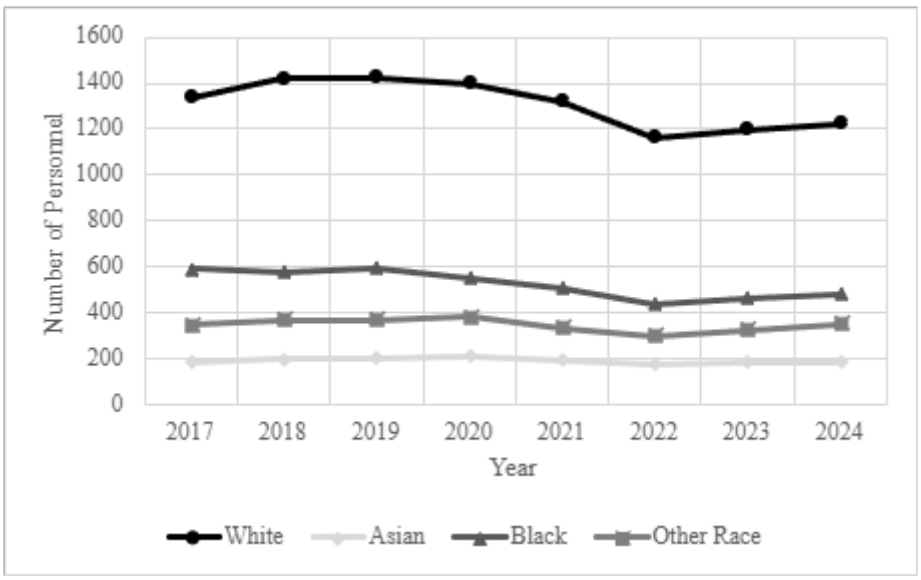

Figure 18. NSF Police Race by Year

Educational trends of the NSF police officers are shown in Figure 19. The force is dominated by officers receiving a high school diploma as their highest level of education (~51%) with less than high school (~0.1%), some college (~30%), bachelor's degree (16%), and over bachelor's degree (4%) combining for about another half of the education achievements of the police force.

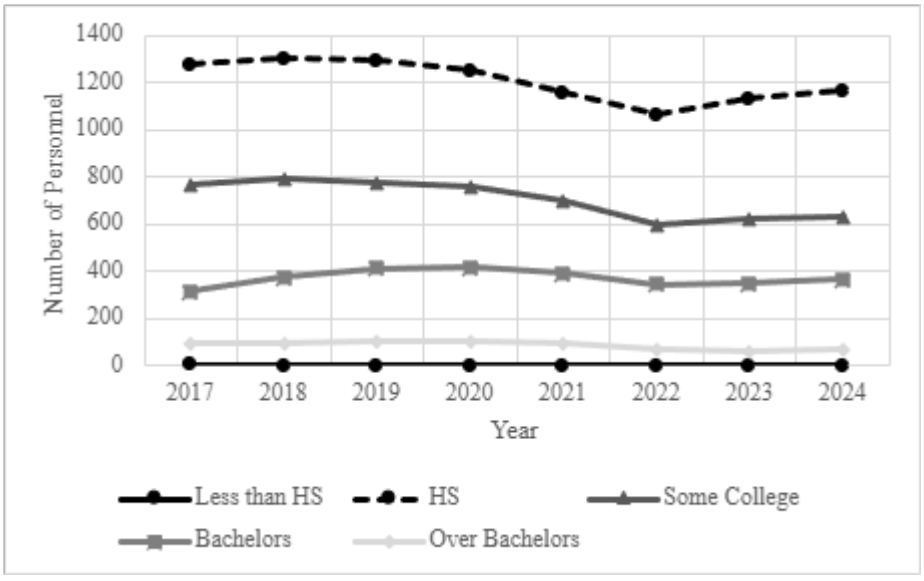

Figure 19. NSF Police Education by Year

Many law enforcement agencies have a strong connection to those who have served in the military and the NSF is no different. Figure 20 shows this connection to the military and is the first significant trend that is observed. Figure 20 shows that the

majority of the police serving in the NSF have always had prior military service, but this may not be true in the very near future if the trend continues. Although approximately 77% of police officers had prior military experience in 2017, only 57% do now, a change of 20 percentage points and a decrease of 26%. The opposite is also true in that in 2017 only 23% of the officers had no prior military experience and in 2024, 43% of the officers had no military experience. If this trend continues, the force will soon have a majority of officers who never served in the military. Whether this is good or bad is not for this paper to say, but the demographic of prior military service associated with the NSF are indeed changing and this could affect recruiting efforts going forward.

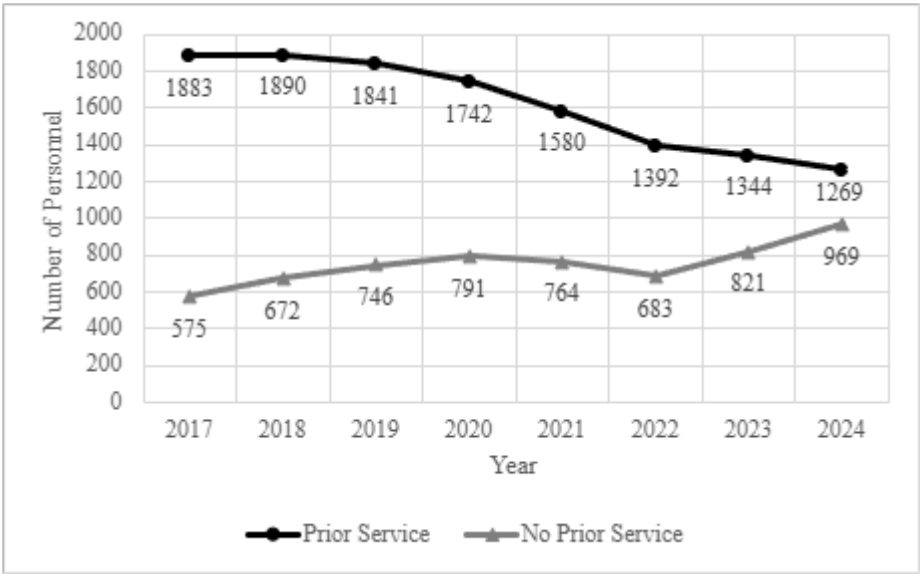

Figure 20. NSF Police Prior Service by Year

Average age is also another demographic that has seen significant change within the NSF police force. This information is shown in Figure 21. Although the average age in 2017 was 44.5, the average in 2024 is now 41.6 years old (a decrease of almost 7%). Although average age rose from 2020 to 2022, generally, the average age has decreased within the timeframe of the data. Much like the analysis of Figure 20, this thesis will not state whether this is good or bad for the police force, but it is a significant trend that the NSF should be aware of when it comes to recruiting efforts.

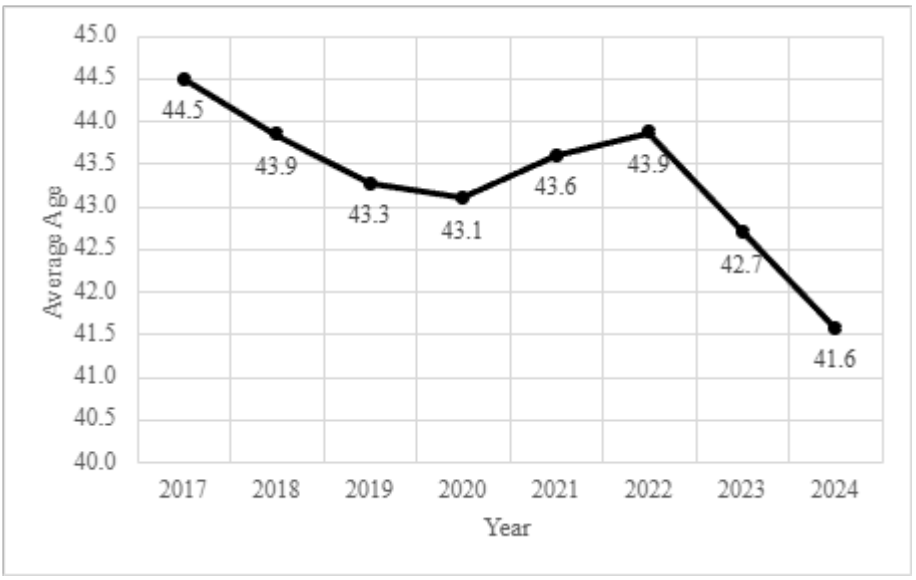

Figure 21. NSF Police Average Age by Year

The same trend observed in Figure 21 for average age is also shown in Figure 22 which shows average years of service of the police force by year. The force was most experienced in 2017 and 2022 but generally has seen a less and less experienced force during the time period studied and in 2024, the force is about 15% less experienced in 2024 than it was in 2017 or even two years ago in 2022.

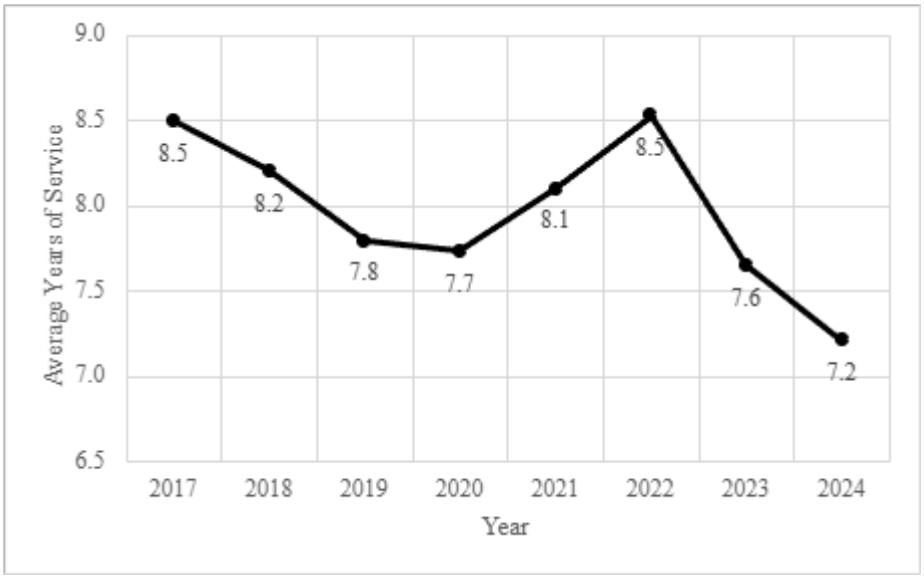

Figure 22. NSF Police Average Years of Service by Year

Another important trend is the implementation of salary adjustments through the years and the comparison of the increase in the salary of newly hired officers to the more experienced officers. This is especially important when considering Wilson's (2010)

piece finding that salary was the strongest indicator of number of applications to police departments. This could highlight a pattern where one group is receiving too large or not large enough of a pay boost contributing to recruiting problems. This trend of new hires, experienced officers, and the total force salaries are shown in Figure 23 adjusted for inflation in terms of 2024 $USD (United States Dollars) (CPI Inflation Calculator, n.d.). I have defined new hires as those officers with less than one year of experience while experienced officers are defined as those who have one or more years of experience. The figure indicates that although salaries mostly remained steady when adjusted for inflation, there were years that the force saw extreme reductions in salary when adjusted for inflation, specifically in 2021, 2022, and 2023. When comparing inflation adjusted salaries, new hires were paid 11% less in 2022 than their salary in 2020 and experienced officers were paid over 6% less than in 2022 than they were paid in 2020. The total force saw a decrease of over 6% as well. Although inflation adjusted salaries bounced back in 2024, the years during the COVID-19 pandemic are associated with reduced salaries even when adjusted for inflation.

Figure 23. NSF Police Inflation Adjusted Salary by Year.

Although Figure 23 shows the average salary has largely kept pace with inflation with the noted exceptions, the NSF still has an extraordinary number of other agencies to compete for talent with, including federal, state, and local law enforcement agencies. Table 3 provides data from the Bureau of Labor Statistics for police officers both

nationally and of the five states most prevalent with NSF police officers. It should be noted that Table 3 uses the most recent salary data from the Bureau of Labor Statistics which was 2023. Therefore, all values of salary in Table 3 are in 2023 dollars as opposed to 2024 dollars expressed in Figure 23. By obtaining this data, national and state comparisons are made in Table 3.

Table 3. Non-NSF Police vs. NSF Police Salary Differences. Adapted from Bureau of Labor Statistics (2023)

Panel A: National Differences				
Area	Non-NSF Police Average	NSF Police Average	Difference	% Difference
Nationwide	$76,000	$57,226	$18,774	33%
Panel B: State-wide Differences (Top five states with the most NSF police officers)				
Area	Non-NSF Police Average	NSF Police Average	Difference	% Difference
CA	$111,770	$63,686	$48,084	76%
FL	$78,480	$49,516	$28,964	58%
HI	$89,850	$58,129	$31,721	55%
MD	$76,000	$63,252	$12,748	20%
VA	$65,890	$56,794	$9,096	16%

Notes: All figures are in 2023 U.S. dollars. Non-NSF data taken from Bureau of Labor Statistics. NSF data taken from DMDC.

Table 3 shows that NSF police officers' salaries are significantly less than other police officers both nationally and in the five states most prevalent with NSF police officers. For example, in California, average police salaries are 76% higher than police officer salaries of the NSF. As the map in Figure 8 shows, well over 50% of all NSF police officers are located in these five states alone. One possible explanation in the compensation gap may be the increased risk of injury or death that other law enforcement officers face while on the job. Police officers of the NSF and competing organizations may have very different duties, interact with a totally different population while at work, and therefore may face vastly different risks at work. The acceptable increase in salary for employees who take a job with more risks is related to the value of a statistical life and it is thoroughly explored in both military and civilian contexts. Although salary is not the only reason police officers may join a specific organization, it is certainly important

when considering recruiting police officers to the NSF. While a comparison is only being made to salary with no other benefits, risks, or costs that come along with the job, at the very minimum, more research needs to be conducted into the salary gap between NSF police officers and other police officers around the country.

B. NAVY SECURITY FORCES MASTER AT ARMS TRENDS

As with the trends of NSF police officers, I start by viewing the trends of the MA force by number of new hires and total personnel in the Navy by year shown in Figure 24. Figure 24 shows a rapid rise in the total number of personnel due to the substantial number of new hires the force had in the early 2000s. From 2005 to 2024 the number of total personnel fluctuates around nine to 10 thousand while the number of new MAs recruited appears to generally be around 1,000 with some lower number of recruits starting around the year 2019.

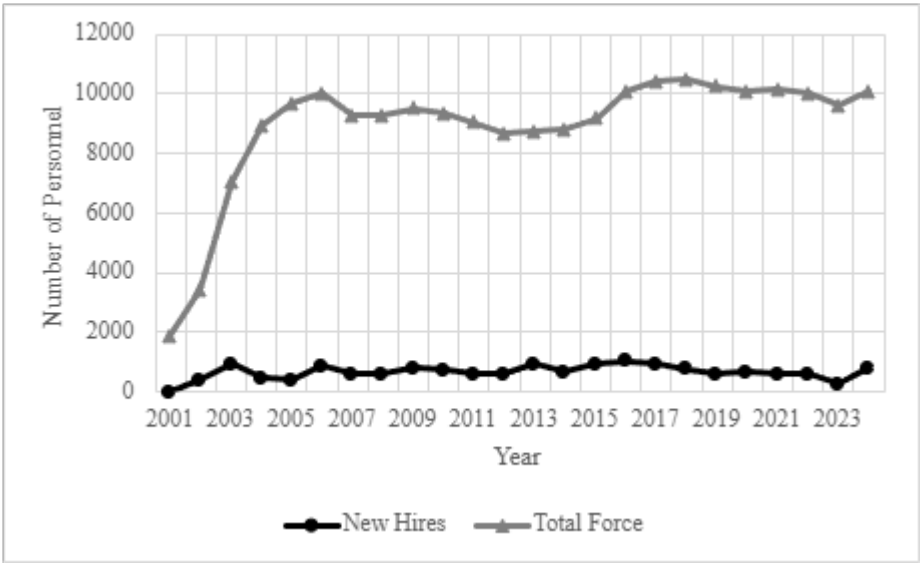

Figure 24. NSF MA New Hires and Total Personnel by Year

A breakdown of sex is pictured in Figure 25. Both males and females were recruited rapidly during the buildup of the early 2000s and then the number of males in the MA rating shows fluctuation from 2006 to 2024. At the same time, the female portion of the force saw a steady increase up until around 2019 when it saw slight decreases in the number of females in the force. Although the percentage of females began around 14%, it has gradually risen to a maximum of about 23% in 2018 and has remained around 20% since then.

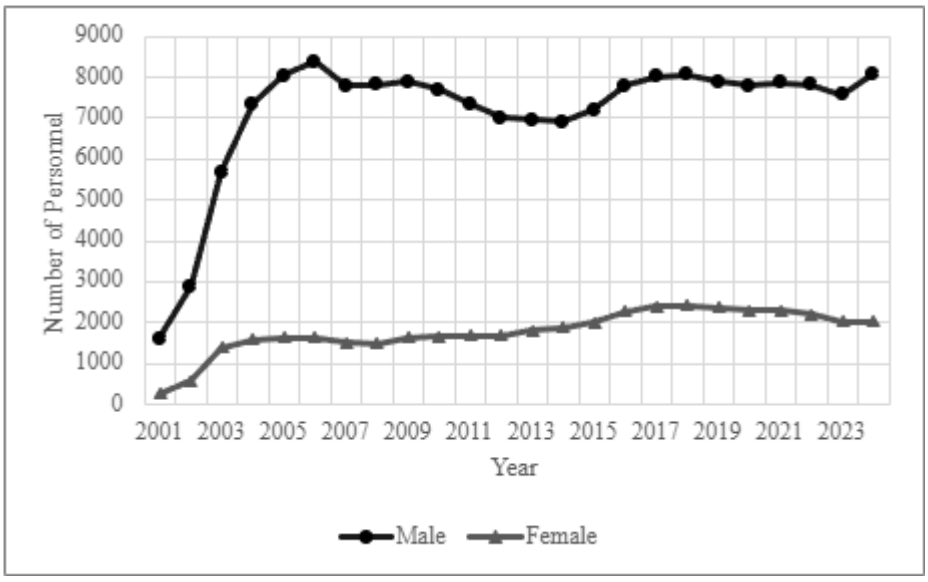

Figure 25. NSF MA Sex by Year

Figure 26 shows the trends of race in the MA community and the main takeaway is that the predominant race has always been White. Although large fluctuations are seen in the number of White personnel, the percentage of White MAs has fluctuated between 60 and 71% during this timeframe. Black, Asian, and other races have fluctuated between 16 and 23 percent, zero to four percent, and six and 19% respectively. It should be no surprise that the same trend seen in Figure 25 for males is also seen for White MAs in Figure 26 since a large portion of those in the dataset are both White and male.

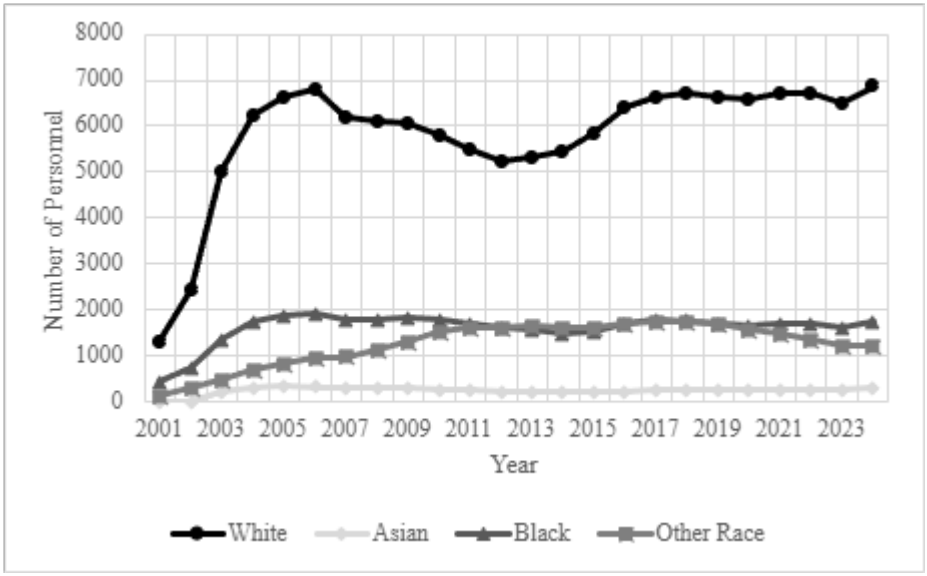

Figure 26. NSF MA Race by Year

Figure 27 shows the education credentials of the MA force. Although any trend can be hard to discern for all education levels except high school, the takeaway of Figure 27 is that the overwhelming majority of those enlisting as a MA have a high school education as their highest academic achievement. Over the past 24 years the share of those who had a high school education varied between 78 to 91 percent, but the percentage has been slowly decreasing. This is not to say the force has become less educated. Rather, the force is pursuing college at a higher rate. Although about half of those who did pursue college did not end up getting a bachelor's degree, this is somewhat surprising because enlisting as a MA does not require any college education.

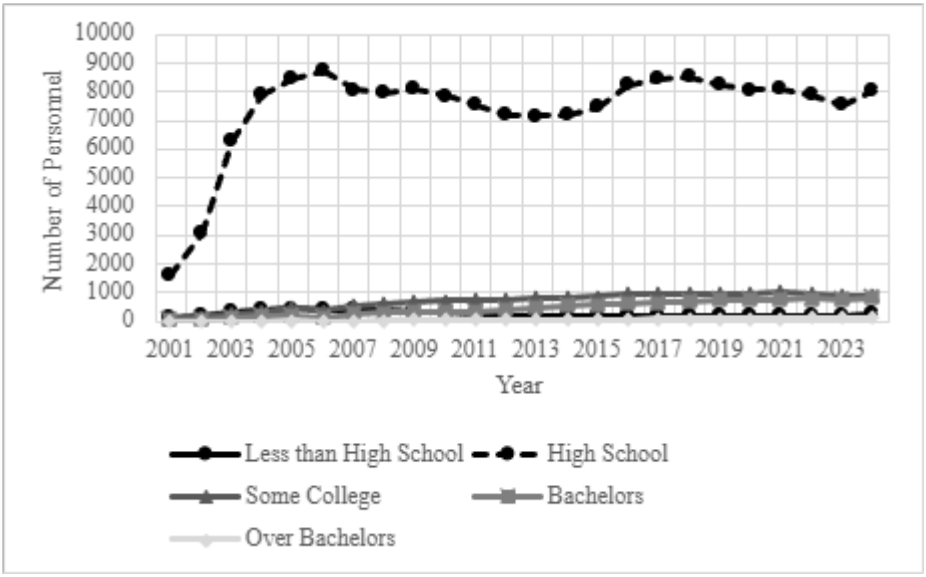

Figure 27. NSF MA Education by Year

The hiring frenzy that took place in the early 2000s is also reflected in Figure 28 with a rapid drop in average age. This happened because the MA force only had a couple thousand sailors and then the force rapidly grew to four to five times that size in only a matter of years. When the force grew rapidly, it did so by hiring young Americans that reduced the average age by over five years. From the years 2001 to 2024, the average age fluctuated between 26 and 33, but after the force rapidly grew between 2001 and 2005 the average age fluctuates between 26 and 29.

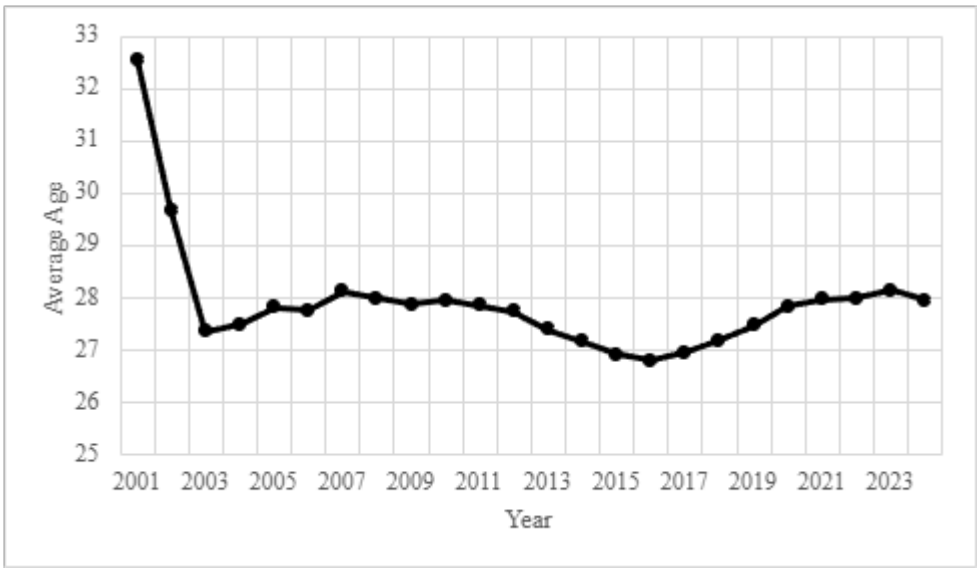

Figure 28. NSF MA Average Age by Year

Figure 29 shows the population of each of the junior enlisted pay grades (E1, E2, and E3). In 2001, pay grades E1, E2, and E3 had 11 or less sailors in each pay grade. The rapid growth of the force seen in Figures 24 through 27 is again seen in Figure 29 in the early 2000s. After the force reached somewhat of an equilibrium in 2005, the E1, E2, and E3 pay grades equated to about 2.5, 5.0, and 14 percent of the total force throughout the last 20 years.

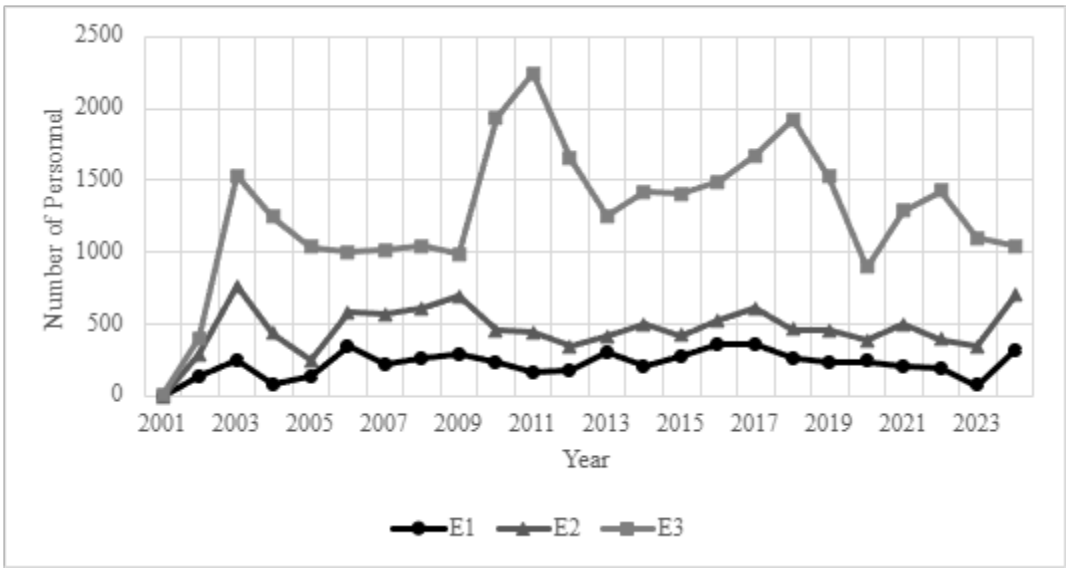

Figure 29. NSF MA Junior Enlisted by Year

Figure 30 shows similar trends to past MA figures. A rapid buildup can be seen among all petty officer pay grades (E4, E5, and E6) from 2001 to 2005 as the total force

expands. From 2006 to 2024, pay grades E4, E5, and E6 comprise an average of 25, 27, and 16 percent of the total force, respectively.

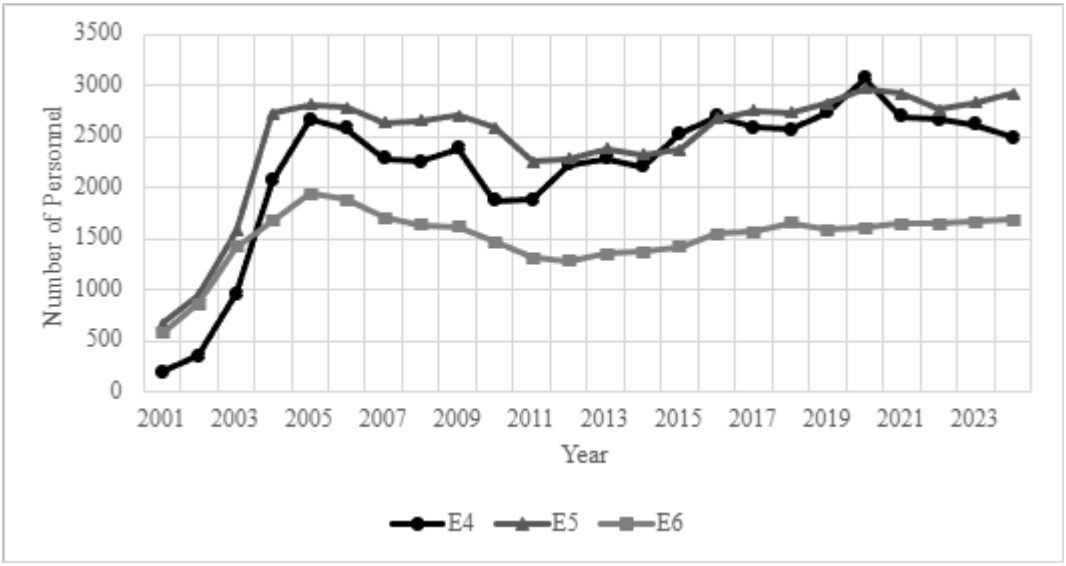

Figure 30. NSF MA Petty Officers by Year

The trends of the senior enlisted pay grades (E7, E8, and E9) are seen in Figure 31. The buildup of the force is less obvious in Figure 31 with the exception of the E7 pay grade. The percentage of E7, E8, and E9 pay grades average 6, 2, and 0.5 percent of the force after the buildup from 2006 to 2024. One interesting trend seen in Figure 31 is the number of E9 MAs over the period of 24 years. Although the force is four to five times bigger from 2006 to 2024 than it was in 2001, the number of E9s does not see any appreciable increase resulting in the percentage of E9s gradually decreasing.

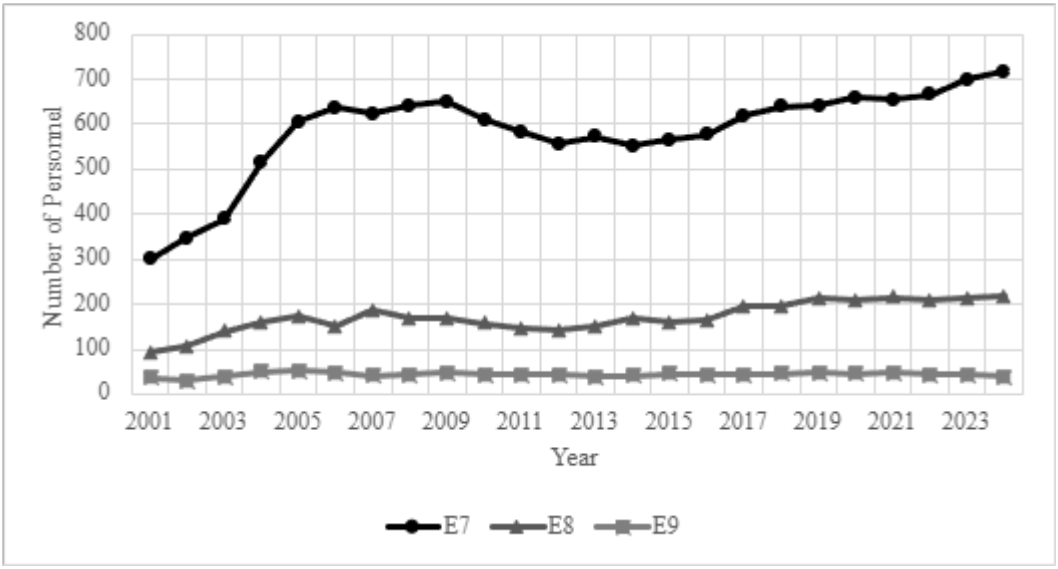

Figure 31. NSF MA Senior Enlisted by Year

VI. CONCLUSIONS AND RECOMMENDATIONS

A. POLICE OFFICER MAIN RESULTS

The first takeaway I see from the results of this study is the large share of the police force that newly hired police officers make up. In 2024 they made up 22% of the force. Although this indicates more of a retention issue than it does a recruiting issue, it is still evident by the data analyzed that this is likely too large of a percentage to be made up of newly hired officers as one study in 2021 found that only 17% of officers have less than 10 years of experience (Police 1, 2021).

Female officers only comprising as much as 11% of the force is another surprising finding. Although in 2023 females only made up 13.8% of all law enforcement officers (Korhonen, 2024), the share of females in the NSF police officer force is about 10% less than the national average.

From 2017 to 2024, the share of officers with prior service in the military shrank from 77% in 2017 to 57% in 2024. If the trend continues, the majority of NSF police officers will have no prior military experience in the near future. Studies show both positive and negative effects of veterans working in law enforcement. Positive effects include a smaller increase in stress when exposed to challenging circumstances (Ivie & Garland, 2011) and negative effects include veterans bringing their military related injuries to their organization which could be exasperated and result in limitations to their work (Whitley & Apaydin, 2024).

The police officers of the NSF have also gotten 7% younger, from an average age of 44.5 to 41.6 years old and the average years of experience of the force have also decreased significantly from 8.5 to 7.2 years, a 15% decrease. Both of these changes represent a significant transformation in the force from 2017 to 2024.

The last significant finding from this study is that NSF police officer salaries have drastically lagged the national average. Nationally, law enforcement officers make 33% more than NSF police officers. Even more concerning are the salary differences in states where NSF police officers are predominantly located. In fact, in three out of the top five states, civilian law enforcement agencies are paying over 50% more than the average

NSF police officers in those states. At the very least, more research needs to be conducted on the large pay gap that exists between these officers and the civilian agencies that represent the competition in these states. This is potentially important in investigating the financial decisions potential NSF police officers face when comparing law enforcement organizations and understanding the recruiting challenges facing the NSF. Investigating if there is a significant difference (while controlling for age, race, sex, hours worked, etc.) between salaries of the NSF and competing organizations allows future researchers to take the next step of a cost benefit analysis. This cost benefit analysis would determine if the total benefits of raising the salaries exceeds the total costs of increasing the salaries for the thousands of NSF police officers across the country. It would also include a comparison of the two groups salaries and determine if the gap was acceptable based on the value of a statistical life findings by Kniesner et al. (2015, 2024) and the current injury and death rates experience by the two communities. On one hand, raising salaries could increase the number of recruits, help retain current members of the force, and raise morale of the current force. On the other hand, raising wages may result in funds being diverted from other priorities. In other words, the opportunity cost of raising wages may result in less funding fencing, barricades, vehicles, training, weapons, or any other budget items the NSF has.

B. MA MAIN RESULTS

Between 2001 and 2005 the enlisted MA force grew by 418% from a force with less than 2,000 personnel to a force with over 9,000 sailors in 2005. The force would then fluctuate between about eight and ten thousand sailors from 2005 to 2024. This massive increase in the number of sailors in the MA community is likely due to force protection policies put in place after the September 11, 2001, terrorist attacks.

Although the category of high school diploma as the highest education achieved has shrunk by 6.7 percentage points, the enlisted MA force is not less educated. This drop in high school diploma as the highest education level achieved is because the community is pursuing college more often than it was in 2001 and roughly half of those pursuing college are completing a bachelor's degree before enlisting in the Navy.

The Navy has seen a steady rise in both the number of females in the MA community and the share of the community they make up. In 2001, females made up less than 15% of the MA community and at times between 2001 and 2024, they made up almost one quarter of the sailors in the community. The rise in the percentage of females in the community is significant change in the force.

The average age of the MA community dropped from 32.5 years old in 2001 by over 5 years of age in 2003. This rapid reduction in average age is spurred by the massive recruitment effort that saw thousands of young sailors join the Navy drastically reducing the average age of the force. Interestingly, the average age never even came close to returning to the pre 9/11 average and fluctuated between 26 and 29 years of age.

C. RECOMMENDATIONS AND FURTHER STUDIES

The biggest area for further research must be the salary gap outlined in Table 3. The gap is massive in terms of the raw difference in salary as well as percentages. In reality, these are the average salaries nationwide and by state, and NSF police officers tend to be located in some of the most expensive coastal areas in the country meaning the gap might actually be much larger. More work must be completed to discover why this discrepancy exists. The best way to find the real salary gap is to analyze data on specific officers of both the NSF and agencies nationwide. By controlling for age, race, sex, zip code, pay grade, benefits package, hours worked, and more, an apples-to-apples comparison can be drawn to calculate the true gap in salary with controls. This study would be required to prove that NSF police officers make less than other agencies in a fair comparison.

Another area for further research is to identify whether having prior military service is a benefit to being an NSF police officer. This could be accomplished by evaluating the performance of NSF police officers who have and do not have prior military service while controlling for age, race, etc. By controlling for other variables, this would tell us whether the police officer with prior military service perform better on average. If they do perform better on average, it may be worth investigating if there is an optimal proportion of officers who have prior military service.

The drastic average age change during the early 2000s begs the question of whether the force is more productive with younger members or not. On one hand they may be more physically capable; on the other hand, they may be less mature and unable to handle the stresses of a job in law enforcement. Although the age to join the Navy is 17 years old, if a study found that older members were more productive, then recruiters could target older applicants to improve the productivity of the force.

From 2001 to 2024, I found that more sailors within the MA community are pursuing college education. Although this is not required to enlist in the Navy in any community, this is making the community more educated and potentially more productive as a workforce. This could be extremely valuable for the Navy, especially if they bring a degree in criminal justice to the table. On the other hand, it could be costing these sailors money and years of their careers in college when they could have enlisted years ago. Further studies could focus on a cost benefit analysis of having a larger proportion of the MA community equipped with a college education.

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