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Military Recruiting: Determining Minority Representation Across Air Force Occupational Specialties

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ABSTRACT: The United States Air Force aims to inspire, engage, and recruit the next generation of Airmen with an annual goal of over 30,000 recruits across 130 career fields. The Air Force Recruiting Service and its recruiters stationed around the globe are tasked with recruiting, screening, and placing applicants into their assigned Air Force Specialty Codes (AFSC) or occupational specialties. As the military services experience challenges in recruiting, it is crucial to recruit and retain personnel in essential roles within the service. Career placement and career progression are important factors regarding recruiting and retention goals. This study examines applicant data to include race, gender, and occupational specialty information from fiscal year 2019 and outlines applicants that were recruited and successfully sent to basic military training. This study aims to evaluate occupational specialties for applicants across South Texas and Eastern Louisiana and determine if minority groups are equally represented in their Air Force career field allocations. The study addresses gaps in the literature by focusing on a segmented portion of the United States and outlining minority representation in Air Force Specialties. Gaining a better understanding of demographic in recruiting can provide an avenue to reallocate resources to meet accessions objectives.

KEYWORDS: Air Force, military, recruitment, occupational specialties, minorities

Introduction

The Department of Defense is one of the largest organizations in the nation, with over 2 million uniformed personnel, 700,000 civilian employees, and a budget of over 3 percent of the country's gross domestic product (Knutson 2019). An organization this size should be adequately resourced through funding and an appropriate workforce to meet its objectives. The Department of Defense is shifting the National Defense Strategy focus from war in the Middle East and counterterrorism operations to the threat of great-power conflict and emerging nations like the People's Republic of China (Twardowski 2019).

As the Department of Defense and the Department of the Air Force continue to grow and resources stretch thin, the military services must retain high-caliber young men and women to fill their ranks. The Army, Air Force, Navy, and Marine Corps all have an assigned organization to oversee, manage, and continuously execute their recruiting programs; however, a shrinking applicant pool has made recruiting more challenging than ever. Krueger et al. (2022) posit that only 29 percent of youths aged 17 to 21 are eligible for military service due to disqualifying factors such as medical, weight, education, and prior drug use. Knutson (2019) stated that even as the propensity to serve in the military decreases, the Air Force has not missed their fiscal year goal since 1999. Recruiting has been a challenge for the Department of Defense, as they compete with higher education, trade schools, and the local job market. Defense leaders should aim to better understand the applicant pool and how recruits are assigned occupational specialties to ensure they recruit the right people for the right job.

Career Options – Air Force Specialty Codes

Career choices in the Air Force are classified into air force specialty codes (AFSC). Applicants meet with recruiters and are then qualified for service through a background check, medical evaluation, and standardized testing using the Armed Services Vocational Aptitude Battery (ASVAB) test. The ASVAB score determines the air force specialty code or an aptitude area in the general administrative, mechanical, or electrical fields. An applicant may join under an aptitude area such as mechanical, and during their time at basic training, they will be assigned an AFSC in the mechanical field. Air Force Specialty Codes are broken into nine categories outlined in Table 1.

Table 1: Air Force Specialty Code Overview

Category	Career Field Examples
1 - Operations	Aircrew, Cyber, Intelligence, Special Warfare
2 – Logistics and Maintenance	Aerospace Maintenance, Fuels, Transportation, Munitions
3 – Base Support	Engineering, Personnel, Public Affairs, Security Forces
4 – Medical	Medical Services, Administration, Public Health, Dental
5 – Professional	Paralegal, Religious Affairs
6 – Acquisitions and Finance	Contracting, Finance
7 – Investigations	Office of Special Investigations
8/9 – Special Duty/Reporting Identifiers	Career Advisor, Instructor, Recruiter, Air Advisor

Source: Veteran.com 2023

Air Force Demographics and Career Progression

The United States military is known as a diverse group of individuals from across the nation. Roth-Douquet (2022) highlights the all-volunteer military force as a proud organization emphasizing diversity in its ranks. Although personnel come from various backgrounds, there are still underrepresented populations across the military services. The 2021 Department of Defense Demographic Report provided the following overview of personnel demographics:

- Across all military services, there is 1,099,460 enlisted personnel, but only 17%, or 186,370, are female.
- The percentage increases for Air Force enlisted personnel with 20.9% or 55,462 out of 209,348.
- Minority applicants account for 32.5% of the 1,099,460 applicants across the Department of Defense and 31.1% of the 264,811 from the Air Force.

A diverse applicant pool brings varying life experiences, backgrounds, and thoughts that all contribute to the national defense mission. Research has found that applicants from specific backgrounds have different levels of career success. A study by Lytell et al. (2015) found that women and other minority groups are less likely to achieve career success and show lower rates of advancement and retention. A key difference Lytell et al. (2015) found among career development patterns is that women and minorities are less likely to enter operational specialties, resulting in fewer individuals in senior leadership positions. The study by Lytell et al. (2015) concluded that it is not only important to recruit a diverse workforce, but occupational classification is also a key factor in future progression in the Air Force. Losey (2017) analyzed enlisted promotions from staff sergeant (E-5) through senior master sergeant (E-8) from 2013-2017 and found that nearly half of the top 20 career fields for promotions came from the operations categories with jobs such as air traffic control, airborne cryptologic linguist, and geospatial intelligence at the top of the list. Table 1 outlines the difference in promotion opportunities across career fields. The average promotion rate from technical sergeant (E-6) to

master sergeant (E-7) was just over 23%. Promotion rates increase to 13% for operations-focused categories like airborne linguists. Promotion rates for security forces, a base support role, were 6% lower than the average and just under 20% lower when compared with airborne linguists. Recruiting the next generation of the military is important for the future of national defense; however, proper classification plays a key factor in advancing and retaining military personnel.

Table 2: Air Force Promotion Rates to Master Sergeant (E-7) in 2016

Air Force Specialty Code	Promotion Selection Rate	Time in Grade in Previous Rank (E-6)
Air Force Average	23.34%	4.60 years
1A0X1 – Airborne Linguist	36.36%	2.91 years
1U0X1 – RPA Sensor Operator	25.23%	3.09 years
3P0X1 – Security Forces	17.22%	4.98 years

Source: Losey, 2017, AirForceTimes.com

Research

This quantitative correlational study aims to determine the relationship between minority applicants, defined by gender and race, and their classification in Air Force occupational specialties defined by Air Force Specialty Code categories 1-9. A tetrachoric correlation was utilized to assess the strength of the relationship between gender and race across categories 1, 2, 3, 4, 6, and 8/9 combined. Air Force specialties in category 5, consisting of professional jobs such as paralegal and religious affairs, and category 7, consisting of special investigations, were not awarded to applicants during this time frame and not utilized in the study. This study aims to evaluate the relationship between applicant demographics and their assigned occupations, as job classification has been identified as a determining factor for future success across a career in the military.

Research Questions

The following research questions will guide this study:
RQ1. What relationship, if any, exists between the applicant's race and their assigned Air Force Special Code (AFSC)?
RQ2. What relationship, if any, exists between the applicant's gender and their assigned Air Force Specialty Code (AFSC)?
H_0 There is not a significant correlation between minority applicants and the Air Force Specialty Code they are assigned.
H_1 There is a significant correlation between minority applicants and their assigned Air Force Specialty Code.

Methodology

This study aims to identify if a relationship exists between Air Force applicants from South Texas and Eastern Louisiana classified as minority applicants and their job classification for the fiscal year 2019. Applicant data was provided by the 341st Recruiting Squadron, headquartered in San Antonio, Texas. Data included the applicant's age, race, gender, and zip code for the address they had on file before leaving for basic military training. All applicant personal identifiable information such as name, address, or social security number was removed before collection to protect applicant privacy.

Significance of the Study

The United States Air Force, as part of the Department of Defense, is the nation's leading employer of young Americans. In March 2023, Secretary of the Air Force Frank Kendall stated that for the first time in over two decades, the Air Force would likely miss its recruiting goal due to a decreased interest in the military (Novelly 2023). Existing policies that have traditionally disqualified candidates for military service, such as tattoos, are being evaluated and altered to increase the limited applicant pool; however, the Air Force should aim to assess the effectiveness of their current recruiting and job classification processes. Gaining a better understanding of applicants can help the Air Force improve their accession processes to improve recruiting, retention, and future workforce success.

Results

Gender

Data was provided for 1,657 applicants that completed the recruiting process and were sent to Air Force basic training in fiscal year 2019. Of the 1,657 applicants, 548 were not given specific jobs before departing to basic training; they were only given jobs in an aptitude area such as mechanical, administrative, general, or electrical. Table 3 outlines the 1,657 applicants by their gender and what job category they were assigned. Over 72% of the 1,657 applicants were male. Males are in the majority for all career categories except for medical, where females represent 57 percent of the population. The acquisition and financial management career categories represented 50 percent female and 50 percent male; however, the sample size was limited to only 12 applicants.

Table 3: Job Classification by Gender

Job Category	Female	Male	**Total**
1 - Operations	111	189	**300**
2 – Logistics and Maintenance	56	255	**311**
3 – Base Support	98	326	**424**
4 – Medical	34	26	**60**
6 – Acquisitions and Finance	6	6	**12**
8/9 – Special Duty/Reporting Identifiers	0	2	**2**
Aptitude Area (Not Specified)	128	420	**548**
N	433	1,194	**1,657**

Race

Table 4 outlines the 1,657 applicants by their race and what job specialty they were assigned. The subtotal reflected accounts for only African American and White applicants. African American (339) and White (1,214) represented over 93 percent or 1,553 of the 1,657-sample size. A total of 104 applicants, or just over 6 percent, were Asian, Pacific Islander, Native American, or listed multiple races and were categorized together as other.

Table 4: Job Classification by Race

Job Category	African American	White	Other	**Subtotal**	**Total**
1 - Operations	50	241	9	**291**	**300**
2 – Logistics and Maintenance	59	236	16	**295**	**311**
3 – Base Support	96	302	26	**398**	**424**
4 – Medical	14	39	7	**53**	**60**
6 – Acquisitions and Finance	2	9	1	**11**	**12**
8/9 – Special Duty/Reporting Identifiers	0	1	1	**1**	**2**
Aptitude Area (Not Specified)	118	386	44	**504**	**548**
N	339	1,214	104	**1,553**	**1,657**

Table 5 is a breakdown of applicant job classification percentages by race. The largest job classification for African American and White applicants were aptitude areas or "not specified," meaning that just under 35 percent of African American and just over 30 percent of White applicants joined the Air Force and went to basic military training without knowing their specific job. Upon job classification at basic training, applicants were guaranteed a job in a specific aptitude area such as mechanical, administrative, general, or electric. Out of the 339 African American applicants, the largest job category was base support (28.32%), followed by logistics and maintenance (17.40%) and operations (14.75%). African American applicants had only two personnel (0.59%) placed in the acquisitions and finance career category and none in the special duty/reporting identifiers. Out of the 1,214 White applicants, the largest job category was base support (24.88%), followed by operations (19.85%) and logistics and maintenance (19.44%). White applicants had 9 applicants (0.74%) placed in the acquisitions and finance career category and one applicant (0.08%) placed in the special duty/reporting identifiers.

Table 5: Job Classification by Race in Percentage

Job Category	African American	White
1 - Operations	14.75%	19.85%
2 – Logistics and Maintenance	17.40%	19.44%
3 – Base Support	28.32%	24.88%
4 – Medical	4.13%	3.21%
6 – Acquisitions and Finance	0.59%	0.74%
8/9 – Special Duty/Reporting Identifiers	0.00%	0.08%
Aptitude Area (Not Specified)	34.81%	30.31%
N	100.00%	99.00%

A tetrachoric correlation was used to assess the strength of the relationship between gender and job classification categories. Table 7 utilizes gender and the job categories as independent variables. Operations, medical, and acquisitions/finance categories are all positively correlated as outlined in their positive tetrachoric correlation. The negative tetrachoric correlation identifies women as underrepresented in the logistics/maintenance, base support, and special duty job categories. The p-value is less than 0.10 for all categories except for the base support category. This indicates that the correlation is statistically significant below the 10 percent significance level for the operations, logistics/maintenance, medical, acquisitions/finance, and special duty/reporting identifiers job categories.

Table 6: Tetrachoric Correlations by Gender

Job Category	Tetrachoric rho	Std Error	2-sided P
1 - Operations	0.2157	0.0459	0.0000
2 – Logistics and Maintenance	-0.1837	0.0483	0.0002
3 – Base Support	-0.0750	0.0452	0.1092
4 – Medical	0.3636	0.0668	0.0000
6 – Acquisitions and Finance	0.2306	0.1270	0.0914
8/9 – Special Duty/Reporting Identifiers	-0.0813	0.0431	0.0357

A tetrachoric correlation was used to assess the strength of the relationship between race and job classification categories. Table 7 utilizes race (African American) and the job categories as independent variables. Base support, medical, and special duty/reporting identifiers are all positively correlated, as outlined in their positive tetrachoric correlation. The negative tetrachoric correlation identifies that African American applicants are underrepresented in the operations, logistics/maintenance, and acquisition/finance job categories. The p-value is less

than 0.10 for all categories except for acquisition/finance. The correlation is statistically significant at below the 10 percent significance level for operations, logistics/maintenance, base support, medical, and special duty/reporting identifiers.

Table 7: Tetrachoric Correlations for African American Applicants

Job Category	Tetrachoric rho	Std Error	2-sided P
1 - Operations	-0.0953	0.0516	0.0817
2 – Logistics and Maintenance	-0.0370	0.0509	0.5327
3 – Base Support	0.0602	0.0469	0.2091
4 – Medical	0.0447	0.0806	0.6243
6 – Acquisitions and Finance	-0.0508	0.1522	1.000
8/9 – Special Duty/Reporting Identifiers	0.0319	0.0452	0.4776

Table 8 utilizes race (White) and the job categories as independent variables. Operations, logistics/maintenance, and acquisitions/finance are all positively correlated, as outlined in their positive tetrachoric correlation. The negative tetrachoric correlation identifies that white applicants are underrepresented in the base support, medical, and special duty job categories. The p-value is less than 0.10 for all categories except for acquisition/finance identifying the correlation as statistically significant at below the 10 percent significance level for operations, logistics/maintenance, base support, medical, and special duty/reporting identifiers.

Table 8: Tetrachoric Correlations for White Applicants

Job Category	Tetrachoric rho	Std Error	2-sided P
1 - Operations	0.1545	0.0486	0.0019
2 – Logistics and Maintenance	0.0564	0.0481	0.2562
3 – Base Support	-0.0488	0.0488	0.2799
4 – Medical	-0.1082	0.0751	0.1400
6 – Acquisitions and Finance	0.0193	0.1408	1.0000
8/9 – Special Duty/Reporting Identifiers	-0.0797	0.0425	0.0676

Discussion and Implications

The United States Air Force aims to attract the best and brightest young men and women from around the nation to join its forces each year; however, for the first time in decades, the service is at risk of not making its recruiting goals. In March of 2023, Air Force Public Affairs cited Assistant Secretary of the Air Force Kristyn Jones, confirming that the Air Force is on track to miss its enlisted active duty goal by more than 10 percent. In response to its recruiting challenges, the service has increased marketing by $150 million, offered loan repayment options, and removed enlistment barriers through relaxed accessions policies; however, challenges will remain as the applicant pool continues to shrink due to limited exposure to the military and increased disqualifications due to medical, criminal backgrounds, educational requirements, and drug use.

The Air Force should continue to focus on attracting, recruiting, and retaining a diverse force that can increase the propensity to serve in the military in underrepresented communities. This research outlined how certain demographic groups were underrepresented in the sample provided. Female applicants are underrepresented in the logistics/maintenance and base support job categories. African American applicants are underrepresented in the operations, logistics/maintenance, and acquisitions/finance job categories. Lastly, White applicants are underrepresented in the base support and medical job categories. Both genders and all races

were listed as underrepresented in the special duty job categories due to their limited sample size, with only two applicants being selected throughout the fiscal year.

Lytell et al. (2015) emphasized the importance of career progression and its tie to careers in the operations category, outlining that women and minority groups are less likely to enter these specialties. The data shows 50 African American and 241 White applicants were assigned jobs in the operations category. A total of 19.85 percent of all White applicants were assigned a job in the operations category compared to 14.75 percent of all African American applicants, a 5.1 percent variance. The percentages improve for the gender breakdown, with 25.64 percent of female applicants being assigned an operations career field versus only 15.82 of male applicants; however, the totals equaled 111 females and 189 males for a total of 300 for the fiscal year.

This data should be further analyzed to include a large sample size that expands outside of the Texas and Louisiana markets to include a larger region across the United States. Table 9 outlines applicants' rank breakdown by race and gender, confirming the study by Lytell et al. (2015) demonstrating that minority groups such as African American and female applicants can experience limited career progression. African American Airmen in the Air Force account for 18.4 percent of enlisted personnel at the E1 to E4 ranks; however, that decreases to 15.5 percent for ranks E7 to E9. Female Airmen account for 23 percent of personnel at the E1 to E4 ranks; however, that decreases to 20.5 percent for ranks E7 to E9. Additional research should focus on the career progression of applicants after their accession and completion of basic military training.

Table 9: Air Force Diversity Across the Enlisted Ranks in 2021

Rank Category	African American	White	Others	Women	Men
E1 – E9 (All Ranks)	16.9%	68.9%	14.2%	20.9%	79.1%
E1 – E4	18.4%	68.2%	13.4%	23.0%	77.0%
E5 – E6	15.6%	70.0%	14.4%	18.6%	81.4%
E7 – E9	15.5%	68.5%	16.0%	20.5%	79.5%

Source: Militaryonesource.com, Demographics Dashboards 2021

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Conclusion

Literature has provided insight into the lack of career progression for specific demographic groups throughout their military career. Air Force and Department of Defense recruiting should analyze accession practices to better understand the recruiting and retention practices of military personnel. Recruiting the next generation of personnel to serve in the United States Air Force is proving difficult as fewer potential applicants are exposed to the military through family and friends, and those with the propensity to serve in the military are facing increasing disqualification rates due to various reasons such as their health, fitness levels, criminal background, educational levels, or past drug use. As the recruiting pool decreases, attracting the right talent is a key factor in readying the force of the future.

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