

Accession Medical Standards Analysis and Research Activity (AMSARA)

Special Report



**Learning, Psychiatric and
Behavioral Disorders (LPBD)
Disqualifications and their
Impact on Readiness**

2024



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Material has been reviewed by the Walter Reed Army Institute of Research. There is no objection to its publication. The opinions or assertions contained herein are the private views of the authors, and are not to be construed as official, or as reflecting true views of the Department of the Army or the Department of Defense. The investigators have adhered to the policies for protection of human subjects as prescribed in AR 70–25.

AMSARA's Mission

Execute advanced analytics and epidemiological research for evaluating accession medical standards and their changes to promote, inform, and support evidence-based Department of Defense (DoD) policy decisions aimed at optimizing the selection of new recruits and enhancing service member medical readiness.

AMSARA's Vision

Provide historic perspective, experience, expertise, and tailored real-time evidence-based analytical research support to the DoD leadership for optimizing accession policies, medical readiness, and responsiveness to the ever-changing needs of service members and the DoD.

AMSARA's Objectives

Provide analytic and operational research support to:

- Improve service member health, readiness, and resilience
- Optimize recruitment, retention, and deployment
- Reduce medical attrition and disability

Table of Contents

Section 1: Background

- 1 Introduction
- 3 Key Terms and Definitions
- 8 Baseline Metrics: Learning, Psychiatric, and Behavioral Disorders (LPBD) Accession Medical Disqualifications (DQs)

Section 2: Studies

- 14 Risk of Early Adverse Attrition Among Active Duty Enlistees with an Accession DQ For Selected LPBD Standards
- 26 Insights into ADHD among Military Applicants and Accessions: Assessment of Early Adverse Attrition Risk
- 40 First-year Attrition among Recent Accession Waivers for History of Mood Disorders, Self-Harm, Anxiety Disorders, or Stress/Adjustment Disorders
- 47 Special Report Caveats
- 48 Acronyms and References

SECTION 1: BACKGROUND

Introduction

Since 1996, AMSARA has produced an Annual Report providing descriptive analyses and research characterizing Service member health, readiness, and resilience to inform policymakers tasked with optimizing recruitment, retention, and deployment, and reducing medical attrition and disability. The starting point for these analyses was a thorough assessment of the medical disqualification (DQ) codes indicating medical fitness of applicants for enlisted service relative to military requirements. Further analyses examined medical waiver actions, baseline medical status of enlistees at entrance into the service, and attrition by initial medical status. The absence of comprehensive DQ codes within applicant data since FY 2021 extracted from the United States Military Entrance Processing Command (USMEPCOM) USMIRS 1.1 database has precluded the production of a FY 2024 AMSARA Annual Report in the traditional format.

In lieu of the traditional report, this AMSARA Special Report aims to provide a comprehensive analytical overview of accession medical DQs under the Learning, Psychiatric, and Behavioral

Disorders (LPBD) subsection in the Department of Defense Instruction 6130.03 Volume 1 (DoDI 6130.03 V1) and their impact on readiness. LPBD accession medical standards has drawn considerable interest and input within DoD and external stakeholders, and the conversation would benefit from assessments of these standards' impact on force strength and medical readiness^{1,2}.

This report begins with an initial assessment of the frequency and time patterns of DQs under the LPBD subsection, and then provides insights on the impact of these standards on Military Services applicants. To assess impact of LPBD DQs on military service, two prospective epidemiologic studies compare early adverse attrition between selected LPBD DQ enlistee cohorts and medically qualified (MQ) enlistees.

The third study examines service outcomes after accession medical waiver for LPBD DQs utilizing Service Medical Waiver Review Authority (SWMRA) data rather than USMEPCOM applicant data. In theory, waiver and DQ classifications should be nearly the same, but in practice there appears to be differences in how DQs can be classified and coded at physical exam versus at the time of accession medical waiver consideration. This may result from different levels of information available at these two stages, as the

Report Aims

1. Describe prevalence and patterns of LPBD DQs among Military Services applicants
2. Identify the most common LPBD DQs
3. Describe and assess risk of early adverse attrition (EPTS, disability, and other adverse attrition) among LPBD DQs
4. Identify Service medical waivers for selected conditions listed in the LPBD subsection of the DoDI 6130.03 V1, and compare first-year adverse attrition to MQ accessions

SWMRA may request medical records and other documentation that clarifies the nature of the applicant’s medical history.

Results in this Special Report are intended to inform and assist policymaker identification of any potential for standard-specific DQ or waiver policy modifications that may impact force strength and medical readiness. AMSARA acknowledges the challenges associated with mental health screening at accession³. Consequently, all findings in this report should be considered in regard to the limitations listed in the *Special Report Caveats* section on page 47.

Role of AMSARA

Since 1995, AMSARA has supported the efforts of the Medical and Personnel Executive Steering Committee (MEDPERS) and Accession and Retention Medical Standards Working Group (ARMSWG). MEDPERS was established by the Under Secretary of Defense (Personnel and Readiness) to integrate the medical and personnel communities to provide policy guidance and establish medical standards for accessions, stemming from evidence-based information provided by analysis and research. The committee is co-chaired by the Deputy Assistant Secretary of Defense (DASD)-Military Personnel Policy and the DASD-Health Services Policy & Oversight and comprises representatives from the Office of the Assistant Secretary of Defense (OASD)-Health Readiness Policy and Oversight, OASD-Health Services Policy and Oversight, OASD-Reserve and Manpower Personnel, OASD-Civilian Personnel Policy, Offices of the Service Surgeons General, Offices of the Service Deputy Chiefs of Staff for Personnel, and Health and Safety Directorate (Department of Homeland Security, U.S. Coast Guard). The ARMSWG is a subordinate working group which reviews accession medical policy issues contained in DoDI 6130.03 V1, entitled “Medical Standards for Military Service: Appointment, Enlistment, or Induction”⁴. This group is composed of representatives from each of the offices listed above.



Military and civilian staffing within the WRAIR Center for Enabling Capabilities (CEC) which supported this effort included COL Kirsten Smith, Dr. Natalya Weber, CPT(P) Jared Egbert, and Mrs. Caitlin Rushin. AMSARA is augmented with contract support through ManTech Health. ManTech staff in 2024 included Amanda Kelley, Lily Trofimovich, Timothy Powers, Reema Singh, Rhonda Jackson, Sarah Knop, Desiree Tupas, Darrah Edwards, Harihar Bhattarai, Alyssa Villa, and Madeline Laslo.

Key Terms and Definitions

Unless otherwise noted, these terms and definitions are for the purpose of this Special Report.

Accession: An applicant who signs an oath of enlistment. Accessions with no record of a Military Entrance Processing Station (MEPS) physical examination within 2 years prior to accession were excluded from analyses.

Accession Medical Standards: See “DoDI 6130.03 Volume 1 (V1)”. For this report, medical standard numbering and descriptions were based on DoDI 6130.03 V1, 2018, Change 2.

Applicant: An individual who has completed a MEPS physical exam in pursuit of enlistment in any of the Military Services.

Application: An individual’s request to enlist in a specific Service.

Disqualification (DQ): USMEPCOM designation based on current or verified past medical history of a condition which does not meet the medical standards for accession into military service based on DoDI 6130.03 V1. Medical DQs per DoDI 6130.03 V1 were referenced pursuant to the guidelines provided within the USMEPCOM Supplemental Medical Policy Guidance (SMPG)⁵.

DoDI 6130.03 Volume 1 (V1): A Department of Defense Instruction promulgated in May 2018 which regulates the physical and medical standards for accession into military service. If an applicant does not meet one or more of these standards, the applicant must receive an accession medical waiver to access.



Adverse Attrition: Separation from service for any reason that constituted an unfavorable outcome for the Service. Adverse attrition was further classified into three mutually exclusive attrition categories: separation due to medical conditions that existed prior to service (EPTS), disability discharge, and any other adverse attrition with no record of EPTS separation or disability discharge.

1. **EPTS:** An administrative separation from service within 180 days of service due to a condition that does not meet accession medical standards, and which was verified to have existed prior to service and was not permanently aggravated by military service (DoDI 1332.18, AR 635-200 Chapter 5-10, MCO 1900.16 Chapter 2). Service members were categorized as EPTS separation upon presence of an EPTS record within the USMEPCOM data. EPTS separation may not be related to the pre-accession DQ or medical waiver. Data received by AMSARA for EPTS separations has historically been incomplete, and drastically so since FY 2020 (see Figure 1). AMSARA believes this reflects a change in reporting rather than an actual reduction in EPTS separations. Hence, EPTS separations were likely under-counted in this report’s analyses. This underreporting is likely independent of whether an enlistee had a pre-accession DQ or waiver. As a result, relative risk estimates for EPTS separations should not be biased, and the low numbers of EPTS separations reduces the likelihood of achieving statistical significance. Most EPTS separations unreported by USMEPCOM were likely captured in DMDC separation data and given an inter-separation code included in the ‘Other Adverse Attrition’ category described below.

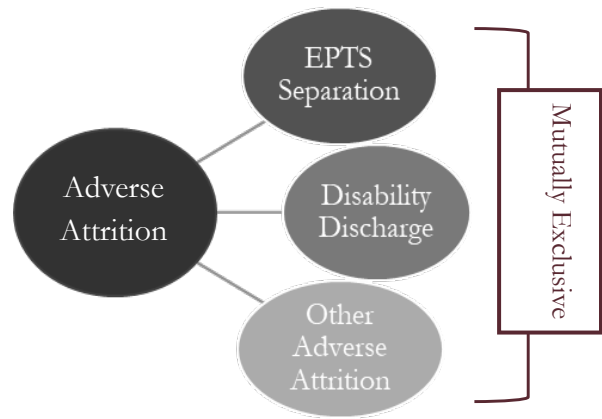
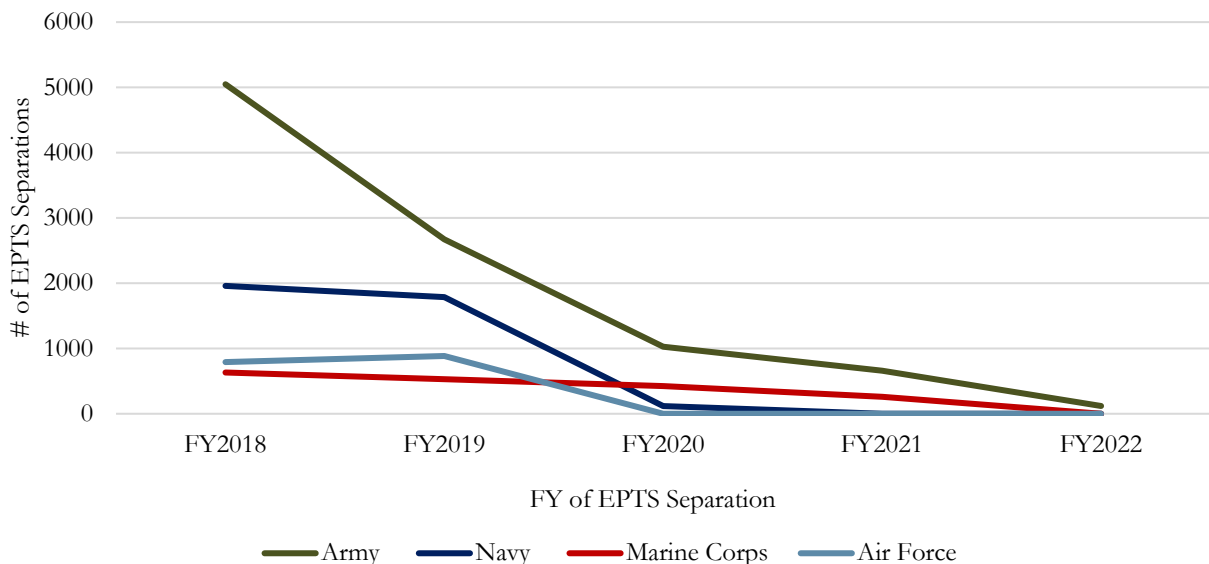


Figure 1: Decline in EPTS Separation Data Received by MSAR By Training Site and Year



1 Army training sites included Fort Benning, Fort Jackson, Fort Leonard Wood, and Fort Sill; Navy training sites included Great Lakes and San Diego; Marine Corps training sites included Parris Island; Air Force training sites included Lackland Air Force Base.

2 For this Special Report, AMSARA received data covering only the first 3 months of FY 2022; results should be considered underestimated.

2. ***Disability Discharge:*** A discharge processed through the Disability Evaluation System (DES) resulting in one of the disability dispositions listed below. Due to their rarity, disability discharges related to any condition (coded using Veterans Affairs Schedule for Rating Disabilities (VASRD) codes) were included. Therefore, the condition(s) that caused the disability discharge may not be related to the pre-accession DQ or medical waiver.
 - a. **Disability Dispositions:** The complete list of disability dispositions can be found in the FY 2023 DESAR Annual Report⁶, however, the disability dispositions used in this Special Report are as follows:
 1. ***Permanent Disability Retirement List (PDRL):*** A disposition assigned when the Service member is found unfit with a condition considered stable (unlikely to change within three years) and has either a combined disability rating of 30 percent or higher or has a length of service greater than 20 years. Service members assigned this disposition are eligible to receive ongoing payments and health care throughout their lifetime.
 2. ***Temporary Disability Retirement List (TDRL):*** A Service member is placed on the TDRL when the condition has not stabilized sufficiently to accurately assess the degree of disability. To be eligible for this interim disposition, the Service member must be determined to be unfit for continued service due to a temporary or unstable condition (i.e., may improve or worsen within three years). A re-evaluation of a Service member placed on the TDRL may result in assignment of a permanent disposition (e.g., PDRL), or in cases when the condition remains unstable, retained on the TDRL.
 3. ***Separation with Severance Pay (SWSP):*** This disposition is assigned when at least one condition is found to be unfitting, the combined disability rating is less than 30 percent, and the Service member has fewer than 20 years of service⁷. Service members assigned this disposition will be given a one-time severance payment but limited or no ongoing benefits.
 - b. **Body System Categories:** Medical categories of grouped VASRDs listed in 38 Code of Federal Regulations (CFR) Book C, Schedule for Rating Disabilities⁸.
3. ***Other Adverse Attrition:*** A separation classified under any of the ISC codes listed in Table 1 without either an EPTS separation or disability discharge record. Note that prior analyses found that most historical EPTS separations were assigned ISC codes listed within Table 1, therefore, for this report, EPTS separations with missing records would likely be captured in (i.e., misclassified into) this category.

Table 1: ISC Code Categories Included as Other Adverse Attrition

ISC Code	Description	ISC Code	Description
1016	Unqualified for Active Duty - Other	1096	Conscientious Objector
1060-1088	Failure to Meet Minimum Behavioral and Performance Criteria	1098	Breach of Contract
1090	Secretarial Authority	1099	Other Separation or Discharge
1091	Erroneous Enlistment or Induction	1101	Dropped from Strength for Desertion
1095	Underage	1102	Dropped from Strength for Imprisonment

Accession Medical Qualification Status: Medical qualification decision given by USMEPCOM based on the presence or absence of a medical DQ listed in DoDI 6130.03 V1 found during the MEPS medical review.

The two categories of accession medical qualification status among applicants are as follows:

1. **Medically Qualified (MQ):** An applicant who meets the medical requirements listed in the DoDI 6130.03 V1. Note that this designation does not imply compliance with administrative standards (e.g., body weight standards).
2. **Medically Disqualified:** An applicant determined by USMEPCOM to not meet at least one standard listed in the DoDI 6130.03 V1.

Of particular interest in this report are applicants who were determined by USMEPCOM to not meet at least one standard listed in Subsection 5.28, *Learning, Psychiatric, or Behavioral Disorders*, in the DoDI 6130.03 V1 and **Medically Disqualified for a Learning, Psychiatric, or Behavioral Disorders (LPBD)**. An abridged listing showing DQ categories examined in this report is provided in Table 2.

Table 2: Most Common Disqualifying Learning, Psychiatric, and Behavioral Disorders Accession Medical Standards Examined in this Report – For Full List Please See DoDI 6130.03 V1

Accession Standard	Pseudonym in this Report	Full Description
5.28.a.4	ADHD	ADHD if with documentation of adverse academic, occupational, or work performance
5.28.b.3	Hx of Learning Disorders	History of learning disorders after the 14th birthday, including but not limited to dyslexia if any of the following apply: documentation of adverse academic, occupational, or work performance
5.28.f.4	Depressive Disorder	Depressive disorder if any recurrence
5.28.h	Hx of Behavior Disorders	History of disruptive, impulse control and conduct disorder to include but not limited to oppositional defiant and other behavior disorders
5.28.n	Hx of Self-Mutilation	History of self-mutilation
5.28.q.4	Hx of Anxiety Disorders	History of anxiety disorders if any recurrence

1. ADHD: Attention-Deficit/Hyperactivity Disorder, Hx: History
2. ICD codes were mapped using the USMEPCOM SMPG⁵. As a result, not all accession standards have a mapped ICD code.

Accession Medical Waiver: A recommendation of approval, after review by a SMWRA, for an applicant to join a Service branch after receiving one or more medical DQs. A medical waiver may be approved for the LPBD DQ if the SMWRA determines that the DQ is not supported by medical evidence, does not represent a current or active diagnosis, and meets accession standards⁹. Additional approval criteria for waivers for self-mutilation DQs are described in Army Directive 2018-12⁹.

Accession Physical Examination (Physical Examination): Assessment performed at MEPS where applicants are evaluated for their physical qualification to enter the military. This assessment includes a physical examination and interview, medical history review, height/weight measurements, hearing and vision examinations, urine and blood screenings, and other qualification tests, such as the Armed Forces Qualification Test (AFQT).



Baseline Metrics: LPBD Accession Medical DQs

Key Findings

- LPBD DQs accounted for 15% (Army) – 20% (Marine Corps) of all active duty enlisted applicant DQs during FY 2016-FY 2020.
- History of self-mutilation was the leading LPBD DQ, accounting for approximately 40% of all LPBD DQs, followed by ADHD, representing roughly 25% of all LPBD DQs.
- The next most common DQs, in order, were history of anxiety disorders, depressive disorder, and history of behavior disorders, each accounting for 4-12% of all LPBD DQs.
- DQs for history of self-mutilation more than doubled among each Service's applicants over the period FY 2016-FY 2020.
 - Since the standard for self-mutilation did not become stricter over this time period, the apparent increase may reflect an increase in self-mutilation activity among youth, a more sensitive approach to DQs, more detailed risk assessments, updated Service-specific medical waiver approval criteria, a change in the DQ code mapped to this DQ, and/or other factors.
 - Temporal patterns in other DQs were less pronounced, with direction differing by service.

Background

Accession medical DQs under the LPBD accession medical standards constituted roughly one out of every six pre-accession medical DQs¹⁰. This has drawn the interest of high-level government officials regarding the impact of LPBD DQs on military strength and readiness². As the Services face one of the most challenging recruitment environments since the inception of the all-volunteer force in 1973, there have been requests to consider modifying accession medical standards and the criteria for granting accession medical waivers to increase the number of recruits^{9,10,11,12,13}.

To offer insights into the impact of the LPBD standards on the number of medically eligible applicants for active duty enlisted service, this Section will focus on the relative frequency, volume, and time patterns of the leading LPBD accession medical DQs.

Methods

First-time applicants between FY 2016 to FY 2020 for enlisted active duty service in the Army, Navy, Marine Corps, or Air Force were included in the tabulations in this Section. Applications later than FY 2020 were not included due to the absence of comprehensive DQ codes within the applicant data received by AMSARA since February 2021.

Tables 3A-3D present the percentage distribution of LPBD DQs during a pre-accession medical examination at a MEPS, defined in the DoDI 6130.03 V1, for the leading DQs among applicants for each Service branch. Time patterns of DQ frequencies were plotted for the top LPBD accession medical standard from FY 2016-FY 2020 (Figures 2A-2D).

Results

Table 3A: Application DQs, as a % of all LPBD DQs and of all DQs among **Army** Enlisted Applicants between FY 2016-FY 2020

Disqualifying Accession Standard	% of LPBD DQs	% of All DQs
Hx of Self-Mutilation	38.6%	5.7%
ADHD	21.5%	3.2%
Hx of Anxiety Disorders	8.8%	2.0%
Depressive Disorder	8.2%	1.2%
Hx of Behavior Disorders	6.1%	0.9%
Any LPBD DQ	100.0%	14.9%

Hx: History; ADHD: Attention-Deficit/Hyperactivity Disorder; LPBD: Learning, Psychiatric and Behavioral Disorders; DQ: Disqualification

Figure 2A: DQ Numbers, by LPBD Standard, Among **Army** Enlisted Applicants Between FY 2016-FY 2020

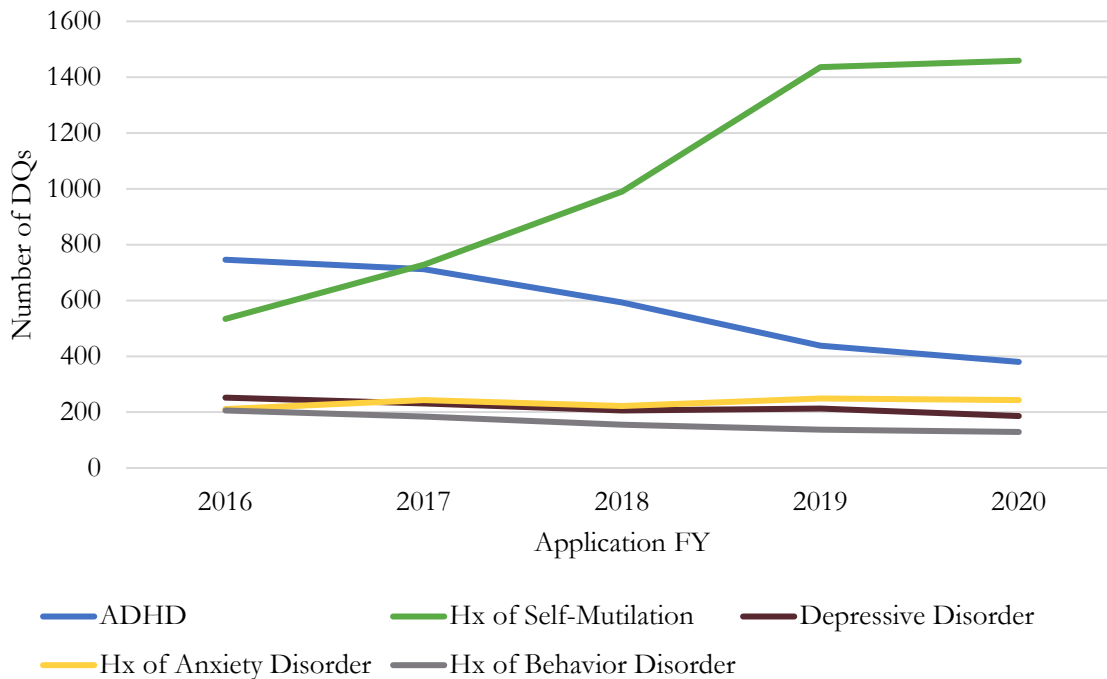


Table 3B: Leading LPBD DQs, as a % of all LPBD DQs and of all DQs among **Navy** Enlisted Applicants between FY 2016-FY 2020

Disqualifying Accession Standard	% of LPBD DQs	% of All DQs
Hx of Self-Mutilation	40.9%	6.8%
ADHD	25.1%	4.2%
Hx of Anxiety Disorders	8.0%	1.3%
Depressive Disorder	7.1%	1.2%
Hx of Behavior Disorders	5.1%	0.8%
Any LPBD DQ	100%	16.7%

Hx: History; ADHD: Attention-Deficit/Hyperactivity Disorder; LPBD: Learning, Psychiatric and Behavioral Disorders; DQ: Disqualification

Figure 2B: DQ Numbers, by LPBD Standard, among **Navy** Enlisted Applicants between FY 2016-FY 2020

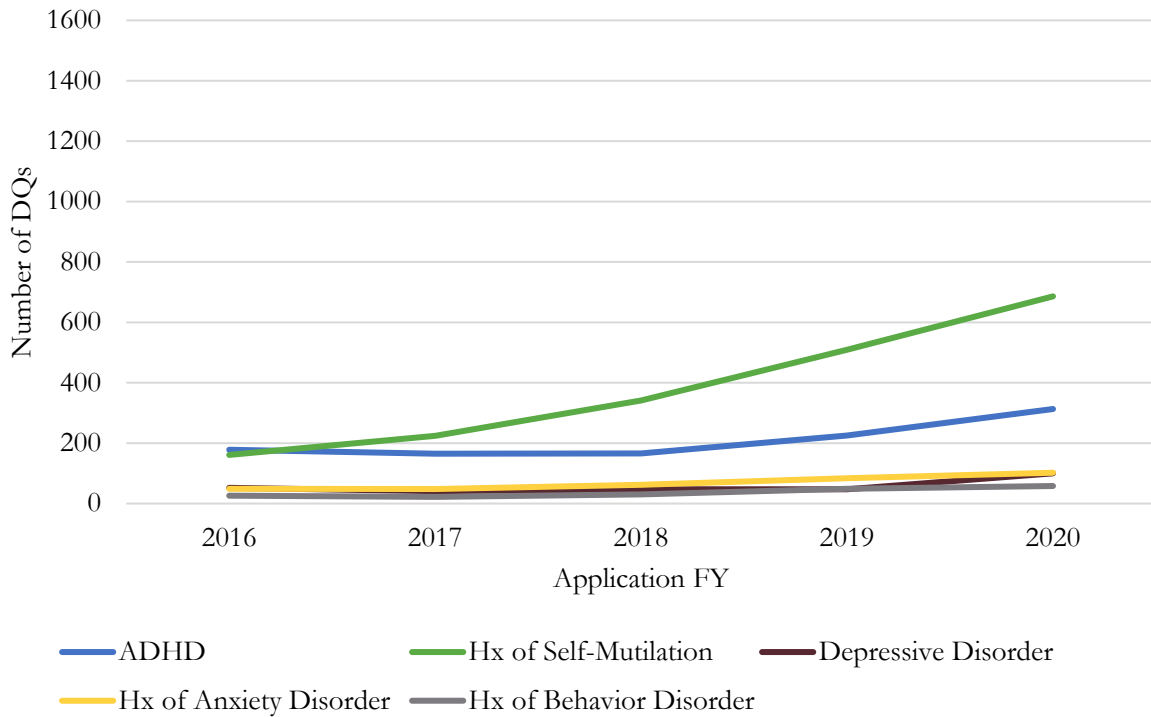


Table 3C: Leading LPBD DQs, as a % of all LPBD DQs and of all DQs among **Marine Corps** Enlisted Applicants between FY 2016-FY 2020

Disqualifying Accession Standard	% of LPBD DQs	% of All DQs
Hx of Self-Mutilation	41.8%	8.3%
ADHD	25.2%	5.0%
Hx of Anxiety Disorders	6.3%	1.2%
Depressive Disorder	6.1%	1.2%
Hx of Behavior Disorders	5.7%	1.1%
Any LPBD DQ	100.0%	19.8%

Hx: History; ADHD: Attention-Deficit/Hyperactivity Disorder; LPBD: Learning, Psychiatric and Behavioral Disorders; DQ: Disqualification

Figure 2C: DQ Numbers, by LPBD Standard, among **Marine Corps** Enlisted Applicants between FY 2016-FY 2020

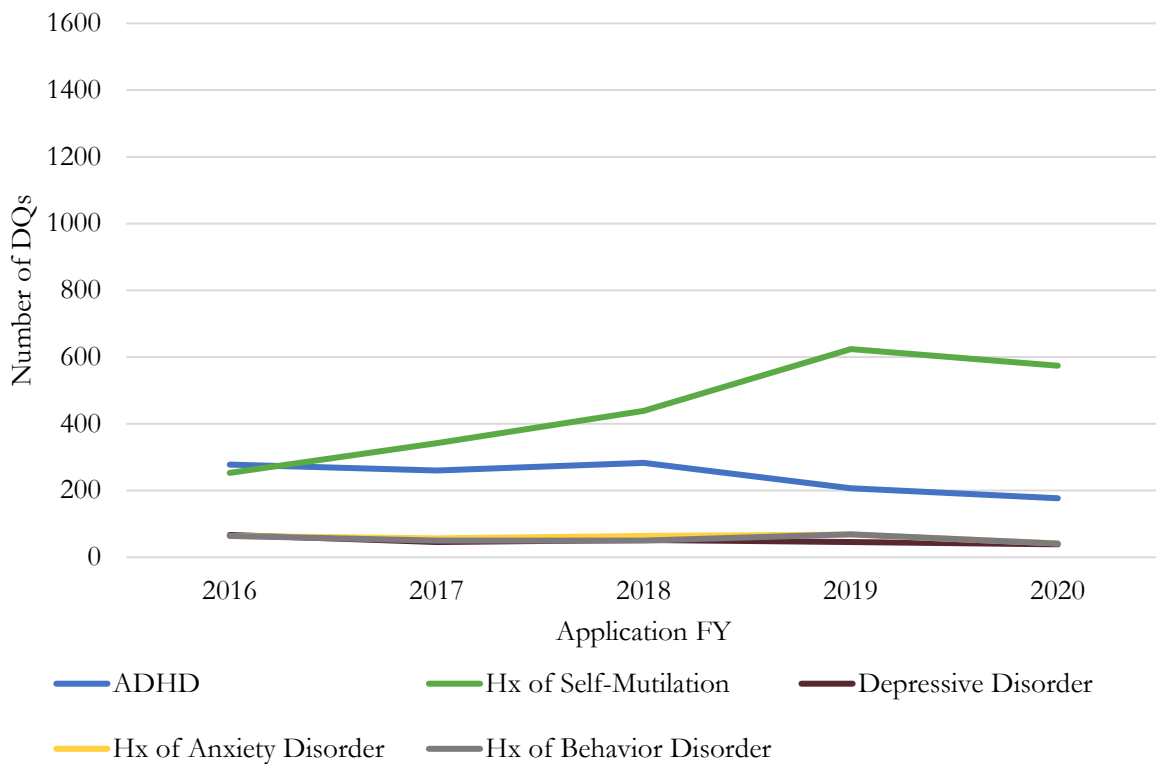
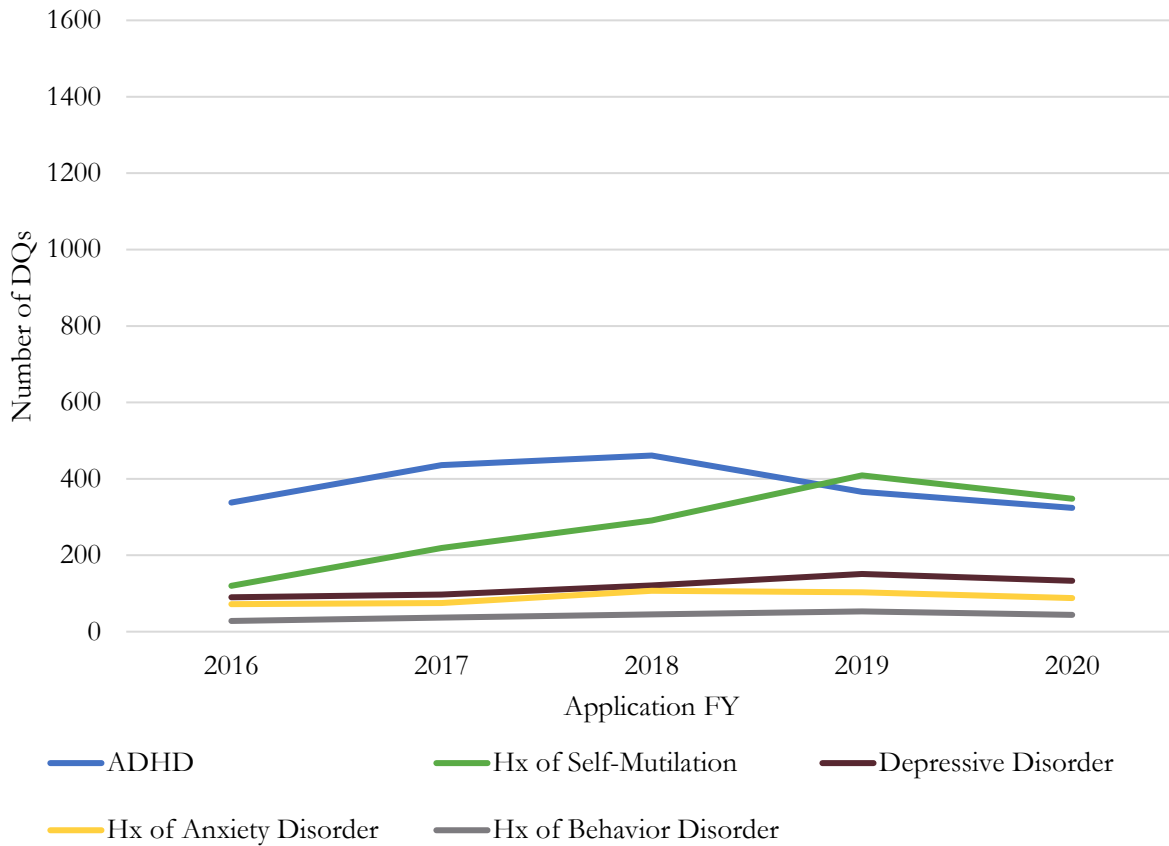


Table 3D: Leading LPBD DQs, as a % of all LBPH DQs and of all DQs among **Air Force** Enlisted Applicants between FY 2016-FY 2020

Disqualifying Accession Standard	% of LBPH DQs	% of All DQs
Hx of Self-Mutilation	35.8%	5.9%
ADHD	25.4%	4.2%
Hx of Anxiety Disorders	11.7%	1.9%
Depressive Disorder	8.6%	1.4%
Hx of Behavior Disorders	4.2%	0.7%
Any LPBD DQ	100.0%	16.4%

Hx: History; ADHD: Attention Deficit Hyperactivity Disorder; LPBD: Learning, Psychiatric and Behavioral Disorders; DQ: Disqualification

Figure 2D: DQ Numbers, by LPBD Standard, among **Air Force** Enlisted Applicants between FY 2016-FY 2020



Discussion

LPBD DQs constitute a major portion of pre-accession medical DQs among military recruits¹⁰. This analysis uncovered that over 60% of LPBD DQs among recent recruits were related to the history of self-mutilation and attention-deficit/hyperactivity disorder (ADHD) medical standards. These two standards combined accounted for 9-13% of all medical DQs. Notably, the number of history of self-mutilation DQs more than doubled over the time period. With the increasing prevalence of self-mutilation among the youth population targeted for military recruitment, Services faced the need to better identify and assess self-harming behavior to maintain low attrition rates and high military readiness. Specifically, history of self-mutilation was listed as standalone DoDI 6130.03 DQ effective May 6, 2018. Any history of self-mutilation, regardless of intent or the circumstances surrounding even a single event, was set to meet the criteria for DQ and require more detailed examination by each Service's medical waiver authorities to determine the level of risk acceptance. A more sensitive approach to DQs led to a higher number of recruits being considered for waivers. Combined with more detailed risk assessments, this approach resulted in a higher number of accessions who were initially disqualified but later waived for a history of self-mutilation.

To inform the potential for modifying LPBD standards, the following sections of this report will compare end of service outcomes between Service members initially disqualified for one of the leading LPBD standards (listed in Table 2) versus MQ Service members.



SECTION 2: SPECIAL STUDIES

Study 1: Risk of Early Adverse Attrition Among Active Duty Enlistees with an Accession DQ For Selected LPBD Standards

Key Findings

- Active duty enlistees with an accession medical DQ (DQ cohort) for history of learning disorders, depressive disorder, history of behavior disorders, history of self-mutilation, or history of anxiety disorders generally had higher attrition than MQ enlistees (MQ cohort).
- Risk of disability discharge, typically the costliest form of adverse attrition, was rare and mostly comparable between the DQ and MQ cohorts.
- Risk of EPTS separation was elevated in some of the DQ cohorts, though incomplete data provision limited statistical power to detect differences from the MQ cohorts.

Background

Medically DQed applicants may apply for an accession medical waiver, which is reviewed by the SMWRAs on a case-by-case basis⁴. Accession medical waivers are granted to applicants deemed medically capable of service. The LPBD baseline metrics in Section 1 identified the most commonly applicable accession medical standards within the LPBD subsection of the DoDI 6130.03 V1. This analysis included DQ rates under each standard and observed patterns of DQs over time.

This study aimed to investigate early adverse attrition from service among active duty enlistees initially disqualified for at least one of the selected LPBD standards. “Early” attrition refers to any separation occurring within the first 3 years after enlistment, indicating non-completion of the initial term of duty. As defined earlier in the *Key Terms and Definitions* on pages 3-7, “adverse” attrition encompasses any attrition from enlisted active duty service that did not have favorable connotations (such as enrollment in an officer training program), and instead represents a negative outcome for the Military.

While adverse attrition from service may not be the only type of adverse separation, it serves as a broad indicator of the overall benefit of an enlistment for both the active duty enlistee and the Military. To assess this, early adverse attrition was compared between disqualified active duty enlistees (DQ

cohort) and active duty enlistees who did not receive a medical DQ (medically qualified, MQ cohort) during their pre-enlistment physical exam.

Methods

This study included all active duty enlistees who accessed into the Army, Navy, Marine Corps, or Air Force between FY 2016 to FY 2020, excluding those with prior service in any U.S. Military component. Eligible active duty enlistees were categorized based on their medical qualification status at their most recent USMEPCOM physical examination prior to accession. Those disqualified under LPBD of the DoDI 6130.03 V1 were classified in accordance with to the specific standard they did not meet. The most common LPBD DQs among the accessions were chosen for this study, except for ADHD which is examined in a separate study in this report on page 25. Active duty enlistees who entered a Service branch without a designation for a DQ by USMEPCOM form the MQ cohort and served as the reference group for attrition comparisons.

Active duty enlistees were followed for up to three years after accession to assess adverse attrition, as defined in the *Key Terms and Definitions* section on pages 3-7 of this report. Relative risk of attrition was estimated for each DQ cohort relative to the MQ cohort. Adjusted relative risks for total adverse attrition were estimated using log-binomial models, controlling for Service branch, age group, sex, and race. Crude relative risk estimates were used to examine the three mutually exclusive subcategories of total adverse attrition (EPTS separation, early disability discharge, and other adverse attrition), as the numbers of EPTS separation and disability discharges were too small for meaningful adjustment through modeling. To provide insights into the frequency and timing of attrition for each DQ, the percentages of active duty enlistees who experienced early adverse attrition and the median time to separation within three years from accession were calculated for each selected LPBD standard.

This study was completed using SAS 9.4 software (SAS Institute. Cary, NC).



Results

Figures 4A-E on the following pages show the adjusted relative risk estimates for total adverse attrition, separately comparing the DQ cohort for each of the five selected conditions to the MQ cohort. The dot in each Service-specific plot represents the modeled point estimate of relative risk, while the dashes at either end of the line represent the 95% confidence limits. Overall, from FY 2016 – FY 2020, total adverse attrition was composed of EPTS separation (10%), disability discharge (10%), and other adverse attrition (80%). The table that follows each graph presents crude relative risk estimates for each of the three identifiable subcategories of attrition.

Hx of Learning Disorders:

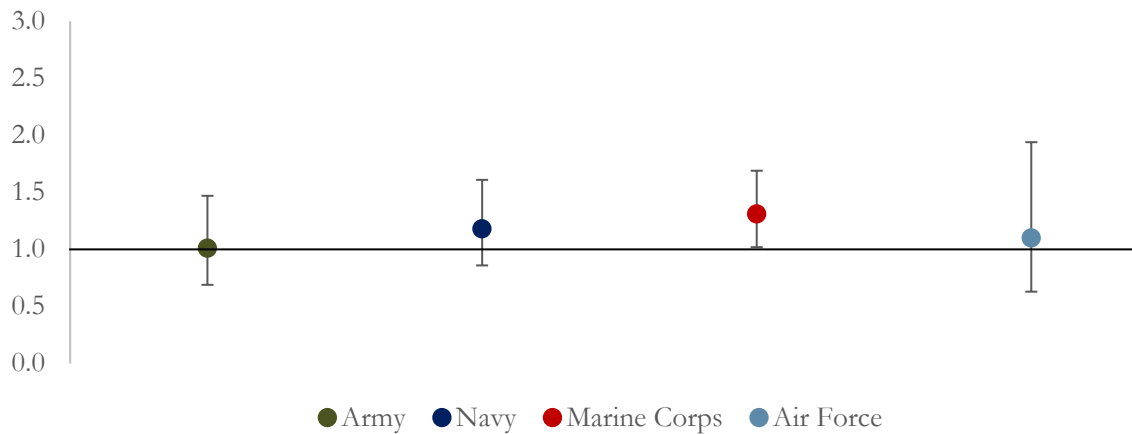
Figure 3A shows adjusted relative risk estimates and their 95% confidence intervals for history of learning disorders DQ cohort relative to the MQ cohort. Point estimates approximating relative risk for this time period were at or above 1 for each Service, meaning that risk of early adverse attrition is estimated to be similar to or higher than for the MQ cohort. For the Marine Corps, the risk of attrition among the DQ cohort was estimated to be 36% higher than among the MQ cohort after controlling for Service branch and other demographic features. This result was statistically significant, as indicated by the lower confidence limit of the point estimate being greater than 1. Relative risk point estimates for the other Services were not significantly different from 1, meaning that there is not a clear difference in attrition risk between the DQ cohort and the MQ cohort.

Table 4A examines the different sources of adverse attrition individually for the DQ cohort. The EPTS column indicates whether the DQ cohort was at any greater risk of attrition in the first 180 days of service due to a pre-existing medical condition than the MQ cohort. While the relative risk point estimates for the Army and the Marine Corps suggested a roughly double risk among the DQ cohort compared to the MQ cohort, the observed differences were not statistically significant owing to the small numbers of separations of this type. Thus, there was not clear evidence that the DQ cohort were more likely than the MQ cohort to experience EPTS separation due to a pre-existing condition.

Similarly, there was no statistically significant indication that this DQ cohort had higher risk of disability discharge within the first 3 years of service. Again, the limited numbers of discharges in this category limits our power to detect a difference in risk.

Relative risk of adverse attrition other than EPTS separation or disability, which makes up the largest portion of total adverse attrition, was statistically significant for the Marine Corps only.

Figure 3A: Relative Risk of Early Adverse Attrition Under the History of Learning Disorders
Standard: DQ Cohort vs. MQ Cohort



Relative risk is adjusted for age group, sex, Service, and race.

Table 4A: Relative Risk of Early Adverse Attrition by Separation Type Under the History of Learning Disorders Standard: DQ Cohort vs. MQ Cohort

Service	EPTS Discharge		Early Disability Discharge		Other Early Adverse Attrition	
	RR	95% CI	RR	95% CI	RR	95% CI
Army	1.92	(0.74, 4.97)	0.80	(0.21, 3.15)	0.90	(0.56, 1.45)
Navy	0.58	(0.08, 4.07)	-	-	1.25	(0.91, 1.73)
Marine Corps	2.06	(0.94, 4.53)	0.84	(0.28, 2.59)	1.36	(1.01, 1.83)
Air Force	-	-	1.38	(0.20, 9.65)	1.21	(0.66, 2.21)

RR: Relative Risk; CI: 95% Confidence interval

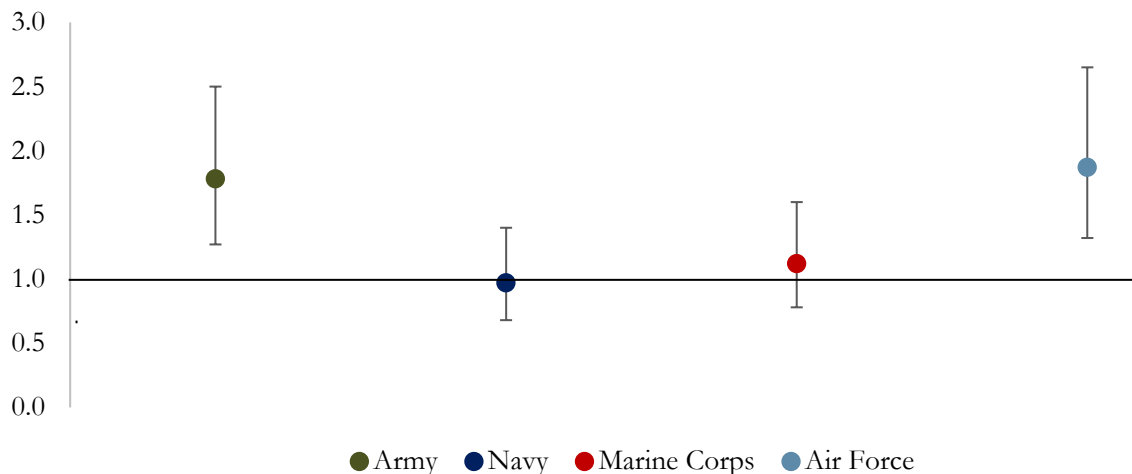
Depressive Disorder:

Figure 3B shows that Soldiers and Airmen within the depressive disorder DQ cohort were at higher risk of early attrition than their MQ cohort counterparts. The relative risk point estimates suggest excess attrition of 78% and 87% among the DQ cohorts for these two Services, respectively. The adjusted relative risks for the Sailors and Marines in the depressive disorder DQ cohort were considerably lower (i.e., closer to 1) suggesting similar outcomes for both the DQ and MQ cohorts and were not statistically significant.

Table 4B reveals that EPTS discharges drove the overall significant result for the Army, with the Army DQ cohort estimated to have roughly seven times the EPTS rate as the MQ cohort. The Army DQ cohort did not have any disability discharges and their other adverse attrition was not significantly different from the MQ cohort. So, the overall excess in Army adverse attrition among the DQ cohort is of the presumably least costly type, which is early EPTS separation. For the Air Force, none of the individual mutually exclusive subcategories of adverse attrition was significantly elevated, but all were

somewhat higher than for the MQ cohort, thus producing statistically significant overall adverse attrition when combined. This indicates that Airmen in the depressive disorders DQ cohort were at a higher risk of overall total adverse attrition in the first 3 years, but the excess risk was not specific to any one type of discharge. Finally, none of the adverse attrition categories was significantly higher for the Navy or the Marine Corps DQ cohort.

Figure 3B: Relative Risk of Early Adverse Attrition Under the Depressive Disorder Standard: DQ Cohort vs. MQ Cohort



Relative risk is adjusted for age group, sex, Service, and race.

Table 4B: Relative Risk of Early Adverse Attrition by Separation Type Under the Depressive Disorder Standard: DQ Cohort vs. MQ Cohort

Service	EPTS Discharge		Early Disability Discharge		Other Early Adverse Attrition	
	RR	95% CI	RR	95% CI	RR	95% CI
Army	6.99	(3.59, 13.59)	-	-	1.34	(0.79, 2.27)
Navy	0.62	(0.09, 4.33)	0.88	(0.13, 6.15)	0.99	(0.67, 1.46)
Marine Corps	1.67	(0.55, 5.11)	1.83	(0.70, 4.78)	1.01	(0.64, 1.58)
Air Force	2.44	(0.93, 6.36)	2.94	(0.97, 8.96)	1.53	(0.98, 2.38)

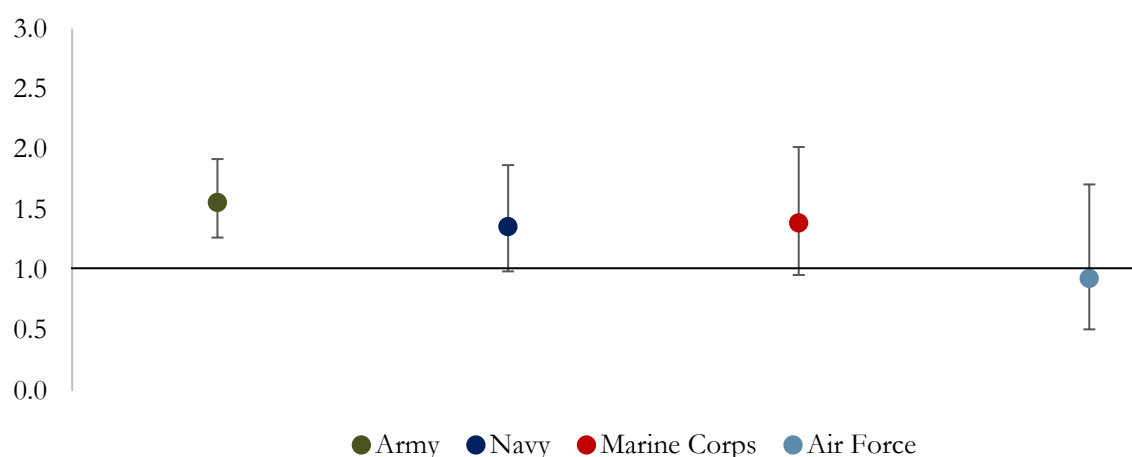
RR: Relative Risk; CI: 95% Confidence interval

History of Behavior Disorders:

Figure 3C presents the adjusted relative risk point estimates for the history of behavior disorders DQ cohort. Notably, only the Army DQ cohort showed statistically elevated adverse attrition, with an estimated 56% excess attrition relative to the MQ cohort. The Navy and Marine Corps DQ cohorts had relative risk point estimates of 1.36 and 1.39, respectively, which were not statistically significant.

Evaluating risk by attrition type (Table 4C), the Army had point estimates suggesting higher attrition in the DQ cohort, but only the Other Adverse Attrition category was statistically significant. The consistency of elevation across the attrition categories was enough to achieve significance in the overall adverse attrition risk for the Army DQ cohort. Risk estimates for the Navy and Marine Corps DQ cohorts were generally elevated compared to the Navy and Marine Corps MQ cohorts, but not statistically significant.

Figure 3C: Relative Risk of Early Adverse Attrition Under the History of Behavior Disorders
Standard: DQ Cohort vs. MQ Cohort



Relative risk is adjusted for age group, sex, Service, and race.

Table 4C: Relative Risk of Early Adverse Attrition by Separation Type Under the History of Behavior Disorders Standard: DQ Cohort vs. MQ Cohort

Service	EPTS Discharge		Early Disability Discharge		Other Early Adverse Attrition	
	RR	95% CI	RR	95% CI	RR	95% CI
Army	1.31	(0.56, 3.10)	1.10	(0.47, 2.60)	1.55	(1.22, 1.98)
Navy	1.49	(0.38, 5.86)	-	-	1.38	(0.98, 1.94)
Marine Corps	1.50	(0.38, 5.90)	1.23	(0.31, 4.83)	1.36	(0.88, 2.10)
Air Force	-	-	2.60	(0.66, 10.18)	0.88	(0.44, 1.78)

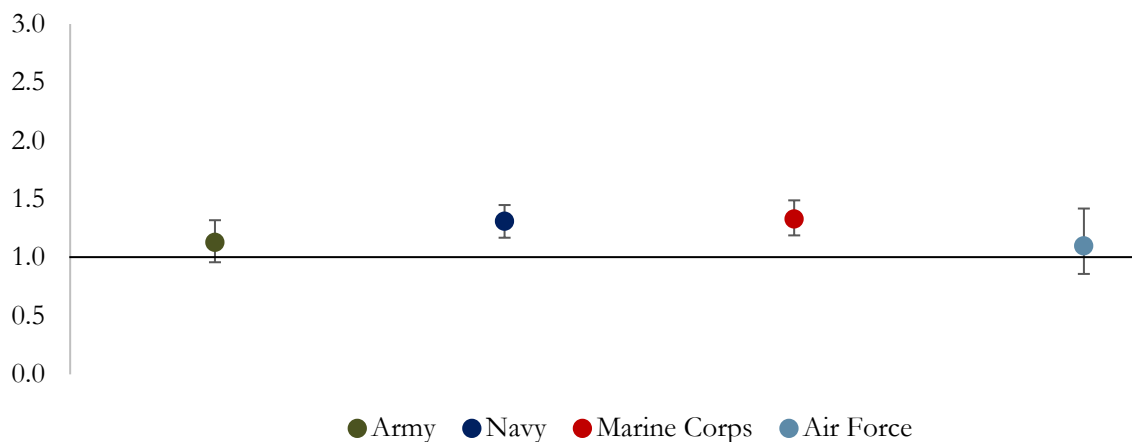
RR: Relative Risk; CI: 95% Confidence interval

History of Self-Mutilation:

Figure 3D indicates that the history of self-mutilation DQ cohort Sailors and Marines had significantly elevated early adverse attrition, with relative risk point estimates of 1.31 and 1.33, respectively. The estimated relative risks for the Army and Air Force DQ cohorts were not statistically significant. In interpreting these results, note that history of self-mutilation was one of the larger categories of LPBD DQs and of subsequent accession into a Service after medical waiver approval. Accordingly, the confidence intervals were tighter and statistical significance may be achieved even when the relative risk estimates are not especially high.

Table 4D shows that only the Marine Corps DQ cohort had elevated risk of all three components of early attrition. This suggests that Marine Corps in the history of self-mutilation DQ cohort were at elevated risk of all types of adverse attrition, including disability discharge, which is uncommon early in service. The Navy DQ cohort showed an elevated risk of Other Adverse Attrition, which was elevated enough to cause an overall increase in total adverse attrition relative to the MQ cohort.

Figure 3D: Relative Risk of Early Adverse Attrition Under the History of Self-Mutilation Standard: DQ Cohort vs. MQ Cohort



Relative risk is adjusted for age group, sex, Service, and race.

Table 4D: Relative Risk of Early Adverse Attrition by Separation Type Under the History of Self-Mutilation Standard: DQ Cohort vs. MQ Cohort

Service	EPTS Discharge		Early Disability Discharge		Other Early Adverse Attrition	
	RR	95% CI	RR	95% CI	RR	95% CI
Army	1.58	(0.94, 2.63)	1.32	(0.79, 2.21)	1.12	(0.92, 1.37)
Navy	0.43	(0.18, 1.02)	0.97	(0.49, 1.93)	1.45	(1.30, 1.62)
Marine Corps	1.85	(1.26, 2.73)	1.52	(1.03, 2.23)	1.45	(1.27, 1.66)
Air Force	1.24	(0.59, 2.57)	1.14	(0.43, 3.01)	1.11	(0.83, 1.48)

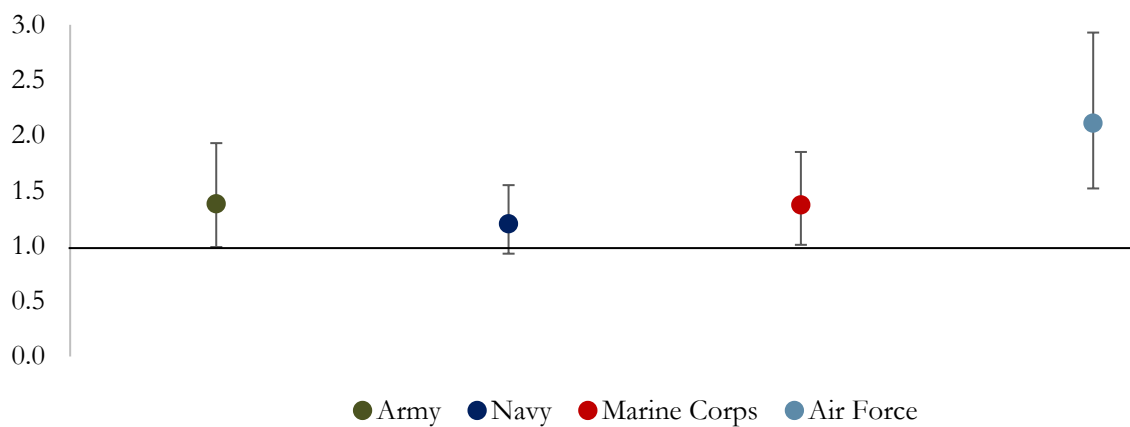
RR: Relative Risk; CI: 95% Confidence interval

History of Anxiety Disorders:

Figure 3E shows Airmen in the anxiety disorders DQ cohort had significantly elevated total adverse attrition, with a point estimate indicating roughly two-fold attrition risk compared to the MQ cohort. The other Services' DQ cohorts had non-significant, yet elevated point estimates of relative risk.

Air Force adverse attrition risk was not found to be particularly high for either EPTS separation or disability discharge (Table 4E). All excess risk among the Air Force DQ cohort was attributed to Other Adverse Attrition. However, this result may be influenced by unreported EPTS separations which have been classified as Other Adverse Attrition. Interestingly, EPTS separation among the Army DQ cohort was significantly high, with a point estimate suggesting almost four times the likelihood of EPTS separation relative to the MQ cohort. However, those in the DQ cohort who completed the initial 180 days did not experience any excess attrition either due to disability or any other reasons. Thus, overall attrition for the Army DQ cohort did not differ significantly from the MQ cohort.

Figure 3E: Relative Risk of Early Adverse Attrition Under the History of Anxiety Disorders
Standard: DQ Cohort vs. MQ Cohort



Relative risk is adjusted for age group, sex, Service, and race.

Table 4E: Relative Risk of Early Adverse Attrition by Separation Type Under the History of Anxiety Disorders Standard: DQ Cohort vs. MQ Cohort

Service	EPTS Discharge		Early Disability Discharge		Other Early Adverse Attrition	
	RR	95% CI	RR	95% CI	RR	95% CI
Army	3.85	(1.81, 8.20)	1.08	(0.28, 4.19)	1.12	(0.70, 1.81)
Navy	0.43	(0.06, 3.01)	2.42	(0.92, 6.37)	1.20	(0.90, 1.60)
Marine Corps	2.17	(0.83, 5.67)	0.89	(0.23, 3.50)	1.47	(1.04, 2.09)
Air Force	1.26	(0.32, 4.97)	-	-	2.27	(1.60, 3.23)

RR: Relative Risk; CI: 95% Confidence interval

Attrition Rates and Time in Service

The aim of this section is to characterize the risk of attrition by DQ, as well as the time to attrition among those who experienced adverse attrition within the first three years of service. Table 5 shows attrition percentages among active duty enlistees medically disqualified under the standards examined in this study at their most recent USMEPCOM physical examination prior to accession. There was some variation in the level of adverse attrition depending on which LPBD standard was not met. For example, nearly 50% of Army active duty enlistees disqualified under the depressive disorder standard attrited, whereas less than 27% of those disqualified under the history of learning disorders standard attrited within 3 years. For the Air Force, 3-year attrition was near 30% among history of anxiety disorders DQs but was only 13% among history of behavior disorders DQs. Navy enlistees had slightly higher 3-year attrition than Marine Corps enlistees for all examined LPBD DQs.

Median time in service for those with early attrition differed substantially by DQ, and by Service within those categories. Active duty enlistees with a DQ for history of anxiety disorders had relatively short median times to attrition (30-85 days), while those with DQ under the history of self-mutilation standard had generally long median times to attrition (111-294 days). Time to adverse attrition varied by Service and DQ with no clear patterns, however, Sailors generally had shorter times to adverse attrition than other Service members.



TABLE 5: Proportion with Early Adverse Attrition and Median Time in Service per LPBD DQ Among the DQ Cohorts Between FY 2016–FY 2020

Disqualifying Accession Standard	Early Adverse Attrition %	Median Time in Service until Early Adverse Attrition (days)
Hx of Learning Disorders		
Army	26.7	174
Navy	28.6	62
Marine Corps	26.8	135
Air Force	15.6	296
Depressive Disorder		
Army	47.2	63
Navy	23.9	36
Marine Corps	22.8	139
Air Force	25.6	51
Hx of Behavior Disorders		
Army	39.4	163
Navy	32.9	34
Marine Corps	26.7	73
Air Force	13.2	218
Hx of Self-Mutilation		
Army	32.0	126
Navy	33.8	111
Marine Corps	29.3	164
Air Force	16.4	294
Hx of Anxiety Disorders		
Army	37.5	85
Navy	30.1	45
Marine Corps	28.8	30
Air Force	28.7	57

Discussion

This study demonstrates the examined LPBD accession medical standards were generally at a slightly to moderately elevated risk of adverse attrition during their first term of service compared to MQ active duty enlistees. Most of this adverse attrition for all LPBD DQs occurred within the first year of service. Figures 3A-E reveal that nearly all relative risk estimates were above 1, indicating that early service attrition risk was as high or higher among enlistees who entered service with a DQ for history of an LPBD designated at their most recent USMEPCOM physical examination prior to accession compared to MQ active duty enlistees. Statistical significance was not consistently reached, in some cases due to the relatively small numbers of accessions after DQ for some categories limiting power to detect differences. In any event, the general pattern of higher estimated risk in the DQ cohorts is noteworthy.

EPTS separation is a form of entry-level administrative separation attributed to pre-service medical conditions that impede performance in the first 180 days of service. This form of separation was notably elevated among disqualified active duty enlistees across most Services and conditions. Again, statistical significance was only achieved in a few cases, owing to small numbers, which in turn is partly owing to incomplete data collection by Service and training site— see Figure 1 on Page 4.

Disability discharge, the other specific form of adverse attrition considered in this study, tends to be a more costly form of separation. The process for evaluating disability cases is relatively time- and resource-intensive, and sometimes results in ongoing care and financial commitments. This form of discharge is generally uncommon in the first 3 years of service¹⁰, as was true among the examined cohorts. Statistical significance was only achieved in the case of Marines who had a DQ for history of self-mutilation.

Roughly 80% of all adverse attrition was of a type other than EPTS or disability. This category encompasses a variety of general adverse attrition codes (see Table 1 on Page 5) that are generally not specific enough to be interpreted other than that a separation was adverse in nature. We expect that this category does capture some EPTS discharges that were not classified as such due to incompleteness of EPTS reporting (see Figure 1 on Page 5), although EPTS has historically been underreported to the point that the impact of this misclassification is difficult to assess.

In conclusion, these comparisons offer an important perspective on service performance, specifically how LPBD disqualified active duty enlistees perform relative to MQ active duty enlistees. However, it is also important to understand the actual adverse attrition rates among the DQ cohorts. Attrition rates of 0.0002% vs 0.0001% yields a relative risk of 2 as would adverse attrition rates of 20% vs 10%. but the implications of these two scenarios would be very different. In the case of 0.0002% vs 0.0001%, decision-makers would likely perceive the very low adverse attrition risk as acceptable for both groups. Conversely, the two-fold risk between 20% and 10% involves practical differences in risks and a potential for changing policy.

Section 1.2.c of DoDI 6130.03 specifies the objectives of the accession medical standards and the associated waiver process⁴. In short, the goal is to allow service by eligible applicants who can meet the demands of military service without posing undue medical risk to themselves or those they would serve with. This study suggests that these goals are being reasonably met based on adverse attrition during the first term of service. However, any relaxation of these standards, or associated waiver criteria, may lead to more pronounced differences in attrition rates.

Study Limitations

In addition to the limitations listed in the *Special Report Caveats* section, the following limitations should be considered when interpreting results for this study:

1. Disqualified applicants who subsequently accessed were presumably granted a medical waiver after medical review by a SMWRA. Therefore, the performance of enlistees who received a DQ and granted an accession waiver cannot be extrapolated to disqualified applicants who either did not apply for a waiver or were denied a waiver.
2. EPTS data is known to be grossly incomplete, though the exact extent is unknown. It is likely, however, that incompleteness of EPTS records is non-differential regarding whether an applicant had a pre-service medical disqualification. Therefore, while this should not bias comparisons, it substantially reduces our power to detect differences in EPTS by DQ history.

Study 2: Insights into ADHD among Military Applicants and Accessions: Assessment of Early Adverse Attrition Risk

Key Findings

- Active duty enlistees with an Attention-Deficit/Hyperactivity Disorder (ADHD) DQ had no higher early adverse attrition than MQ active duty enlistees.
 - This was true among all Services and across all mutually exclusive subcategories of adverse attrition.
 - Disability discharge among active duty enlistees with an ADHD DQ was a rare event and bore little medical concordance to the pre-accession DQ.
- Active duty enlistees who accessed into military service with a pre-accession DQ for ADHD had at least as high AFQT scores and education level as MQ active duty enlistees.
- Only about 6% active duty enlistees with an ADHD DQ were prescribed medication.
 - Service waiver decisions on ADHD DQs adequately balance increasing total force strength while ensuring military readiness and retainable active duty enlistees.

Background

ADHD is not only the most prevalent neurodevelopmental disorder diagnosed in childhood but also persists into adulthood for a significant number of individuals¹⁴. This persistence raises concerns about the potential implications for various components of a career, including that of military service. The effects of ADHD become more significant and complex when accentuated by the rigors of the military environment; the challenges and demands of managing ADHD may be more complex and difficult when matched with the demands and stressors of military service. Therefore, the DoDI 6130.03 V1, promulgated in May 2018⁴, outlines specific criteria that render ADHD a disqualifying condition for military service. These criteria include (1) a recommended or prescribed Individualized Education Program, a 504 Plan, or work accommodations after the age of 14; (2) a history of comorbid mental disorders; (3) prescribed medication within the previous 24 months; or (4) documentation of adverse academic, occupational, or work performance. Provision for medical waivers, however, allow for the enlistment of individuals with ADHD under certain circumstances¹⁵.

The symptoms of ADHD, characterized by inattention, hyperactivity, and impulsivity, may interfere with the rigorous training and complex tasks that Service members are expected to perform. Because military service requires high demands for attention, discipline, and stress resilience, ADHD could be an obstacle to operational readiness and personnel safety¹⁶. Addressing the implications of ADHD on military readiness and retention is crucial for sustaining a competent force and could suggest potential policy changes¹⁷.



Recent trends indicate a rise in ADHD diagnoses, reflecting increasing implications for military recruitment, given the large number of young adults who are potential applicants¹⁸. Additionally, the U.S. military is currently facing significant challenges in recruiting and retaining qualified Service members^{19,20,21}. The tightening labor market, along with the increasing prevalence of ADHD diagnoses among adolescents, creates a challenge to military recruitment efforts^{22,23}. The need to maintain a robust and ready force makes it imperative to understand the extent to which ADHD impacts eligibility for service and the potential need for policy adjustments. Research emphasizes the importance of understanding the effects of ADHD on readiness and retention in the military, and the informed decision-making of stakeholders to accommodate individuals with ADHD while ensuring operational effectiveness^{17,24}. This includes assessing the ability of Service members with ADHD to complete their first term of enlistment successfully, a key indicator of both individual and organizational success.

This study aims to provide a deeper understanding of ADHD among Service members by examining active duty enlisted service applicants and active duty enlistees with an ADHD DQ and evaluating the effects of pre-existing ADHD on military readiness and retention; seeking to provide evidence-based insights that can inform stakeholders. This study is expected to provide support in maintaining the efficacy and readiness of the military and demonstrate that those with an ADHD DQ, who were carefully selected through the SMWRAs, can serve their country successfully, fulfill their required duties and responsibilities, and meet the high demands of military service. It offers results that could be used to assess a recalibrated approach to ADHD within the Service and could contribute to the ongoing research and evaluation of pre-existing medical conditions on military recruitment and readiness considering a changing eligible population.

Methods

Service characteristics and demographics were analyzed based on medical qualification status, comparing active duty enlisted applicants and accessions with a pre-accession ADHD DQ to those who were deemed MQ. A cohort study then examined active duty enlistees with a DQ for ADHD (ADHD DQ cohort) with comparison to MQ active duty enlistees (MQ cohort). The longitudinal approach described characteristics from application to early discharge (within 3 years of accession), by discharge type, and time to discharge (0-3, 3-6, 6-12, 12-24 and 24-36 months). All applicants for enlisted active-duty service into the Army, Navy, Marine Corps, or Air Force between FY 2016 - FY 2020 were eligible for inclusion in these analyses.

Data Sources

The USMEPCOM provided data on all enlisted applicants' physical examination prior to military entry, including examination dates, medical qualification status (MQ, medical DQ, administrative qualification), and, where relevant, medical DQs based on DoDI 6130.03 V1 utilizing a subset of ICD-9/10 codes. In addition to medical examination data, the USMEPCOM supplied EPTS separation data reported by training sites which included separation dates and reasons for separation in the form of ICD-9/10 codes.

The SMWRAs, specifically U.S. Army Recruiting Command (USAREC), Air Force Recruiting Services (AFRS) and Air Education Training Command (AETC), and the Navy Bureau of Medicine and Surgery (BUMED) provided data on applicants who had a medical DQ at the pre-enlistment physical examination and sought a medical waiver. These data included medical waiver action (approved, denied) and medical DQ codes.

The DMDC, Seaside, California provided accession dates, separation dates, and separation reasons identified using ISC codes.

Data on disability discharge considerations were provided by the U.S. Army Physical Disability Agency (PDA), Air Force Personnel Center (AFPC), and the Secretary of the Navy (SECNAV) and included information pertaining to the disability evaluation including dates, disposition, percent rating, and the medical reasons for which the Service member was deemed unfit. Medical reasons for disability evaluations are coded based on the VASRD.

Data on prescriptions filled at a Military Treatment Facilities (MTF) were provided by the Pharmacy Data Transaction Service (PDTS) via the Military Health System Data Repository (MDR) and included date of the drug fill and drug name.

Measures

Early adverse attrition was defined as separation from service within three years after accession for any reason that did not suggest benefit to the Service member or the Service. This overall category comprised three mutually exclusive subcategories determined in the following order of priority: 1)

EPTS separation; 2) disability discharge; and 3) any other adverse attrition. Disability disposition and medical conditions were collected from the first disability evaluation.

In this study, VASRD codes and reasons for EPTS separation were condensed into subcategories, aligned the DoDI 6130.03 V1 standard subsections, to better assess concordance between medical DQ and reason for early adverse attrition.

Time to early adverse attrition was assessed at five time periods, 0-3, 3-6, 6-12, 12-24 and 24-36 months from accession and was calculated using the date of the Service member's first military entry and date of the early adverse attrition, including the date of EPTS separation, disability discharge, or other adverse attrition date.

ADHD-related prescription drugs included both stimulant and non-stimulant medications approved by the Food and Drug Administration (FDA) for use in the treatment of ADHD^{25,26}. Prescription date was used to ensure the medication was prescribed after the date of first accession. The total ADHD-related drugs prescribed for each Service member was calculated by counting all unique drug fills per drug name.

Statistical Analysis

Univariate analysis was used to assess the distribution of demographic, military, prescription, and discharge characteristics among Service applicants and accessions by medical qualification status. Log-binomial models were primarily used to calculate adjusted relative risks and associated 95% confidence intervals to determine if the risks of early adverse attrition were significantly different among the ADHD DQ cohort compared to the MQ cohort. These models controlled for age at application, sex, race, Service branch, education level, and AFQT score category at military entry. Crude relative risks were used to compare risk of specific sources of attrition, particularly EPTS separation, disability discharge, and other adverse attrition between the ADHD DQ and the MQ cohorts.

All statistical analyses were performed using SAS version 9.4 (SAS Institute, Cary, North Carolina).



Results

Table 6A-B presents the demographic and Service characteristics of applicants and accessions by medical qualification status. A total of 7,187 applicants were disqualified for ADHD, with approximately 44% accessing into service. This compares to 1,057,913 MQ applicants, an accession rate of 71%.

Army constituted a smaller percentage of both applicants and accessions with an ADHD DQ relative to the Army's proportion of MQ applicants and accessions (26.6% of accessions with an ADHD DQ vs. 37.8% of MQ accessions). This was offset by the Air Force, which had a higher proportion of both applicants and accessions with an ADHD DQ relative to Air Force's proportion of MQ applicants and accessions. The percentage of applicants and accessions with an ADHD DQ contributed by year declined over the years from 2016 to 2020, whereas the analogous percentages of MQ applicants and accessions remained relatively stable. A significantly higher percentage of active duty enlisted accessions with an ADHD DQ were male (94.5%) compared to the MQ applicants and accessions (81.0%). ADHD is more common in males than females, however the ratio in the general population is closer to 2:1 or 66.7% male. This overrepresentation of males in applicants and accessions with an ADHD DQ may reflect a greater likelihood of males seeking entry into military service²⁷. The majority of all populations had a high school diploma, but accessions with an ADHD DQ had a slightly higher proportion (86.1%) compared to the MQ accessions (81.5%). While a diagnosis of ADHD in the general population is often a risk factor for lower education level achievement, the observed similar distribution of education level attainment between accessions with an ADHD DQ and MQ accessions may indicate those with ADHD who seek entry into military service have developed strategies or received support to increase their educational attainment²⁸. Active duty enlisted accessions with an ADHD DQ were predominantly White (88.0%), whereas MQ accessions had a more diverse racial composition with 68.1% White and 17.4% Black. Both MQ accessions and accessions with an ADHD DQ had a majority in the 17-20 age range, with the accessions with an ADHD DQ having a slightly higher proportion in the 21-25 age range (30.6% vs. 24.8%).

Table 6A: Applicant and Accession Service Characteristics by Medical Qualification Status

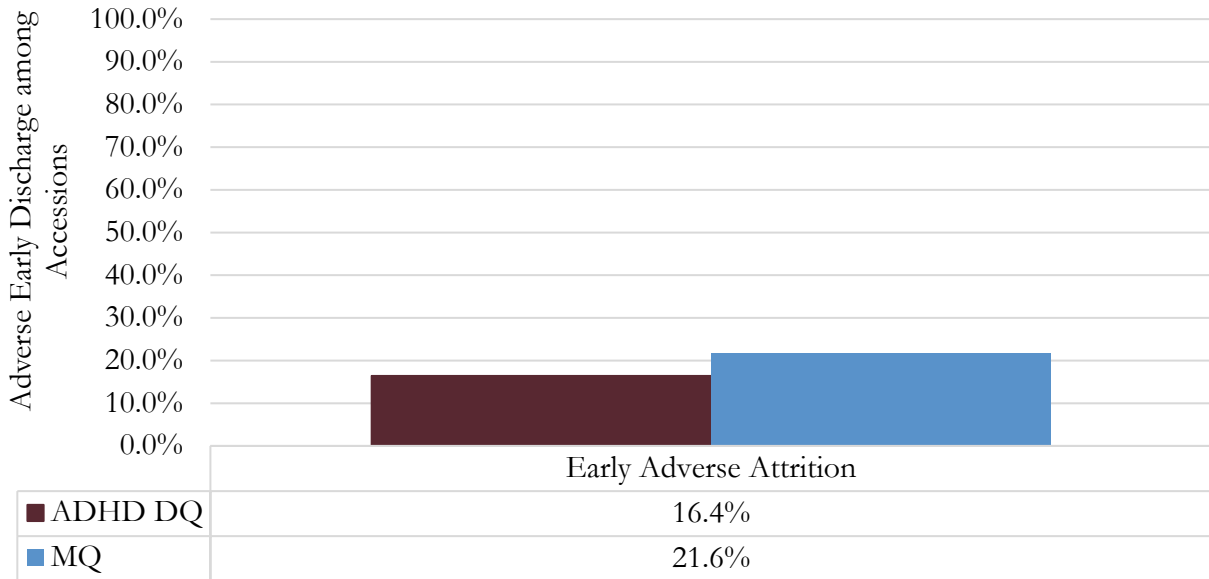
	ADHD DQ		MQ	
	Applicants	Accessions	Applicants	Accessions
Application Service				
Army	30.3%	26.6%	38.5%	37.8%
Air Force	26.1%	31.3%	17.3%	19.3%
Marine Corps	21.7%	19.6%	21.2%	20.1%
Navy	21.9%	22.5%	23.1%	22.8%
Fiscal Year of Physical Exam				
2016	23.3%	22.0%	18.6%	19.5%
2017	23.3%	22.9%	19.1%	20.1%
2018	21.3%	19.9%	19.5%	20.0%
2019	16.4%	16.8%	21.8%	20.8%
2020	15.8%	18.4%	21.0%	19.6%
History of Prior Service				
No	99.0%	99.8%	97.7%	99.7%
Yes	1.0%	0.2%	2.3%	0.3%
AFQT Score Category				
93-99	7.2%	8.0%	5.8%	6.4%
65-92	38.8%	43.7%	32.9%	36.2%
50-64	25.9%	25.8%	23.7%	25.5%
31-49	26.0%	22.3%	26.7%	27.9%
10-30	1.2%	0.0%	2.4%	0.7%
1-9	0.1%	0.0%	0.1%	0.0%
<1	0.8%	0.3%	8.4%	3.3%
Total Applicants	7,187	3,146	1,057,913	752,194

Table 6B: Applicant and Accession Demographic Characteristics by Medical Qualification Status

	ADHD DQ		MQ	
	Applicants	Accessions	Applicants	Accessions
Sex				
Female	6.1%	5.5%	20.3%	19.0%
Male	93.9%	94.5%	79.7%	81.0%
Missing	0.0%	0.0%	0.0%	0.0%
Education Level				
Below HS Senior	0.8%	0.5%	0.5%	0.4%
HS Senior	10.4%	4.4%	12.2%	9.0%
HS Diploma	81.1%	86.1%	78.0%	81.5%
Some College	3.8%	4.4%	4.2%	4.3%
Bachelor's & above	3.9%	4.6%	5.1%	4.8%
Missing	0.0%	0.0%	0.0%	0.0%
Race Category				
White	85.8%	88.0%	61.5%	68.1%
Black	9.1%	6.9%	16.1%	17.4%
Other	4.9%	5.0%	8.3%	9.2%
Missing	0.2%	0.1%	14.1%	5.3%
Age Category				
<17	0.0%	0.0%	0.0%	0.0%
17-20	66.8%	65.2%	65.3%	67.7%
21-25	28.2%	30.6%	25.4%	24.8%
26-30	4.3%	3.9%	7.1%	5.9%
>30	0.7%	0.3%	2.3%	1.6%
Total Applicants	7,187	3,146	1,057,913	752,194

Figure 4 illustrates the early adverse attrition among accessions. The early adverse attrition was slightly lower for the ADHD DQ cohort (16.4%) compared to the MQ cohort (21.6%).

Figure 4: Early Adverse Attrition among the ADHD DQ Cohort Compared to the MQ Cohort



Assessments of time to early adverse attrition are presented in Tables 7A-B and Figures 5A-D, providing insights into the time to early adverse attrition. For the ADHD DQ cohort, the adverse attrition was highest in the first 90 days (6.6%) and then decreased over time. Comparatively, the MQ cohort had higher early adverse attrition within the first 90 days (8.1%) but also saw a decrease over time.

Table 7A: Time to Early Adverse Attrition among the ADHD DQ Cohort

Time to Adverse Attrition	ADHD DQ Cohort			
	Adverse Attrition (n=516)	EPTS Separation (n=50)	Disability Discharge (n=37)	Other Adverse Attrition (n=429)
0-90 days	6.6%	1.3%	0.0%	5.4%
91-180 days	1.7%	0.3%	0.0%	1.4%
181-365 days	1.4%	--	0.0%	1.4%
366-730 days	3.1%	--	0.3%	2.9%
731-1095 days	3.5%	--	0.9%	2.6%

Table 7B: Time to Early Adverse Attrition among the MQ Cohort

Time to Adverse Attrition	MQ Cohort			
	Adverse Attrition (n=162,271)	EPTS Separation (n=15,604)	Disability Discharge (n=15,108)	Other Adverse Attrition (n=131,559)
0-90 days	8.1%	1.8%	0.0%	6.3%
91-180 days	2.5%	0.2%	0.0%	2.3%
181-365 days	2.0%	--	0.1%	1.9%
366-730 days	4.2%	--	0.5%	3.7%
731-1095 days	4.7%	--	1.3%	3.3%

Figure 5A: Time to Early Adverse Attrition among the ADHD DQ Cohort Compared to the MQ Cohort

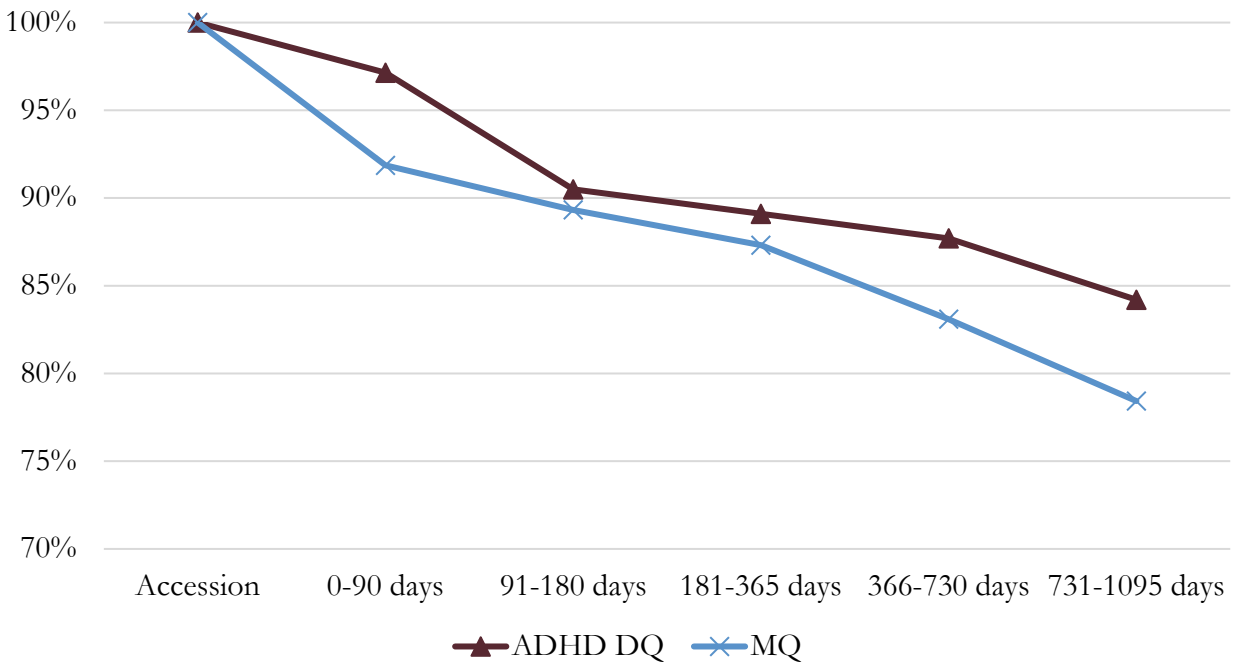


Figure 5B: Time to EPTS Separation among the ADHD DQ Cohort Compared to the MQ Cohort

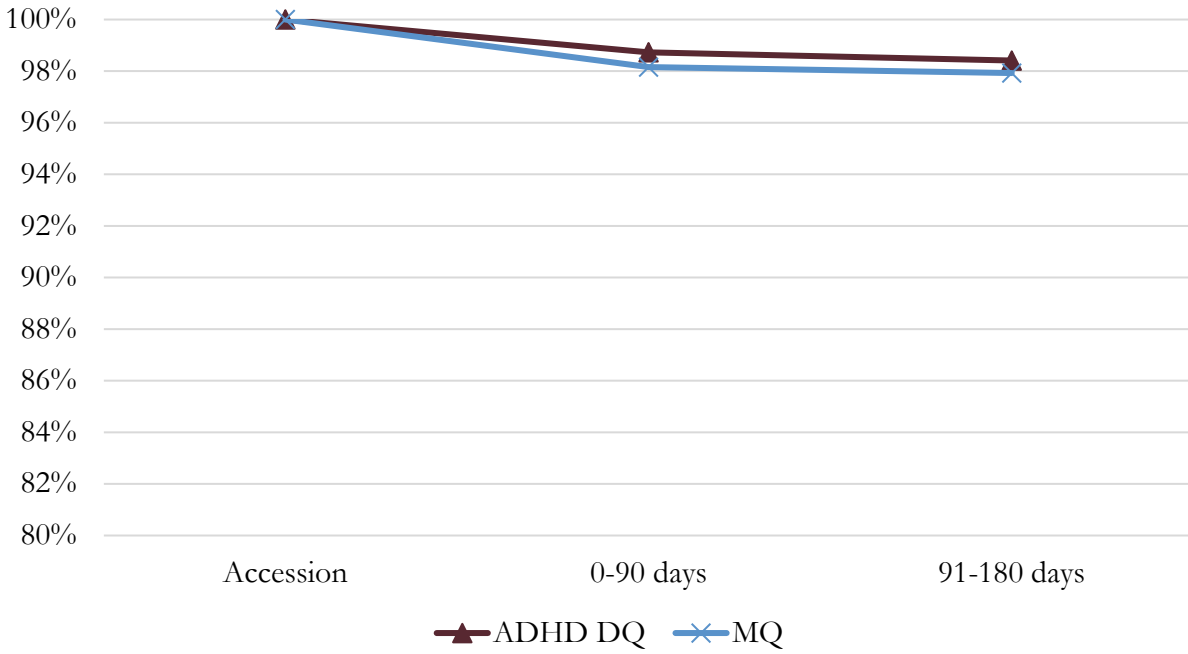


Figure 5C: Time to Disability Discharge among the ADHD DQ Cohort Compared to the MQ Cohort

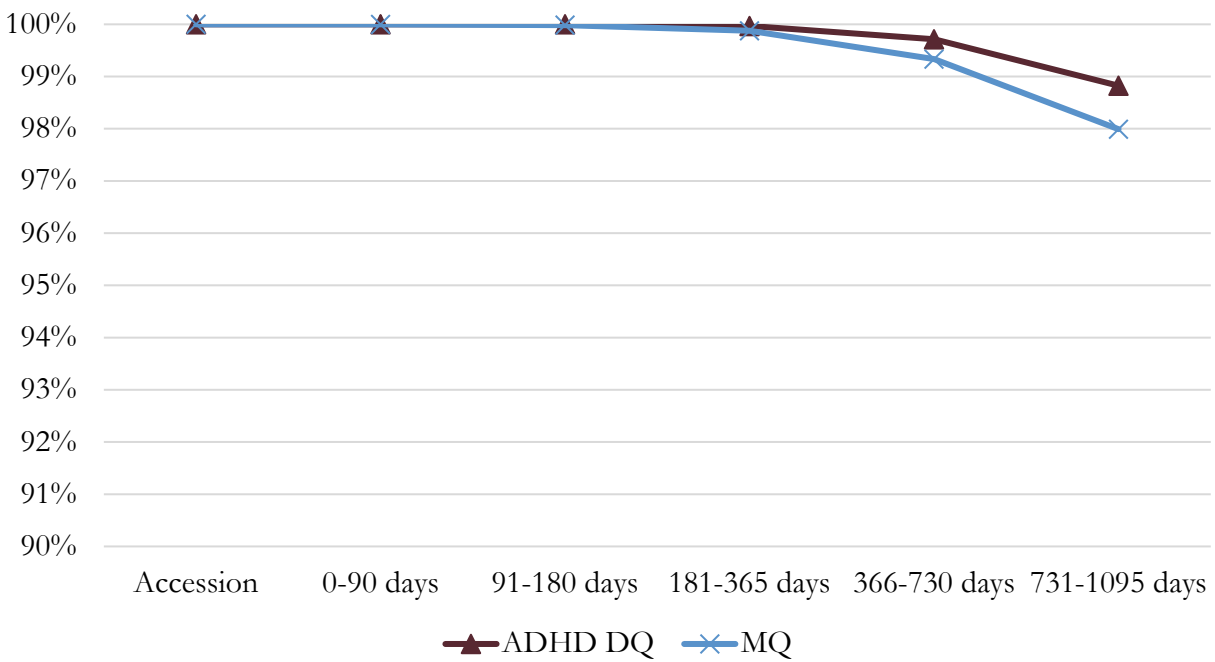
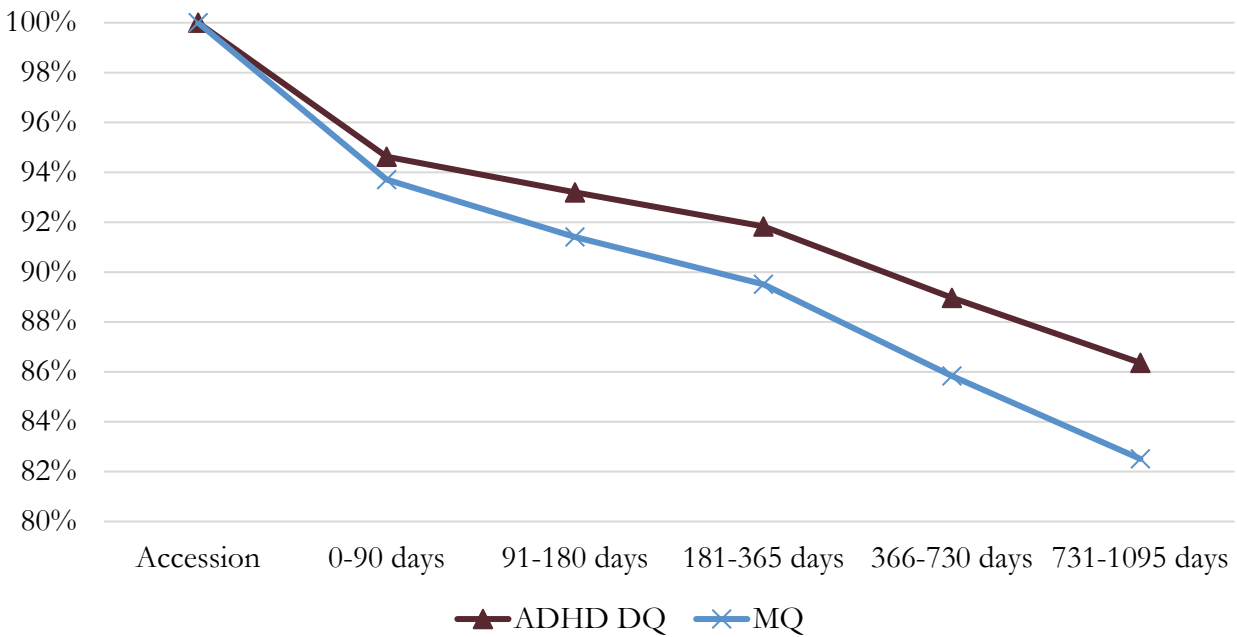


Figure 5D: Time to Other Adverse Attrition among the ADHD DQ Cohort Compared to the MQ Cohort



The likelihood of early adverse attrition, assessed using relative risk, is presented in Table 8. Overall, the ADHD DQ cohort had a lower likelihood of overall early adverse attrition (0.83), disability discharge (0.54), and other adverse attrition (0.78) compared to the MQ cohort. Relative risks varied by Service branch, but similar results were noted.

Table 8: Likelihood of Early Adverse Attrition among the ADHD DQ Cohort Compared to the MQ Cohort*

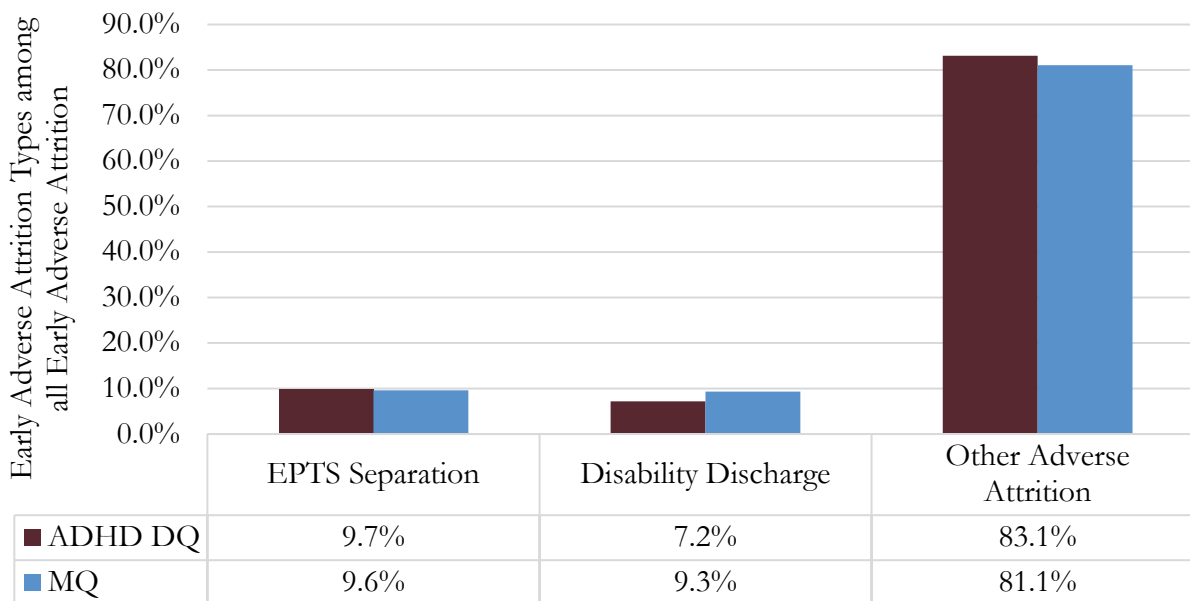
Service	Adverse Attrition	EPTS Separation	Disability Discharge	Other Adverse Attrition
	aRR (95% CI)	cRR (95% CI)	cRR (95% CI)	cRR (95% CI)
Army	0.72 (0.63, 0.84)	1.01 (0.67, 1.51)	0.66 (0.43, 1.04)	0.65 (0.54, 0.77)
Navy	0.81 (0.69, 0.94)	0.16 (0.04, 0.65)	0.5 (0.19, 1.32)	0.85 (0.73, 1.00)
Marine Corps	0.84 (0.68, 1.04)	0.96 (0.52, 1.78)	0.49 (0.22, 1.08)	0.88 (0.72, 1.08)
Air Force	1.00 (0.86, 1.17)	0.96 (0.58, 1.58)	0.74 (0.37, 1.48)	1.02 (0.86, 1.22)
DoD	0.83 (0.77, 0.90)	0.77 (0.58, 1.01)	0.54 (0.39, 0.75)	0.78 (0.71, 0.85)

* Statistically significant results are bolded

aRR: adjusted relative risk; cRR: crude relative risk; 95% CI: 95% confidence interval

Figure 6 breaks down the types of attrition that make up the overall definition of adverse attrition. The general nature of separations appears to be similar for the ADHD DQ and the MQ cohorts.

Figure 6: Early Adverse Attrition Distribution by Type among the ADHD DQ Cohort Compared to the MQ Cohort



While most reasons for disability discharge, on the basis of disability body system category, were too infrequent to significantly impact our results, some interesting trends were noted. The ADHD DQ cohort had a higher percentage of neurological (21.6% vs. 11.8%) but a lower percentage of psychiatric (13.5% vs. 24.4%) disabilities compared to the MQ cohort. In contrast, musculoskeletal disabilities were more common among the MQ cohort (45.2% vs. 27.0%). Despite the slight differences in the distribution of disability body systems between the ADHD DQ and MQ cohorts, both cohorts reflected the general disability population trends⁶ with musculoskeletal, neurological, and psychiatric being the most common systems.

Table 9 reveals that a larger proportion of the disability discharged ADHD DQ cohort were placed on the TDRL (37.8%) compared to the disability discharged MQ cohort (24.7%).

Table 9: Distribution of Disability Dispositions among the Disability Discharged ADHD DQ Cohort Compared to the Disability Discharged MQ Cohort

Disability Disposition	ADHD DQ Cohort	MQ Cohort
PDRL	24.3%	25.6%
TDRL	37.8%	24.7%
SWSP	37.8%	42.5%
Total Disability Discharged	37	16,285

PDRL: Permanent Disability Retirement List; TDRL: Temporary Disability Retirement List; SWSP: Separated with Severance Pay

Most of the reasons for EPTS separation are too small for meaningful comparison. However, it was noted that the EPTS separated ADHD DQ cohort had lower proportions of separations for LPBD conditions (40.0% vs. 49.8% for the MQ cohort). Although, specifically, ADHD-related separations (5.28-a-4) were higher among the EPTS separated ADHD DQ cohort (20.0%) compared to the EPTS separated MQ cohort (6.9%).

Rate of prescribed ADHD-related medication during service is presented in Table 10. While a larger proportion of the ADHD DQ cohort (6.4%) were prescribed medication, 2.0% of those active duty enlistees considered MQ were also prescribed medication, indicating possible ADHD among the MQ cohort.

Table 10: Rate of Prescriptions for ADHD-Related Medication among the ADHD DQ Cohort Compared to the MQ Cohort

Prescribed ADHD-Related Medication during Service	ADHD DQ Cohort	MQ Cohort
Yes	6.4%	2.0%
No	93.6%	98.0%
Total Accessions	3,146	752,194

Discussion

From FY 2016 - FY 2020, approximately 3,000 active duty enlistees with an ADHD DQ were waived, entered military service, and did not have higher rates of early adverse attrition when compared to MQ recruits. Additionally, nearly 95% of active duty enlistees with an ADHD DQ and waiver did not receive ADHD-related medication during service. Although some concordance was observed between ADHD accession medical DQ and reason for separation, these findings could demonstrate that DoD accession medical DQ and waiver policies yield active duty enlistees at least as capable as their MQ counterparts. The prescriptions of ADHD-related medication among MQ active duty enlistees may indicate recognition of adult ADHD after accession or the pre-existence of earlier diagnosed ADHD that was not considered disqualifying at accession, but later exacerbated by military service.

While some research indicates that Service members with ADHD might be significantly associated with worse clinical and functional outcomes,²⁹ this study suggested that those with an ADHD DQ who were carefully evaluated and waived for each respective Service commensurate with operational demands, fair as well or better than their MQ counterparts.

Results of this study indicate that active duty enlistees who were waived for an ADHD DQ can successfully serve in the Military with comparable retention and promotion rates to those without, consistent with existing literature demonstrating that individuals with ADHD could function efficiently in military service²⁴. These findings support the notion that active duty enlistees with ADHD can serve successfully in the military, potentially informing future policy adjustments to maintain an inclusive yet operationally effective force.

It is notable that smaller proportions of applicants for military service with an ADHD DQ are coming from the more recent years, even though ADHD diagnosis rates in the U.S. have been increasing with national trends indicating a rising prevalence over recent years³⁰. There may be several contributing factors, including ADHD standard updates which may have reduced the number of applicants requiring an ADHD waiver, fewer total applicants over time, and self-selection bias as those with a diagnosis of ADHD may choose not to apply to military service due to perceived or real difficulties in meeting military requirements. Additionally, although overall diagnosis rates are increasing, there is also increased awareness and early interventions leading to better management and care, allowing civilians with an ADHD diagnosis to achieve success in other fields, possibly explaining the difference in rates between the U.S. population and Military applicants³¹. To assess ADHD's impact on military service more fully, future studies may evaluate Service members newly diagnosed with ADHD early in service.

Study Limitations

In addition to the limitations listed in the *Special Report Caveats* section, the following limitations should be considered when interpreting results for this study:

1. ADHD-disqualified applicants who subsequently accessed were presumably granted a medical waiver after medical review by a SMWRA. Therefore, the performance of enlistees who received a DQ and granted an accession waiver cannot be extrapolated to disqualified applicants who either did not apply for a waiver or were denied a waiver.
2. EPTS data is known to be grossly incomplete, though the exact extent is unknown. It is likely, however, that incompleteness of EPTS records is non-differential regarding whether an applicant had a pre-service medical disqualification. Therefore, while this should not bias comparisons, it substantially reduces our power to detect differences in EPTS by DQ history.

Study 3: First-year Attrition Among Recent Accession Waivers for History of: Mood Disorders, Self-Harm, Anxiety Disorders, or Stress/Adjustment Disorders

Key Findings

- Accession waiver data are important to examine as well as accession DQs for the following reasons:
 - enables more current assessment of disqualified applicants, as waiver data continues to be available beyond February 2021, and
 - provides waiver authorities with direct information regarding impact of their waiver approval decisions.
- An accession waiver for history of self-harm was a significant risk factor for early adverse attrition within the first year of enlisted service.
- Accession waivers for history of mood disorders, anxiety disorders or stress/adjustment disorders were not significant risk factors for early adverse attrition among all services combined. Elevated early adverse attrition risk were seen among:
 - Air Force active duty enlistees waived for a history of mood disorders.
 - Marine Corps active duty enlistees waived for a history of stress/adjustment disorders.
- Current accession waiver procedures for the examined conditions generally allow applicants to serve without undue impacts on early adverse attrition.

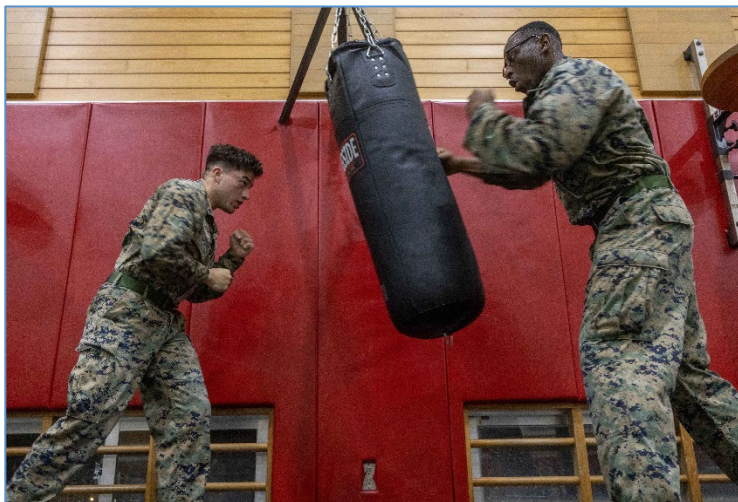
Background

The studies and analyses to this point have focused on accession medical DQs and subsequent accessions, without attention to the accession medical waivers that are required for medically disqualified applicants to access into service. Bypassing the medical waiver data is often necessary because DQ codes for individual cases may not fully match between the USMEPCOM data and the medical waiver data. As an alternative, this study focuses on accession waiver approvals on the assumption that the waiver consideration followed an accession medical DQ. This approach has two distinct benefits: 1) allowing feedback to the SMWRAs on the direct assessment of outcomes of their waiver approvals; and, 2) allowing more current assessment of the DQ/waiver process, as disqualification data remains limited after FY 2021.

The aim of this study was to examine first year attrition among active-duty enlistees who received an approved waiver for a history of selected LPBDs (mood disorders, self-harm, anxiety disorders, or stress/adjustment disorders).

Methods

We conducted a series of cohort survival analysis of active duty enlistees who accessed during FY 2018-FY 2022. The focus population contained four distinct cohorts, consisting of Service members who entered the service with an accession medical waiver record indicating any one of the following LPBDs, our definitions for which are mutually exclusive: mood disorders (ICD-10 codes F30-F39), anxiety disorders (ICD-10 codes F40-F41.9), history of self-harm (ICD-10 codes Z91.5-Z91.52), or stress/adjustment disorders (ICD-10 codes F43-F43.9). While some waiver actions during the early study period were coded using ICD-9 code format, only those with the ICD-10 code format were included to maintain purity in the definition of the study cohorts. Note that these LPBD categories were based on DQ codes used by the medical waiver authorities, which may not directly correspond to, or were mappable to, individual accession medical standards. For example, the disqualifying LPBD standard in DoDI 6130.03 V1 for ‘history of self-mutilation’ is coded using ICD-10 code Z91.5 only, while this study utilized the broader category of ‘history of self-harm’ which includes ICD-10 codes Z91.5-Z91.52.



Matched comparison cohorts for each of these four LPBD cohorts consisted of active duty enlistees who did not need an accession medical waiver. Matching was at a 3:1 ratio, by Service branch (Army, Navy, Marine Corps, Air Force), age group at accession (17-19, 19-22, 22-25, 25+ years), sex, race (White, Black, Other), and year of accession. Matching was at the individual level, so that any demographic subgroup (e.g., Air Force enlistees) had a fully matched comparison cohort.

Kaplan-Meier survival analyses were performed for each LPBD waiver cohort to evaluate early adverse attrition during the first year of enlisted active duty service. Early adverse attrition, defined as any adverse separation in Table 1 on page 5, was examined separately for each of the four accession medical waiver cohorts listed above, with comparison to their respective matched medically qualified comparison cohorts. Survival time was censored at one year. This restriction to one year of follow-up was due to the following three reasons: (1) the general drop-off in early adverse attrition after the first year¹⁰; (2) the expectation that most early adverse attrition, including those related to pre-existing medical conditions, would occur early in service; and, (3) to provide more timely feedback to the SMWRAs and policymakers.

Data used in this analysis were derived from records on Service members at military service entry (gain or accession), and military service separation (early adverse attrition) provided by the DMDC.

Accession medical waiver data was received from USAREC, BUMED, Navy Recruiting Command (NRC), and AETC. All subject selection, matching and analysis was performed using SAS software, version 9.4 (SAS Institute, Cary, North Carolina).

Results

Table 11 presents the demographic features of the four study cohorts. Comparison cohorts were matched exactly on these demographic factors and therefore not shown. Army active duty enlistees constituted a disproportionately small portion of each cohort. Separate analyses (not shown) suggest that the Army has a lower accession waiver approval rate for LPBD DQs among active duty applicants than the other Services. The Air Force constitutes a smaller portion of the history of self-harm cohort than the other cohorts, perhaps reflecting a more restrictive waiver approach by the Air Force for this standard.

Accessions after receiving a waiver for the LPBD DQs examined in this study have generally increased over time, with nearly half of the post-waiver accessions for anxiety and mood disorders occurring in FY 2020. This year also had the biggest proportion of post-waiver accessions for the other two examined LPBDs, though at a more modest contribution of roughly 30%. Some of this may be due to COVID-related declines in accessions during 2020-2021.

Examining distributions by sex, females comprised a larger portion of the population waived for these LPBD DQs than of the general recruit population (not shown), ranging from 21% (history of mood disorders) to 48% (history of self-harm) of the waived population. Notably, females comprised nearly half (48.0%) of the history of self-harm waiver cohort. It is not clear whether this was a result from higher rates of history of self-harm among female versus male applicants, if waiver approval rates differ by sex, or a combination of the two. Regardless, the matching of study groups by sex was important to prevent confounding, as prior studies have found attrition differences by sex.

The tabulations by age group show the history of self-harm cohort consisting of more (59.1%) in the youngest age group, and those in the anxiety cohort having the fewest (38.5%).

Finally, race representation is relatively stable across the four LPBD waiver cohorts.

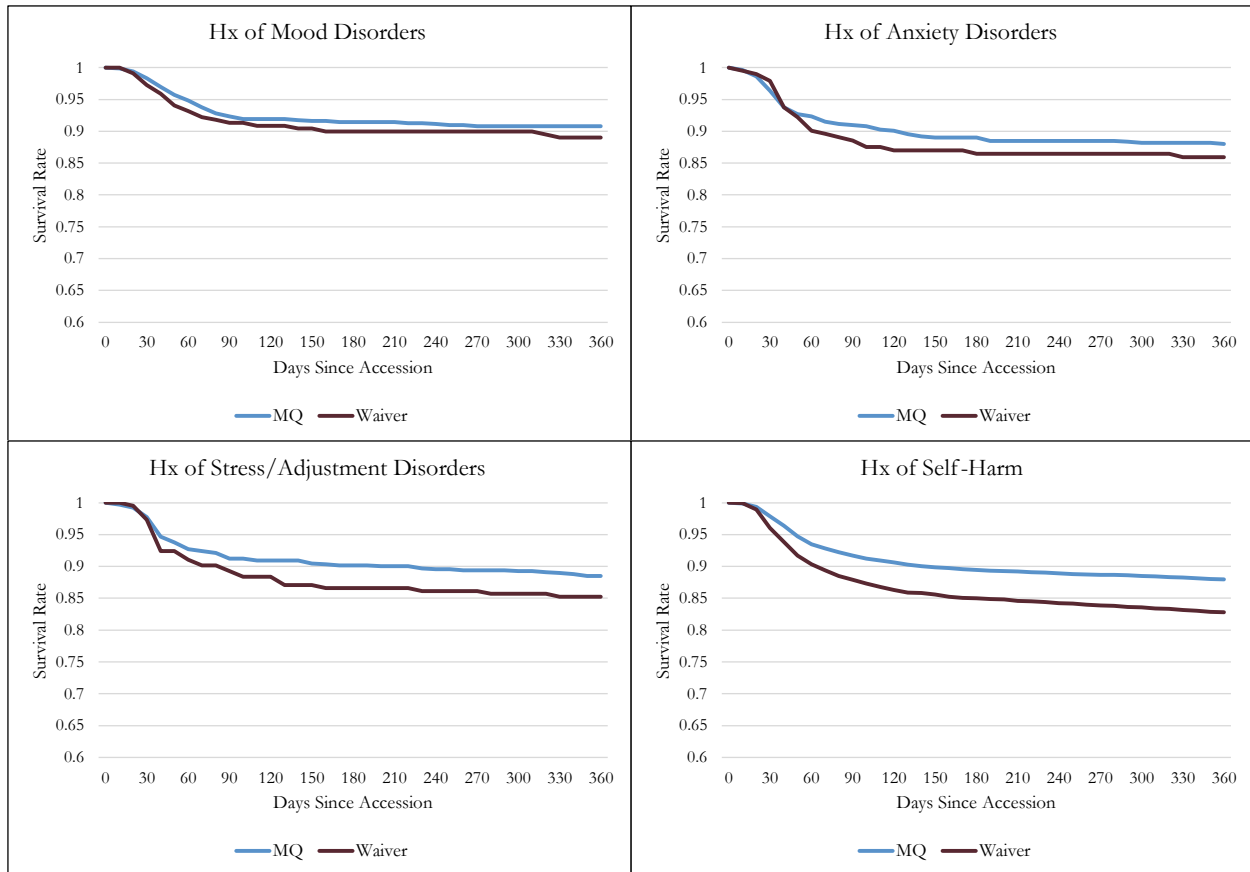
Table 11: Demographic Characteristics at Accession by Waiver Category

	Hx of Mood Disorders %	Hx of Anxiety Disorders %	Hx of Stress/Adjustment Disorders %	Hx of Self-Harm %
Service				
Army	13.2	16.2	18.3	19.4
Navy	35.2	35.9	29.5	36.7
Marine Corps	24.7	22.4	23.7	31.2
Air Force	26.9	25.5	28.6	12.7
Accession Year				
2018	6.9	8.3	12.5	5.2
2019	9.6	10.4	16.5	12.6
2020	19.2	18.8	14.3	22.0
2021	18.7	14.6	26.8	28.6
2022	45.7	47.9	29.9	31.7
Sex				
Male	78.5	69.3	72.8	52.0
Female	21.5	30.7	27.2	48.0
Age Group				
17-19	49.3	38.5	55.8	59.1
19-22	32.0	37.5	27.7	26.1
22-25	14.2	13.5	10.7	8.8
>25	4.6	10.4	5.8	6.0
Race				
White	77.2	85.4	81.3	75.8
Black	13.2	10.4	10.3	13.7
Other	9.6	4.2	8.5	10.5

Figures 7A-7D show the Kaplan-Meier survival curves for each of the four LPBD waiver cohorts and their matched comparison cohorts. The survival curves show estimated probability of remaining in service at any given time up to one year. These estimates are based on the attrition observed among the cohorts, with some accounting for any loss to follow-up (e.g., end of study period, or non-adverse separation from service). In each case, the survival curve for the LPBD waived cohort was generally slightly below that of the matched comparison cohort, meaning that the waived cohort had lower retention (and thus, higher attrition) across the first year of service. This difference was barely discernable for history of mood and history of anxiety disorders waiver cohorts. The curves for the

history of self-harm and history of stress/adjustment disorders waiver cohorts were more noticeably below those of their respective matched comparison cohorts.

Figures 7A-7D: Survival Curves for New Enlistees with Waivers for Selected LPBD DQs Versus Demographically Matched MQ Enlistees



1. Hx: History; MQ: Medically Qualified

History of Mood Disorders

Survival curves were not significantly different for the history of mood disorders waiver cohort relative to its matched comparison cohort ($p=0.44$). Assessing the survival curves per Service branch (not shown), only the Air Force waiver cohort showed a significant difference in one-year survival with 15% (9/59) of the waiver cohort having some form of adverse attrition during the first year of service, compared to roughly 3% of their matched counterparts ($p<0.01$). None of the other Service waiver cohorts showed a significant difference relative to their matched cohorts, so that the overall result across all Services was non-significant.

History of Anxiety Disorders

The survival curve for the history of anxiety disorders waiver cohort did not differ significantly from that of its matched comparison cohort ($p=0.42$). Also, none of the Service-specific comparisons of waiver to matched comparison cohorts showed any significant differences.

History of Stress/Adjustment Disorders

The graph for history of stress/adjustment disorders showed a more visible difference in estimated retention between the waived cohort and its matched comparison, although the difference was not statistically significant ($p=0.20$). Examination by Service reveals that the overall difference in curves was almost entirely driven by relatively high early adverse attrition in the Marine Corps waiver cohort, which was statistically significantly different from the Marine Corps matched comparison subjects. The former cohort had one-year adverse attrition of around 26% compared to 13% in the matched comparison cohort. None of the other Services showed any notable difference in survival between waived and matched comparison cohort.

History of Self-Harm

The cohort with a waiver for history of self-harm had significantly higher early adverse attrition than their matched comparison cohort ($p<0.01$), with adverse attrition rates at the one-year point estimated at 17% and 12%, respectively. These overall results were reflected in the Service-specific comparisons, with each Service's waiver cohort having significantly higher early adverse attrition curve estimates than their matched counterparts ($p<0.01$ for each Service). Differences in estimated adverse attrition at the one-year point between the waiver and comparison cohort ranged from 3.5% for Army to 6.2% for Navy.

Discussion

The Services have struggled in recent years to recruit enough enlisted applicants to meet manpower requirements⁸. There are not enough applicants to allow the Services to only select those who are free of any apparent medically disqualifying conditions⁶. In such a situation, the Services must consider applicants with various medical DQs and determine which of these are likely to be able to serve without presenting inordinate risk to themselves or others.

This study examined four LPBD DQs for which the Services have recently granted some accession medical waivers, with sufficient numbers of subsequent accessions to allow assessment of early adverse attrition. For three of the four LPBD DQs, we found that early adverse attrition was slightly

higher, but not statistically significantly, between the waived active duty enlistees and the matched comparison cohort who were demographically alike to the active duty enlistees other than not needing a waiver. For the remaining LPBD DQ, history of self-harm, the waiver cohort showed higher early adverse attrition than their matched counterparts, having a one-year adverse attrition excess of roughly 5%. The less favorable early adverse attrition outcomes for enlistees waived for history of self-harm suggest that this DQ would not be a good candidate for more relaxed waiver criteria. The outcomes for the other three waiver LPBD DQs suggest that the SMWRAs decision-making criteria adequately balance the need for more Service members with the imperative of maintaining a fit fighting force. The slight decrement in survival among the waiver cohort is not surprising, but the relatively small difference in outcomes compared to those among ostensibly healthy active duty enlistees paints a favorable picture.

Notably, the lack of significant early adverse attrition differences for some of the LPBD DQs examined does not imply that more waivers could be granted with similar effect. Most of the survival curves indicated slightly higher early adverse attrition among the waiver cohorts, even if not strikingly so in terms of early adverse attrition difference or statistical significance. The SMWRAs have considerable experience reviewing applicants' medical histories and determining which applicants are likely to be able to serve satisfactorily. Any requirement to extend more waivers may result in less favorable outcomes among the waived populations.

Limitations

In addition to the limitations listed in the *Special Report Caveats* section, the following limitation should be considered when interpreting results for this study:

1. Disqualified enlistees who subsequently accessed were granted a medical waiver after thorough medical review by a SMWRA. Therefore, the performance of enlistees who were granted an accession waiver cannot be extrapolated to disqualified applicants who either did not apply for a waiver or were denied a waiver.



Special Report Caveats

The following limitations apply to all studies in this Special Report:

1. Assessing mental health fitness for military service is well-recognized as a challenging task³. Identifying disqualifying mental health conditions at the pre-accession physical exam largely relies on the recruit disclosing their mental health history, which is not always guaranteed. Therefore, it is important to recognize this limitation while comparing “DQ” to “MQ” enlistees as misclassification between the two groups may occur.

Nondisclosure of mental health issues before accession results in some enlistees being misclassified into the medically qualified cohort rather than the LPBD DQ cohort. In contrast, it is reasonable to assume that no enlistees are misclassified into the LPBD DQ cohort due to falsely reporting history of a LPBD condition. As a result, comparisons are likely made between a pure LPBD DQ cohort versus a MQ cohort which may include a small portion of enlistees with undisclosed disqualifying LPBD conditions. Such misclassification would tend to mute the estimated association between LPBD DQs and Service outcomes. Additionally, enlistees who conceal their mental health history may have more severe issues, perhaps exacerbating this underestimation.

2. The coding of DQs in the USMEPCOM physical examination data does not directly indicate which standard a particular DQ applies to, but rather uses ICD codes which are then mapped the standards⁵. Accordingly, there may be some potential for misclassification of DQs. It is expected that this is minimal and would mostly result in missing a small number of DQs that are applicable to a particular category. This would result in reduced power to detect differences in attrition but should not bias risk estimates.



Acronyms

ADHD	Attention-Deficit/Hyperactivity Disorder
AFQT	Armed Forces Qualification Test
AFPC	Air Force Personnel Center
AMSARA	Accession Medical Standards Analysis and Research Activity
AMSWG	Accession Medical Standards Working Group
CEC	Center for Enabling Capabilities
DASD	Deputy Assistant Secretary of Defense
DES	Disability Evaluation System
DMDC	Defense Manpower Data Center
DoD	Department of Defense
DoDI	Department of Defense Instruction
DQ	Disqualification
EPTS	Existed Prior to Service
FDA	Food and Drug Administration
FY	Fiscal Year
GEMS	General Equivalence Mappings
LPBD	Learning, Psychiatric, and Behavioral Disorder
ICD-9	International Classification of Diseases, 9th Revision
ICD-10	International Classification of Diseases, 10th Revision
ISC	Inter-Service Separation Code
MDR	Military Health System Data Repository
MEPS	Military Entrance Processing Station
MHS	Military Health System
MTF	Military Treatment Facilities
MQ	Medically Qualified
OASD	Office of the Assistant Secretary of Defense
PDA	U.S. Army Physical Disability Agency
PDRL	Permanent Disability Retirement List
PDTS	Pharmacy Data Transaction Service
SECNAV	Secretary of the Navy
SSN	Social Security Number
SMWRA	Service Medical Waiver Review Authority
SWSP	Separated with Severance Pay
TDRL	Temporary Disability Retirement List
USAREC	U.S. Army Recruiting Command
USMEPCOM	US Military Entrance Processing Command
USMIRS	U.S. Military Entrance Processing Command Integrated Resource System
VASRD	Veterans Administration Schedule for Rating Disabilities
WRAIR	Walter Reed Army Institute of Research

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