Research Report

MARIA C. LYTELL, MICHAEL L. HANSEN, AVERY CALKINS, MATTHEW D. BAIRD,
NASTASSIA REED, KRISTIN J. LEUSCHNER, CLIFFORD A. GRAMMICH

Retention of Racial-Ethnic Minorities in the Regular Army

For more information on this publication, visit **www.rand.org/t/RRA2011-1**.

Published by the RAND Corporation, Santa Monica, Calif.

Library of Congress Cataloging-in-Publication Data is available for this publication.

ISBN: 978-1-9774-1228-7

About This Report

This report documents research and analysis conducted as part of a project entitled *Analyzing and Understanding Gaps in Retention of Racial/Ethnic Minorities in the Army*, sponsored by the Office of the Deputy Chief of Staff, G-1, U.S. Army. The purpose of the project was to investigate the retention of racial-ethnic minorities in the Regular Army to better understand how and why the composition of the force changes along the career path and recommend courses of action to improve efforts to retain top diverse talent.

This research was conducted within RAND Arroyo Center's Personnel, Training, and Health Program. RAND Arroyo Center, part of the RAND Corporation, is a federally funded research and development center (FFRDC) sponsored by the United States Army.

RAND operates under a "Federal-Wide Assurance" (FWA00003425) and complies with the *Code of Federal Regulations for the Protection of Human Subjects Under United States Law* (45 CFR 46), also known as "the Common Rule," as well as with the implementation guidance set forth in DoD Instruction 3216.02. As applicable, this compliance includes reviews and approvals by RAND's Institutional Review Board (the Human Subjects Protection Committee) and by the U.S. Army. The views of sources utilized in this report are solely their own and do not represent the official policy or position of DoD or the U.S. government.

Acknowledgments

We begin by thanking our sponsor, LTG Douglas Stitt, for his support throughout the project. We also extend our sincerest gratitude to our action officers, COL Jason Edwards and SGM Tobey Whitney, who provided useful insights and helped coordinate meetings and discussions.

We also thank the Army officers and senior noncommissioned officers who took time out of their busy schedules to speak with us for the Army unit-leader interviews. Their insights were critical to our findings and recommendations.

Finally, we thank current and former RAND colleagues who made this project and report possible. First, we thank Heather Krull, Director of the Personnel, Training, & Health Program in RAND Arroyo Center, for her support. Next, we thank members of our project team. Linda Cottrell used her excellent programming skills to merge and clean the personnel data. For interviews, Samantha DiNicola stepped in to facilitate, and Emily Haglund, Shreya Huilgol, and Julia Vidal Verástegui took and cleaned notes. Julia also provided front-end qualitative coding support. Isabel Leamon and Cory Stern conducted literature searches. Tepring Piquado was one of the project leaders before leaving RAND and helped the project start on solid footing. Finally, we thank our reviewers, Kelly Hyde and Paul Aswell, for their thoughtful comments.

Summary

The U.S. Army's talent management strategy, the *Army People Strategy*, lists diversity among its strategic outcomes (Grinston, McConville, and McCarthy, 2019). This includes diversity in its leadership, which can be achieved by recruiting and retaining a diverse force. To help it accomplish these goals, the Army asked RAND Arroyo Center to analyze *retention* of racial-ethnic minorities in the Army. RAND Arroyo Center's analysis considered the extent to which cohorts become more or less diverse as they progress through the ranks. In particular, this report seeks to answer the following:

- How has the racial-ethnic composition of the Army's active-component enlisted and officer force changed over time?
- What factors could explain racial-ethnic group differences in retention and other career outcomes that affect retention, such as promotions?
- How can the Army address potential barriers to retaining a racially and ethnically diverse force?

To address these questions, we used Army personnel data and relevant data on comparable civilian populations to document the racial-ethnic composition of the Regular Army and comparable civilian populations, as well as changes over time. We also applied statistical models to quantify how much observable factors (e.g., military occupational specialty) could explain racial-ethnic group differences in retention and associated career outcomes (e.g., promotion). We conducted interviews with 33 Army unit leaders to understand how unit leader decisionmaking about soldiers' careers might relate to potential barriers for retaining talent from underrepresented racial-ethnic communities. We conclude the report with key findings and courses of action for the Army to consider.

Racial-Ethnic Composition of Junior Cohorts

As the U.S. population has become more racially and ethnically diverse, so too has the Army's active component. Although the Army junior enlisted force (E-1 to E-3) roughly matches the racial-ethnic composition of the comparable civilian population (persons 18 to 24 years of age whose highest educational attainment is high school graduation), it has also rapidly become more diverse than the comparable civilian population in recent years. From fiscal years (FYs) 2005 to 2020, the proportion of such personnel who were of racial-ethnic minorities grew from 33 to 50 percent. (See the left two bars in Figure S.1.)

Army junior officers (O-1 to O-2) are less diverse than junior enlisted personnel and the comparable civilian population. However, diversity among Army junior officers has increased over time, with the proportion who were racial-ethnic minorities increasing from 29 percent in FY 2005 to 33 percent in FY 2020. (See the right two bars in Figure S.1.)

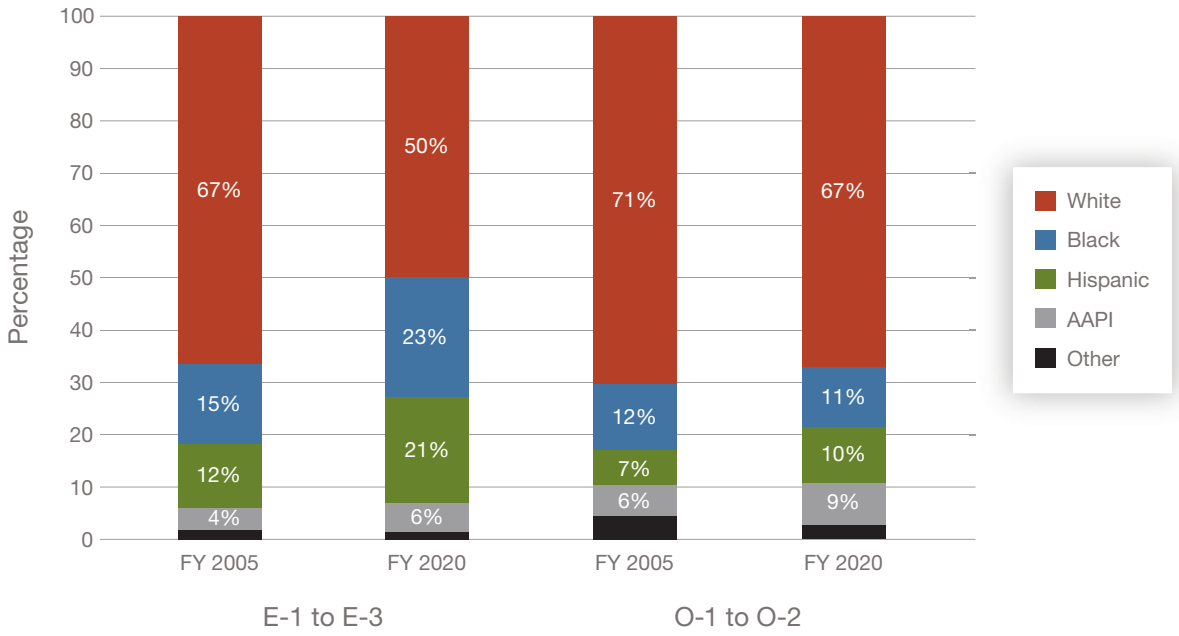
Overall, the Army has succeeded at recruiting from a racially and ethnically diverse population. As a result, it has given itself the opportunity to develop an increasingly diverse group of leaders.

Retention and Other Career Outcomes for Enlisted Personnel

We analyzed enlisted personnel retention as a series of sequential decision points. Specifically, we analyzed whether a soldier who attrits before the end of their first term does so for failure-to-adapt reasons; whether a soldier remains in the enlisted ranks for the duration of their initial service obligation; and whether a

FIGURE S.1

Racial-Ethnic Composition of Junior Enlisted Personnel and Junior Commissioned Officers, FY 2005 and FY 2020



SOURCE: Authors' tabulation of the September 2005 and September 2020 Total Army Personnel Database (TAPDB).

NOTE: The percentages within each bar do not add up to 100. We did not include percentages for the Other racial-ethnic category because they are small and would be difficult to see in the figure.

soldier remains past completion of their initial service obligation and past 10, 15, or 20 years of service. In our analyses, we compared these outcomes across race and ethnicity groups as evident in the overall data and after controlling for military occupational specialties, demographic characteristics, and other military characteristics.

We found that racial-ethnic minority soldiers had comparable failure-to-adapt attrition rates to White soldiers and higher first-term completion and reenlistment rates than White soldiers. Compared with White soldiers, racial-ethnic minority soldiers also generally had higher rates of retention past 10, 15, and 20 years. For example, while our simulations show that 49.9 percent of the entry cohort is White, only 37.6 percent of enlisted personnel retained more than 20 years are White.

At the same time, racial-ethnic minority soldiers generally had higher rates of suspension of favorable personnel action (also known as *flags*), higher rates of reductions in grade from E-5, and lower rates of early promotion to E-5. However, the effects of these outcomes do not offset the higher racial-ethnic minority retention rates that we observed. Rather, they suggest that racial-ethnic minority retention would be even *higher* than we observed if not for these differences in outcomes.

Qualitative Findings About Enlisted Career Outcomes

To understand possible explanations for such outcomes as higher reductions in grade and flagging of racial-ethnic minority soldiers, we asked Army unit leaders about factors that might influence these outcomes, any constraints on leaders to make decisions that affect these outcomes, and whether race or ethnicity directly affects decisions associated with such outcomes as early promotions and reductions in grade.

For early promotions, our interviewees recommended identifying soldiers with high levels of performance and potential for performing at the next grade. At the same time, they noted that the Army imposes numerical constraints on how many soldiers can be recommended for early promotion. Other constraints they noted included junior leaders not knowing how to evaluate and counsel soldiers and noncommissioned officer evaluation reports not fully conveying which noncommissioned officers should be promoted.

Our discussions indicated that suspensions of favorable personnel actions (flags) are fairly cut and dried but also indicated that commanders have some discretion in giving soldiers second chances. Commanders might consider the frequency and severity of the offense, rank of soldier, and other personal life circumstances in determining punishment and rehabilitation options. Some of our interviewees suggested that unit leadership decisions, all the way from direct supervisors to commanders, could be affected by unconscious, or implicit, biases about racial-ethnic minority soldiers' characteristics and competence, affecting subsequent career progress. Some also suggested focusing on junior leadership inexperience to address dynamics that could result in differential outcomes by race and ethnicity.

Commissioned Officers' Career Progression

Similarly, we used Army personnel data to analyze officer career progression from O-1 to O-6. Specifically, we analyzed officer retention—whether officers remain in the Army until they are eligible for promotion to the next grade—and officer promotion—whether an officer is promoted to the next grade.

We found that officers who are racial-ethnic minorities tend to have retention rates that are similar to or even slightly greater than those for White officers. Among those who attrit, however, officers who are racial-ethnic minorities are more likely to do so for performance or conduct reasons. Furthermore, promotion rates for officers who are racial-ethnic minorities tend to lag those for White officers. In particular, numbers of *below-the-zone* promotions—competitive early promotions before reaching the years of service usually needed for the next promotion—are just over one-half those for White officers. Altogether, the data suggest that, conditional on reaching a given paygrade, racial-ethnic minorities have higher retention rates than White officers and that, conditional on achieving eligibility for promotion, racial-ethnic minorities have lower promotion rates than White officers.

A recent policy change may increase racial-ethnic diversity of the officer corps still further. Since August 1, 2020, the Army has suspended the requirement to include official photos for selection boards and redacted any data for such boards that identifies race and ethnicity or gender. While relatively little time has passed since these changes, we found some evidence that these changes are associated with improved outcomes for racial-ethnic minority groups (and no evidence that the changes are associated with adverse outcomes).

Qualitative Findings About Officer Promotions

Our interviews found that officers who promote early are considered top performers with high potential to succeed, while those who promote later could have information in their records that does not reflect stellar performance or is even derogatory. The reasons for differences in such records can range from actual performance issues to personality conflicts between officers and their leadership to misalignment of promotion timing and assignments.

Raters and senior raters play central roles in officer promotion, even if they are not making the final promotion decisions. They evaluate officers and, in the case of senior raters, rate the officer's potential for promotion. Time constraints and the latitude given to senior raters are not unusual compared to those of other organizations but, just as in other organizations, can result in greater subjectivity in decisionmaking.

Although most interviewees did not point to discrimination as a reason that racial-ethnic minority officers might not promote at the same rate as White officers, a few noted that unconscious bias could exist. This might manifest as racial-ethnic minority officers receiving fewer career-enhancing opportunities. However, some participants also noted that combat arms branches, which are disproportionately White, might provide more opportunities than support branches and that this might explain some of the racial-ethnic group differences in career opportunities. Research is limited on whether officer branches vary in opportunities that would affect racial-ethnic group differences in career outcomes.

Participants identified some potential solutions to these issues. Suggested changes include improving education on how to evaluate officers, giving raters more time with the officers they evaluate, and examining the demographic distributions of senior rater profiles. A few participants also suggested changes to the timing of officer assignments and evaluations to address leadership development (giving people more time in position) and mistiming situations, particularly for officers who are above the zone for promotion. However, these changes would be far-reaching and would likely require more review before being considered (e.g., lengthening assignments so leaders have more time to develop in their roles).

Local Labor Markets and Differences in Retention by Race and Ethnicity

There are other influences on soldiers' decisions to remain in the Army beyond the opportunities within it. Specifically, opportunities soldiers might expect to find outside the Army could induce them to leave. As past research has shown, there is a relationship between expected compensation outside the Army and decisions to remain.

We assessed how local economic opportunities are associated with the first reenlistment decision for enlisted personnel and whether O-3s remain in the Army until eligible for promotion to O-4. We found that economic opportunities, as captured by the average wages in areas where individuals of different races and ethnicities live and work, explain a small portion of the difference in retention rates between Black and White soldiers and between Hispanic and White soldiers. The large portion of the difference that remains unexplained may be due to other influences on soldiers' decisions to remain in the service, or our measures of other economic opportunities may be poor proxies for what soldiers consider in their decisionmaking. Our estimates may also understate the effect of local labor market opportunities because they do not capture racial-ethnic differences in opportunities within geographic areas. Nevertheless, our analysis is consistent with the hypothesis that earnings inequality in the civilian economy partly contributes to greater retention of Black and Hispanic soldiers.

Qualitative Findings About Retention

To better understand reasons for voluntary and involuntary separation of soldiers and how these might differ by race and ethnicity, we asked interviewees for their perceptions about causes of separation and whether any of these reasons might be related to race or ethnicity.

Our interviews cited a variety of reasons soldiers might separate, such as better job opportunities (voluntary) and discharges for misconduct (involuntary). About one-half of our interview participants (about 16 individuals) suggested that race and ethnicity could influence voluntary separation. Possible reasons our interviewees cited for this are racial-ethnic minority soldiers perceiving their leaders as biased and limiting these soldiers' opportunities, a lack of racial-ethnic minority role models in higher leadership positions, and a variety of career-field-related reasons. About one-third of our interviews offered examples of how race or

ethnicity could affect involuntary separation. For example, some cited demographic trends in Uniform Code of Military Justice cases.

Our interviewees did not offer suggestions to improve retention that directly relate to race or ethnicity. Among the suggested areas for improvement were better assignment choices for senior noncommissioned officers, more monetary incentives, more educational opportunities, and better support for Army families. Some suggested that there is no "policy fix" for retention but that some problems may resolve as Army culture evolves over time.

Courses of Action

Our findings suggest five courses of action for the Army to consider.

Disseminate the Narrative

The Army has a positive narrative about racial-ethnic minority retention. The Army has given itself the opportunity to develop a diverse group of leaders. When personnel make stay or leave decisions, racial-ethnic minorities are more likely to choose to remain in the Army. The Army provides relatively strong economic opportunities for racial-ethnic minorities, but they choose to remain for other reasons as well (e.g., opportunities to serve their country).

Continue to Monitor Promotion Rates

We found preliminary evidence that removing race and ethnicity identification data from officer selection boards is associated with improved outcomes for racial-ethnic minority groups. However, because our analyses reflect only two years of promotion outcomes post–policy change, the Army should continue to monitor these trends.

Examine Differences in Performance and Conduct Issues

Administrative data indicate that racial-ethnic minority groups were more likely than White soldiers to have negative outcomes associated with performance or conduct in their records but do not indicate why this is so. The Army should investigate these outcomes in depth to assess the causes of these differences and develop appropriate mitigation strategies. One approach would be to monitor demographic trends of senior rater profiles and flagging patterns at the unit level. The demographic information associated with rating profiles and flagging should be aggregated at a level sufficient to preserve anonymity while creating awareness of discernible demographic patterns. The Army could also provide individualized, confidential reports to raters and commanders so that they have awareness of their own patterns of evaluation by race and ethnicity.

Provide More Training and Education for Junior-Level Leaders on Counseling and Evaluating Soldiers

Several interviewees stressed the challenges of inexperience among junior-level leaders in how to counsel and evaluate soldiers. Some suggested adding formal education that would provide practical guidance on counseling and evaluation techniques. A less formal route would be to have junior unit-level leaders, such as company commanders, use existing resources, such as those of the U.S. Army Human Resources Command, with reminders to commanders about these resources and how to find them.

Set Aside Protected Time for Unit Leaders to Counsel Soldiers

Commands should offer more protected time in their training calendars for leaders to counsel soldiers. Several interviewees noted that the Army has not given leaders enough time to spend with soldiers other than what is directly focused on missions or tasks.

Contents

About This Report iii
Summary v
Figures and Tables xiii

CHAPTER 1
Introduction 1
Approach 1
Race and Ethnicity Terminology 3
Limitations 4
Structure of This Report 5

CHAPTER 2
Racial-Ethnic Composition of Junior Cohorts 7
Enlisted Personnel 7
Commissioned Officers 9
Summary 11

CHAPTER 3
Quantitative Analyses of Enlisted Career Outcomes 13
Data Sources and Estimation Approach 14
First-Term Attrition and Reenlistment 14
Potential Mediators of First-Term Reenlistment 17
Long-Term Retention and Cumulative Differences by Race and Ethnicity 22
Summary 25

CHAPTER 4
Qualitative Findings About Enlisted Career Outcomes 29
Early Promotion 29
Suspension of Favorable Personnel Action 37
Reductions in Grade and Second Chances 39
Relationships of Race and Ethnicity with Flagging, Second Chances, and Reductions in Grade 43
Summary 45

CHAPTER 5
Quantitative Analyses of Commissioned Officers' Career Progression 47
Data Sources and Estimation Approach 47
Retention as O-1 Through Promotion to O-3 48
Retention as O-3 50
Promotion to O-4 53
Retention as O-4 55
Promotion to O-5 56
Retention as O-5 58
Promotion to O-6 59
Cumulative Differences by Race and Ethnicity 61

Race and Ethnicity Identification Data for Selection Boards 63
Summary 66

CHAPTER 6
Qualitative Findings on Officer Promotions 69
Factors Associated with Promotability 69
How Raters Evaluate Officers 71
Constraints in the Officer Evaluation System 72
Associations Between Race and Ethnicity and Officer Evaluations and Promotions 74
Ways the Army Can Support Commands in Evaluating Officers 76
Summary 77

CHAPTER 7
Local Labor Markets and Differences in Retention by Race and Ethnicity 79
Measuring Soldier Expectations About Earnings Outside the Army 79
Methodological Approach and Data 80
Results 81
Summary 82

CHAPTER 8
Qualitative Findings About Enlisted and Officer Retention 83
Reasons for Separation 83
Associations Between Separation Reasons and Race or Ethnicity 85
Suggested Improvements to Army Retention Policies, Programs, and Practices 87
Summary 88

CHAPTER 9
Key Findings and Courses of Action 89
Key Findings 89
Courses of Action 93
Conclusion 96

APPENDIXES
A. Quantitative Methods 97
B. Interview Materials 103
C. Qualitative Coding Methodology 109
D. Supplemental Tables and Figures 121
E. Commissioned Officer Regression Results 145

Abbreviations 161
References 163

Figures and Tables

Figures

S.1. Racial-Ethnic Composition of Junior Enlisted Personnel and Junior Commissioned Officers, FY 2005 and FY 2020 vi
2.1. Racial-Ethnic Composition of Junior Enlisted Personnel and a Comparable Civilian Population, FY 2020 8
2.2. Racial-Ethnic Composition of Junior Enlisted Personnel and a Comparable Civilian Population, FY 2005 and FY 2020 9
2.3. Racial-Ethnic Composition of Junior Commissioned Officers and a Comparable Civilian Population, FY 2020 10
2.4. Racial-Ethnic Composition of Junior Commissioned Officers and a Comparable Civilian Population, FY 2005 and FY 2020 11
3.1. First-Term Retention Outcomes, by Race and Ethnicity 15
3.2. First-Term Reenlistment, by Accession Cohort 17
3.3. Suspension of Favorable Personnel Action, by Accession Cohort 19
3.4. Early Promotion to E-5, by Accession Cohort 20
3.5. Reduction in Grade from E-5, by Accession Cohort 21
3.6. Reenlistment Eligibility, by Accession Cohort 23
3.7. Simulated Racial-Ethnic Distribution Using Actual Retention Rates, by Race and Ethnicity 26
3.8. Simulated Racial-Ethnic Distribution Using Adjusted Retention Rates, by Race and Ethnicity 26
5.1. Of O-1s Who Separate, Percentage That Separate for Performance or Conduct Reasons 49
5.2. Of O-2s Who Separate, Percentage That Separate for Performance or Conduct Reasons 51
5.3. O-3 Retention Rates, by Year 52
5.4. Promotion Rates to O-4, by Year 54
5.5. O-4 Retention Rates, by Year 56
5.6. Promotion Rates to O-5, by Year 57
5.7. O-5 Retention Rates, by Year 59
5.8. Promotion Rates to O-6, by Year 60
5.9. Simulated Racial-Ethnic Distribution Using Actual Retention and Promotion Rates by Race and Ethnicity 62
5.10. Simulated Racial-Ethnic Distribution Using Adjusted Retention and Promotion Rates by Race and Ethnicity 63
5.11. Simulated Racial-Ethnic Distribution Using Adjusted Retention Rates, by Race and Ethnicity, and White Promotion Rates 64
7.1. The Extent to Which Earnings Inequality Explains Differences in Retention 81
D.1. Rate of Failure-to-Adapt Attrition by Accession Cohort 121
D.2. Retention to End of First Contract by Accession Cohort 122
D.3. Retention After End of First Contract by Accession Cohort 123

Tables

1.1. Types of Army Unit Leader Interview Participants 2
1.2. Race and Ethnicity Terminology 3
3.1. Predicted Failure-to-Adapt Attrition Rates, by Race and Ethnicity 16

3.2. Predicted First-Term Completion Rates, by Race and Ethnicity 17
3.3. Predicted First-Term Reenlistment Rates, by Race and Ethnicity 18
3.4. Predicted Suspension of Favorable Personnel Action, by Race and Ethnicity 19
3.5. Predicted Early Promotion to E-5, by Race and Ethnicity 21
3.6. Predicted Reduction in Grade from E-5, by Race and Ethnicity 22
3.7. Predicted Eligibility for Reenlistment, by Race and Ethnicity 23
3.8. Predicted Retention Past 10 Years Conditional on Retention Past First Term, by Race and Ethnicity 24
3.9. Predicted Retention Past 15 Years Conditional on Retention to Ten Years of Service, by Race and Ethnicity 24
3.10. Predicted Retention Past 20 Years Conditional on Retention to 15 Years of Service, by Race and Ethnicity 25
4.1. Constraints on Command in Enlisted Promotion Process 35
5.1. O-1 Predicted Retention Rates, by Race and Ethnicity 48
5.2. Predicted Promotion Rates to O-2, by Race and Ethnicity 49
5.3. O-2 Predicted Retention Rates, by Race and Ethnicity 51
5.4. Predicted Promotion Rates to O-3, by Race and Ethnicity 52
5.5. O-3 Predicted Retention Rates, by Race and Ethnicity 53
5.6. Predicted Promotion to O-4, by Race and Ethnicity 54
5.7. Predicted Below-the-Zone Promotion to O-4, by Race and Ethnicity 55
5.8. O-4 Predicted Retention Rates, by Race and Ethnicity 56
5.9. Predicted Promotion to O-5, by Race and Ethnicity 58
5.10. Predicted Below-the-Zone Promotion to O-5, by Race and Ethnicity 58
5.11. O-5 Predicted Retention Rates, by Race and Ethnicity 60
5.12. Predicted Promotion to O-6, by Race and Ethnicity 61
5.13. Predicted Promotion to O-4, by Race and Ethnicity and Period 66
5.14. Predicted Promotion to O-5, by Race and Ethnicity and Period 67
5.15. Predicted Promotion to O-6, by Race and Ethnicity and Period 67
6.1. Key Factors Associated with Officer Evaluations That Affect Promotability 70
C.1. Content Codes for Army Unit Leader Interviews: Officer Promotion 110
C.2. Content Codes for Army Unit Leader Interviews: Enlisted Promotion 112
C.3. Content Codes for Army Unit Leader Interviews: Suspension of Favorable Personnel Action and Reductions in Grade 115
C.4. Content Codes for Army Unit Leader Interviews: Factors Related to Voluntary Separation 118
C.5. Content Codes for Army Unit Leader Interviews: Factors Related to Involuntary Separation 119
C.6. Content Codes for Army Unit Leader Interviews: Retention Improvements 120
D.1. Regression Results for First-Term Retention Outcomes 124
D.2. Regression Results for Suspension of Favorable Personnel Action and Early Promotion to E-5 127
D.3. Regression Results, Reduction in Grade from E-5 and Reenlistment Eligibility 131
D.4. Regression Results for Retention Past 10, 15, and 20 Years of Service 135
D.5. Labor Conditions Regression Results on Retained Past First Term, Conditional on Eligibility 140
E.1. O-1 Logistic Regression Results 146
E.2. O-2 Logistic Regression Results 148
E.3. O-3 Logistic Regression Results 150
E.4. Logistic Regression Results, Below-the-Zone Promotion to O-4 152
E.5. O-4 Logistic Regression Results 153
E.6. Logistic Regression Results, Below-the-Zone Promotion to O-5 155
E.7. O-5 Logistic Regression Results 156

E.8. Logistic Regression Results, Below-the-Zone Promotion to O-6 158
E.9. Policy Change Logistic Regression Results 159
E.10. O-3 Logistic Regression Results 160

CHAPTER 1

Introduction

The Army People Strategy, issued at the beginning of fiscal year (FY) 2020, formalized the Army's shift "to more deliberately managing the talents" of soldiers (Grinston, McConville, and McCarthy, 2019, p. 2). It lists diversity as one of the strategic outcomes it will pursue, noting that the "Army is committed to equality of opportunity" and that its soldiers are "drawn from all corners of our country and its vibrant, diverse population" (Grinston, McConville, and McCarthy, 2019, pp. 5–6). The Strategy's Diversity, Equity, and Inclusion Annex, published at the end of FY 2020, further emphasizes the importance of having a workforce that represents the country's diversity (Wardynski, 2020). This includes the diversity of the Army's leadership, and the annex notes that "it is incumbent upon the Army to institute policies and systems now to ensure the diversity of leadership it needs for the future" (Wardynski, 2020, p. 2).

It is within the context of these two documents that the Army requested that RAND Arroyo Center analyze retention of racial-ethnic minorities in the Army. The Acquire Talent line of effort, identified in the Army People Strategy, is the mechanism by which the Army can identify and recruit a diverse group of soldiers (Grinston, McConville, and McCarthy, 2019). While we examined the extent to which the Army has succeeded at this goal, it is not the focus of the analysis summarized in this report. Rather, our focus is on the strategy's Retain Talent line of effort, or the extent to which cohorts become more or less diverse as they progress through the ranks. Retention of racial-ethnic minorities determines whether the Army will have the diverse leadership it recognizes that it needs.

This report seeks to answer three questions:

- How has the racial-ethnic composition of the Army's active-component enlisted and officer force changed over time?
- What factors could explain racial-ethnic group differences in retention and other career outcomes that affect retention, such as promotions?
- How can the Army address potential barriers to retaining a racially and ethnically diverse force?

Approach

We pursued multiple approaches to answer our research questions. Many of our results are descriptive, summarizing how the composition of the force changes along the career path. Our project sponsor expressed interest in having documentation of these descriptive findings. While this report is clearly not the first to examine these issues, the most recent published work is from around the time of the 2011 Military Leadership Diversity Commission (MLDC). Because the country has become more diverse over time, it is important to understand if and how the composition of the Army has changed.

To conduct these descriptive analyses, we relied on analyses of data on soldier retention, attrition, promotion, reduction in grade, and suspension of favorable personnel actions (flags). We constructed our data by creating quarter-by-year data draws for each enlisted soldier and commissioned officer using Total Army Personnel Data Base (TAPDB) data. We also used data from the American Community Survey to determine

the strength of local labor market conditions. The quantitative methods are described in greater detail in Appendix A.

In addition, we provide results in this report that shed a light on why the composition of the force changes along the career path. Moving from descriptive associations to causal explanations requires additional assumptions, and this report provides a discussion of potential reasons for why the results occur and what they mean. This is necessary to address a second interest of the project sponsor, understanding any potential barriers to retaining talent from underrepresented racial-ethnic communities, and to recommend courses of action to address barriers as the Army operationalizes its Army People Strategy (Grinston, McConville, and McCarthy, 2019). From June to July 2022, we held virtual interviews with 33 Army personnel in current (or recent) leadership positions to uncover factors related to unit-level leader decisionmaking that could affect career outcomes differently by race and ethnicity category. Specifically, we asked participants about the factors that influence soldier and officer career outcomes, how unit leaders make decisions that affect the outcomes, and the extent to which race and ethnicity might relate to any of the outcomes and associated decisions made at the unit (generally, battalion or below) level.

Table 1.1 provides details about participants we interviewed. We interviewed 14 officers (mostly lieutenant colonels with battalion command or equivalent experience) and 19 senior noncommissioned officers (NCOs; mostly E-9) across several career fields.[1] To reduce risk of individuals being identified by inference, we grouped the participants' primary career fields into three categories: combat arms (infantry, armor, field artillery), combat support (chemical, civil affairs, military intelligence, military police, signal), and non–combat related (adjutant general, logistics, quartermaster, medical, public affairs).

The interview protocols are provided in Appendix B, and details about the qualitative coding methodology can be found in Appendix C.

Throughout the report, we cite previous research related to U.S. military personnel retention and demographic diversity. We sought out research dating back to the 1990s that provided insights that were particularly relevant to our findings. We supplemented the military diversity-specific literature with other literature that provides context to specific findings from our interviews and for our recommended courses of action.

TABLE 1.1
Types of Army Unit Leader Interview Participants

	Career Field Category	Number of Participants
Enlisted	Combat arms	3
	Combat support	12
	Non–combat related	4
Officer	Combat arms	2
	Combat support	6
	Non–combat related	6
Total		33

[1] We worked with our sponsor's office to identify potential participants to recruit. Our sponsor's office initially engaged Forces Command (FORSCOM), where we submitted a sampling plan for current commanders (primarily at battalion level) and senior enlisted leaders (e.g., first sergeants) across several types of FORSCOM units. FORSCOM provided seven initial points of contact. Based on those contacts, we were able to interview four participants (three enlisted, one officer). The sponsor's office generated an additional list of contacts to supplement the seven we received from FORSCOM. Using that contact list, we were able to conduct an additional 29 interviews out of the 37 individuals contacted.

Race and Ethnicity Terminology

Because the language involving race and ethnicity continues to evolve in U.S. society, we provide short descriptions of terminology used in this report. To define these terms, we relied on three types of sources: (1) the Diversity, Equity, and Inclusion Annex (Wardynski, 2020) and the MLDC report (MLDC, 2011) as military-specific sources on diversity-related topics, (2) the U.S. Census Bureau as a key federal agency that measures and applies categories of race and ethnicity as part of the U.S. census,[2] and (3) available reference guidance from the American Psychological Association (APA).[3] Table 1.2 lists key terms and provides relevant sources.

TABLE 1.2
Race and Ethnicity Terminology

Term	Description	Source(s)
Diversity	"All attributes, experiences, cultures, characteristics, and backgrounds of the total force which are reflective of the Nation we serve and enable the Army to deploy, fight, and win."	Wardynski (2020, p. 4)
Demographic diversity	Subset of broader definition of *diversity* that focuses on demographics. More specifically, the term refers to the "immutable differences among individuals, such as race and ethnicity, gender, and age, as well as to differences in personal background, such as religion, education level, and marital status."	MLDC (2011, p. 16)
Equity	"The fair treatment, access, opportunity, choice, and advancement for all Soldiers and Civilians while striving to identify and encourage drivers and identify and eliminate barriers that have prevented the full participation of the total force."	Wardynski (2020, p. 4)
Inclusion	"The process of valuing and integrating each individual's perspectives, ideas, and contributions into the way an organization functions and makes decisions; enabling workforce members to achieve their full potential in focused pursuit of organizational objectives."	Wardynski (2020, p. 4)
Race and ethnicity	*Race* refers to "physical differences that groups and cultures consider socially significant," and *ethnicity* refers to "shared cultural characteristics such as language, ancestry, practices, and beliefs." Because some categories are defined as racial (e.g., Black) while others are defined as ethnic (e.g., Hispanic), we use the term *race and ethnicity* to describe the collective set of categories.	APA (undated)
Black, non-Hispanic	A Black or African American person is "[a] person having origins in any of the Black racial groups of Africa." For our quantitative analyses, we use this term to refer to those who are categorized as African American or Black and not categorized as Hispanic. We often shorten the term to *Black* in our writing.	U.S. Census Bureau (2021b)
Hispanic [or Latino]	A person with Hispanic ethnicity is "a person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin regardless of race." For our quantitative analyses, we use this term to refer to those who are categorized as having Hispanic ethnicity, regardless of their racial categorization.	U.S. Census Bureau (2021a)

[2] The U.S. Census Bureau abides by guidance on categories of race and ethnicity from the U.S. Office of Management and Budget (1997).

[3] We also searched the American Sociological Association and American Anthropological Association websites to identify types of guidance similar to that provided by the APA. However, we were unable to find any comparable guidance from these organizations.

Table 1.2—Continued

Term	Description	Source(s)
Asian American and Pacific Islander, non-Hispanic	A person of Asian descent is "[a] person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent including, for example, Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, the Philippine Islands, Thailand, and Vietnam." A person who is Pacific Islander is "[a] person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands." Although the Census Bureau does not combine Asian and Pacific Islander categories, Army personnel data combine the two. For our quantitative analyses, we use this term to refer to those who are categorized as Asian American and Pacific Islander and not categorized as Hispanic. We often shorten the term to *Asian American and Pacific Islander (AAPI)* in our writing.	U.S. Census Bureau (2021b)
American Indian or Alaska Native, non-Hispanic	An American Indian or Alaska Native is "[a] person having origins in any of the original peoples of North and South America (including Central America) and who maintains tribal affiliation or community attachment." For our quantitative analyses, we use this term to refer to those who are categorized as American Indian or Alaska Native and not categorized as Hispanic. We often shorten the term to *Native American* in our writing.	U.S. Census Bureau (2021b)
White, non-Hispanic	A White person is "[a] person having origins in any of the original peoples of Europe, the Middle East, or North Africa." For our quantitative analyses, we use this category to refer to those who are categorized as White and not categorized as Hispanic. We usually shorten the term to *White* in our writing.	U.S. Census Bureau (2021b)
Minority or minority group	A minority group is "a population subgroup with ethnic, racial, social, religious, or other characteristics different from those of the majority of the population." APA recommends using a modifier, such as *racial-ethnic*, before *minority* or *minority group*. Except for direct quotes of other sources, we use *racial-ethnic minority* or *racial-ethnic minority group* when referring to members from racial-ethnic groups that do not include the White, non-Hispanic group.	APA (undated)

Limitations

Although we used both quantitative and qualitative methods to bolster our findings and recommended courses of action, our methods were not without limitations. To begin, many of our quantitative analyses are descriptive, although we include many observable factors (e.g., career field) that might explain racial-ethnic group differences in outcomes, as informed by prior research. Our analysis of local-labor-market conditions was constrained by available data and assumptions about which local area (e.g., near a soldier's installation) to target in our analyses. As a result, the local labor market analysis might provide a conservative estimate of the size of the effects of local-labor-market conditions on racial-ethnic group differences in retention.

The scope of our qualitative analyses was somewhat limited. Despite the best efforts of our sponsor's office, we were not able to interview the number and range of Army unit leaders that we had originally hoped. We originally planned to interview between 40 and 60 participants, but delays in access to leaders from FORSCOM units required our sponsor's office to identify alternative points of contact. As a result, our interview sample did not include as many combat arms leaders as planned or as many individuals. Although our sample can somewhat limit the generalizability of our interview findings across Army units, our interviews did reveal that many participants had previous assignments across a variety of Army units, including those predominated by combat arms personnel (e.g., military intelligence officer in an infantry battalion).

Finally, we acknowledge that our findings identify potential reasons for racial-ethnic group differences in career outcomes, including retention. That is, our analyses do not offer causal evidence. Furthermore, we do not provide a comprehensive set of potential reasons because of data limitations. Nonetheless, the variety of

methods and data sources employed does lend confidence that we were able to identify relevant factors and issues for the Army to address.

Structure of This Report

The remainder of this report is organized in eight chapters:

- Chapter 2 provides descriptive comparisons of junior Army cohorts and the U.S. population and changes in the composition of each over time.
- Chapter 3 focuses on quantitative findings for enlisted personnel outcomes.
- Chapter 4 focuses on qualitative findings related to (mostly) enlisted personnel outcomes that might affect retention, such as early promotions, suspension of favorable personnel actions (flags), and reductions in grade.
- Chapter 5 provides quantitative findings for commissioned officers.
- Chapter 6 provides qualitative findings on officer promotion decisions.
- Chapter 7 presents our analyses of the extent to which labor-market conditions can explain some of the racial-ethnic differences we observed for both enlisted and commissioned officer populations.
- Chapter 8 presents qualitative findings about factors associated with enlisted and commissioned officer retention, including how those factors might relate to race and ethnicity.
- Chapter 9 summarizes key findings and conclusions and describes courses of action for the Army to consider.

We also include several appendixes:

- Appendix A provides details on the quantitative methods used in Chapters 3, 5, and 7.
- Appendix B includes the participant consent form and interview protocols for qualitative findings presented in Chapters 4, 6, and 8.
- Appendix C provides the method and code book used for coding interview content.
- Appendix D presents full results for models presented in Chapter 3 and the enlisted model results from Chapter 7.
- Appendix E provides the full results for the models presented in Chapter 5 and the officer model results from Chapter 7.

CHAPTER 2

Racial-Ethnic Composition of Junior Cohorts

With very limited lateral entry into the Army, the racial-ethnic composition of junior cohorts sets the stage for what the Army can ultimately retain. However, it is worth noting at the outset that it is *not* an explicit goal of the Army to recruit entry cohorts that exactly match the racial-ethnic composition of the U.S. population. As we noted in Chapter 1, while the Army recruits from a diverse population, its focus is on equality of *opportunity*. In the All-Volunteer Force, the racial-ethnic composition of junior cohorts reflects the interaction of three factors: the racial-ethnic composition of the U.S. population, the extent to which individuals are interested in Army service, and the extent to which the Army is interested in the individuals interested in Army service.

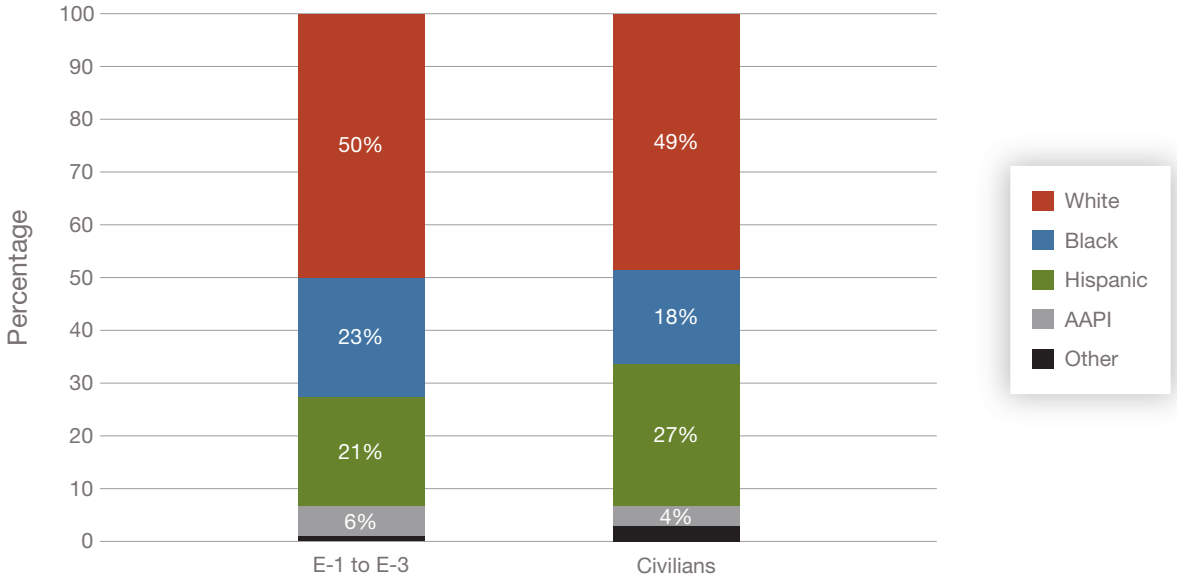
With respect to the second factor, the Army does not control individual preferences for service, although it can influence them through marketing or increasing recruitment from areas that have relatively little knowledge of what Army service would be like (e.g., Miles, 2019; Philipps, 2019). There is no guarantee, however, that the composition of the cohort interested in Army service matches the racial-ethnic composition of the population. For the third factor, the Army has established enlistment standards for several individual characteristics and has waiver authorities to allow individuals to enlist despite failing to meet some of these standards (Army Regulation [AR] 15-6, 2016; Asch et al., 2021). If some racial-ethnic groups are more likely to fail to meet enlistment standards and if the Army's use of waivers does not offset these differentials, the racial-ethnic composition of junior cohorts will differ from that of the U.S. population.

With these caveats in mind, this chapter provides descriptive comparisons of junior cohorts and the U.S. population and the changes in their composition over time. We present separate analyses for enlisted personnel and for commissioned officers because the Army recruits from different populations for each group. In general, we found that comparable U.S. civilian populations have become more racially and ethnically diverse since FY 2005, as have the Army's junior enlisted personnel and commissioned officers.

Enlisted Personnel

Figure 2.1 displays the racial-ethnic composition of junior enlisted personnel in FY 2020 and associates it with a comparable civilian population. The data for junior enlisted personnel are a tabulation of individuals in the E-1 to E-3 paygrades in the September 2020 extract of TAPDB. For civilians, we used U.S. Census Bureau estimates of the population 18 to 24 years of age whose highest educational attainment is high-school

FIGURE 2.1
Racial-Ethnic Composition of Junior Enlisted Personnel and a Comparable Civilian Population, FY 2020



SOURCE: Authors' tabulation of the September 2020 TAPDB and U.S. Census Bureau (2020).
NOTE: *Civilians* are individuals 18 to 24 years of age whose highest educational attainment is high-school graduate. The percentages within each bar do not add up to 100. We did not include percentages for the Other racial-ethnic category because they are small and would be difficult to see in the figure.

graduate.[1] To facilitate these comparisons, we combined some racial-ethnic categories to create the "Other" category.[2]

As Figure 2.1 shows, the two distributions have similar percentages of White individuals: 50 percent of the junior enlisted personnel and 49 percent of civilians. However, the composition of the racial-ethnic minority population differs between the two groups. Black soldiers are the second-largest group (23 percent), followed by Hispanic soldiers (21 percent). In contrast, the civilian population has a higher percentage of Hispanic (27 percent) than Black (18 percent) individuals.

Figure 2.2 reproduces the data from Figure 2.1 on the right-hand side but adds in data for FY 2005 as a comparison.[3] There are several things to note from these data. First, a comparison of the second and fourth columns shows that the U.S. population has become more diverse. In FY 2005, Whites made up 60 percent of the population, but that had shrunk to 49 percent by FY 2020. There were small increases in the share

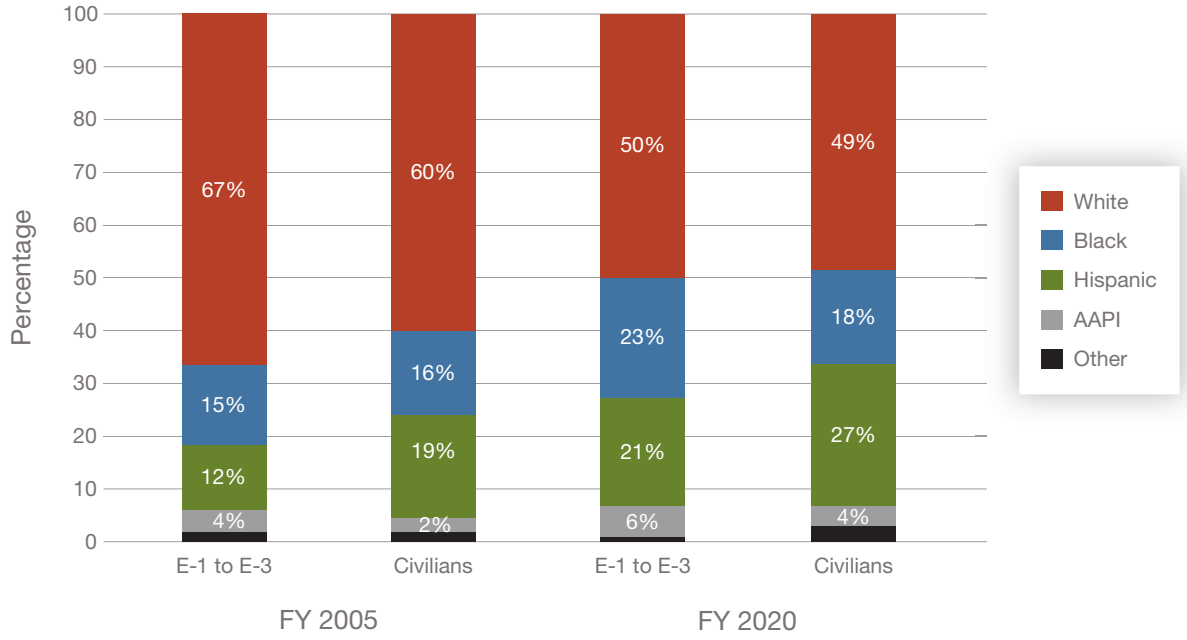
[1] The estimates are from U.S. Census Bureau (2020), Table 1, "Educational Attainment of the Population 18 Years and Over, by Age, Sex, Race, and Hispanic Origin: 2020." The choices of age category and educational attainment were driven by the categories available in the Current Population Survey data and the demographics of enlisted soldiers in the TAPDB data. While there are older accessions and those with more education than just a high-school degree, the vast majority of our sample was age 24 or below at the time of their enlistment contract, and 90 percent of our sample had a high school education (with 2 percent with some college education and 5 percent with a bachelor's degree). See Asch et al. (2021), Table B.2.

[2] The racial-ethnic categories are mutually exclusive and are those listed in U.S. Census Bureau (2020). In the TAPDB data, we combined "American Indian or Alaskan Native" with "Unknown/Other" to create the "Other" category.

[3] The civilian data are from U.S. Census Bureau (2005), Table 1, "Educational Attainment of the Population 15 Years and Over, by Age, Sex, Race, and Hispanic Origin: 2005." The choice of FY 2005 is mostly arbitrary and is intended to be illustrative. We wanted to focus on data after September 11, 2001, and analyzed data from FY 2005, FY 2010, FY 2015, and FY 2020. Comparing the first and last data points provides the broadest prospective on how the U.S. population and the Army have changed.

FIGURE 2.2

Racial-Ethnic Composition of Junior Enlisted Personnel and a Comparable Civilian Population, FY 2005 and FY 2020



SOURCE: Authors' tabulation of the September 2005 TAPDB and U.S. Census Bureau (2005); authors' tabulation of the September 2020 TAPDB and U.S. Census Bureau (2020).

NOTE: *Civilians* are individuals 18 to 24 years of age whose highest educational attainment is high-school graduate. The percentages within each bar do not add up to 100. We did not include percentages for the Other racial-ethnic category because they are small and would be difficult to see in the figure.

of the population that is Black (16 percent to 18 percent) and that is AAPI (2 percent to 4 percent); most of the growth came in the share of the population that is Hispanic, from 19 percent to 27 percent of this U.S. population.

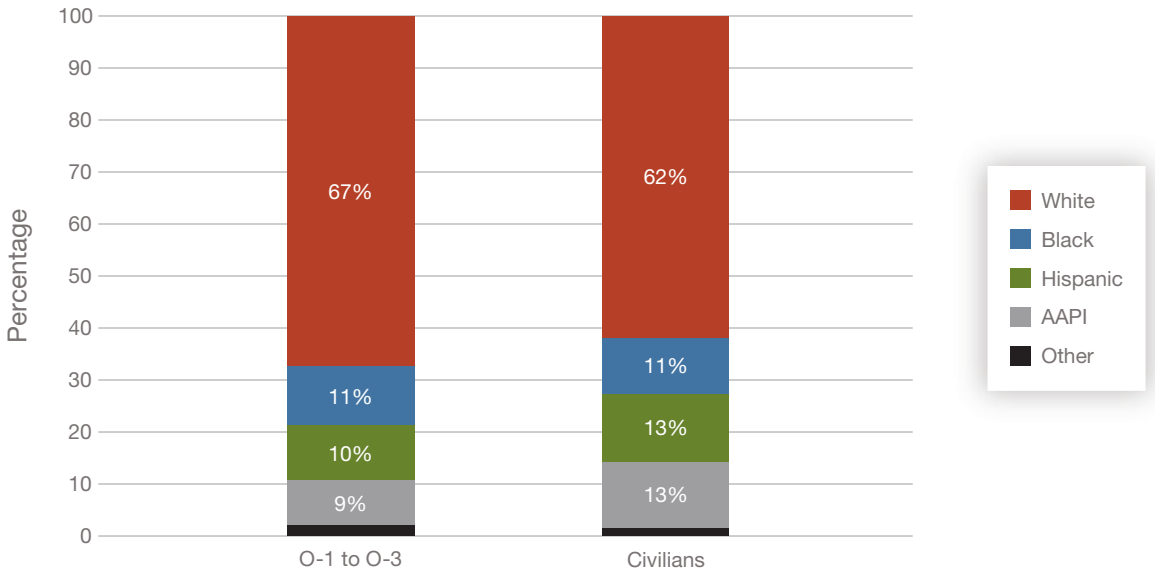
Second, a comparison of the first and third columns shows that junior enlisted personnel have *also* become more diverse. The share of the junior enlisted population that is White declined from 67 percent to 50 percent, and there were notable increases in the share of the population that is Black (15 percent to 23 percent) and that is Hispanic (12 percent to 21 percent).

Third, a comparison of all the columns shows that the Army has almost eliminated what was once a shortfall in racial-ethnic minority representation in its junior enlisted ranks. In FY 2005, the share of the junior enlisted population that was White was 7 percentage points larger than that of the comparable civilian population; by FY 2020, that difference had declined to 1 percentage point. It is the increase in the share that is Black that is responsible for much of this progress. While the share of the junior enlisted population that is Black (15 percent) was slightly less than that of the comparable civilian population in FY 2005 (16 percent), it grew by 8 percentage points by FY 2020; in contrast, the share of the civilian population that is Black grew by only 2 percentage points.

Commissioned Officers

Figure 2.3 shows the racial-ethnic composition of junior officers in FY 2020 and that of a comparable civilian population. The data sources are the same as for the enlisted personnel analyses; the differences are in the composition of the populations. Junior officers are a tabulation of individuals in the O-1 and O-2 paygrades;

FIGURE 2.3
Racial-Ethnic Composition of Junior Commissioned Officers and a Comparable Civilian Population, FY 2020



SOURCE: Authors' tabulation of the September 2020 TAPDB and U.S. Census Bureau (2020).
NOTE: *Civilians* are individuals 18 to 29 years of age whose highest educational attainment is at least a bachelor's degree. The percentages within each bar do not add up to 100. We did not include percentages for the Other racial-ethnic category because they are small and would be difficult to see in the figure.

for civilians, we used estimates of the population 18 to 29 years of age whose highest educational attainment is at least a bachelor's degree.[4]

As Figure 2.3 shows, racial-ethnic minority representation among junior officers (100 – 67 = 33 percent are non-White) is lower than in the comparable civilian population (100 – 62 = 38 percent are non-White). This is because the percentages of Hispanic (10 percent compared with 13 percent) and AAPI (9 percent compared with 13 percent) officers are lower than in the civilian population.

Figure 2.4 reproduces the data from Figure 2.3 on the right-hand side but adds in data for FY 2005 as a comparison. Similar to what we saw in Figure 2.2, a comparison of the second and fourth columns shows that the U.S. population with at least a bachelor's degree has also become more diverse. In FY 2005, Whites made up 73 percent of the population; by FY 2020, the figure had declined to 62 percent. There were small increases in the shares of the population that are Black (8 percent to 11 percent) and AAPI (10 percent to 13 percent); about one-half of the growth came in the share of the population that is Hispanic, from 7 percent to 13 percent of this U.S. population.

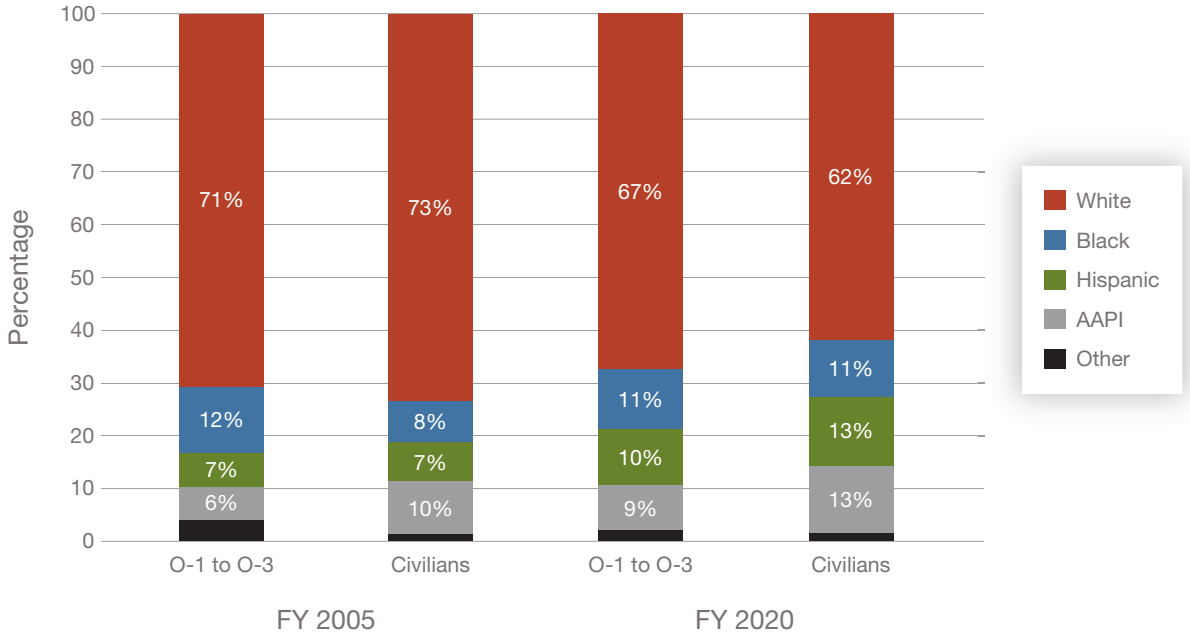
A comparison of the first and third columns of Figure 2.4 shows that junior officers have become slightly more diverse. The share of the junior officer population that is White declined from 71 percent to 67 percent, with modest increases in the shares of the population that are Hispanic (7 percent to 10 percent) and AAPI (6 percent to 9 percent).

Comparing all the columns shows that the Army's junior officer ranks have not matched the civilian population's pace of greater racial-ethnic diversity. In fact, while the junior officer population had slightly higher racial-ethnic representation than the civilian population in FY 2005 (29 percent versus 27 percent), the civil-

[4] As with the enlisted personnel analyses, our choices of age categories and educational attainment were driven by the categories available in the Current Population Survey data and what we know about the composition of Army officer cohorts.

FIGURE 2.4

Racial-Ethnic Composition of Junior Commissioned Officers and a Comparable Civilian Population, FY 2005 and FY 2020



SOURCE: Authors' tabulation of the September 2005 TAPDB and U.S. Census Bureau (2005); authors' tabulation of the September 2020 TAPDB and U.S. Census Bureau (2020).

NOTE: *Civilians* are individuals 18 to 29 years of age whose highest educational attainment is at least a bachelor's degree. The percentages within each bar do not add up to 100. We did not include percentages for the Other racial-ethnic category because they are small and would be difficult to see in the figure.

ian population had higher racial-ethnic representation in FY 2020 (38 percent versus 33 percent). This can be attributed to growth in the share of the officer population that is Hispanic (7 percent to 10 percent) that lags the growth in the civilian population (7 percent to 13 percent) and a small decline in the share of the officer population that is Black (12 percent to 11 percent) compared to the growth in the civilian population (8 percent to 11 percent).

Summary

In its *Diversity, Equity, and Inclusion Annex*, the Army notes that its officers are less diverse than its enlisted corps (Wardynski, 2020, p. 1). A comparison of the data in Figure 2.1 and Figure 2.3 shows this to be true for the junior cohorts. However, the segment of the U.S. population that successfully completes bachelor's degree programs has a very different racial-ethnic composition than those with only a high-school diploma. Since racial-ethnic minorities, in general, are less likely to obtain college degrees,[5] it should not be surprising that racial-ethnic minority representation within the Army's junior officer cohorts is also lower.

The data in Figure 2.2 and Figure 2.4 show both civilian populations becoming more racially and ethnically diverse over time. As these populations have become more diverse, so too have the Army's junior

[5] Among U.S. adults ages 25 and older in 2021, the percentage of non-Hispanic Whites with at least a bachelor's degree was about 42 percent, compared to 28 percent for Blacks and 21 percent for Hispanics. Only Asians (at 61 percent) had higher college degree attainment than Whites (U.S. Census Bureau, 2022).

enlisted personnel and commissioned officers. The changes have been more dramatic within the junior enlisted ranks; the Army has nearly closed a historical gap in racial-ethnic minority representation.

At the beginning of this chapter, we identified reasons that one should not necessarily expect the Army's junior cohorts to precisely reflect the racial-ethnic composition of the U.S. population. Nevertheless, the data presented in this chapter show that, at least with respect to race and ethnicity, the Army has succeeded at recruiting from the diverse population it has set out to pursue (Grinston, McConville, and McCarthy, 2019, pp. 5–6). As a result, the Army has given itself the *opportunity* to develop a diverse group of leaders as these cohorts progress along their career paths.

CHAPTER 3

Quantitative Analyses of Enlisted Career Outcomes

In this chapter, we describe the results of our analyses of enlisted personnel data concerning first-term reenlistment, long-term retention, and other related outcomes. Consistent with the earlier literature (e.g., Lim et al., 2021), we analyzed enlisted personnel retention as a series of sequential decision points:

- whether a soldier who attrits before the end of their initial service obligation did so for failure-to-adapt reasons
- whether a soldier remains in the enlisted ranks for the duration of their initial service obligation[1]
- whether a soldier remains past the completion of their initial service obligation
- whether a soldier remains past 10 years of service (YOS)
- whether a soldier remains past 15 YOS
- whether a soldier remains past 20 YOS.[2]

We analyzed each decision point conditional on its predecessors; for example, we only analyzed whether a soldier remained in the Army past 15 YOS for the soldiers who remain in the Army for at least 10 years. Aside from an analysis of early promotion and reduction in grade from E-5, which are part of our performance analysis, we did not consider enlisted promotion rates.[3]

We also explored the extent to which performance and misconduct outcomes differ by race and ethnicity because these could be potential mediators of racial-ethnic differences in retention. The performance and misconduct outcomes we examined are eligibility to reenlist or extend, early promotion, reduction in grade, and suspension of favorable personnel actions. Each of these outcomes were chosen because of empirical evidence in the literature of their association with first-term retention. These outcomes are not measured at the time of accession but are observed during a soldier's initial service obligation.

[1] For simplicity, in this chapter, when we discuss whether a soldier "remains," we are focused on whether they remain in the enlisted ranks. Some enlisted personnel become commissioned officers or warrant officers, but they represent "losses" to the enlisted ranks.

[2] We do not focus on decision points after 20 YOS because, until recently, this was the point at which soldiers were vested in military retirement. The blended retirement system went into effect on January 1, 2018, so most of the retention decisions on which our analysis focused were made prior to the inception of the system. See Asch, Mattock, and Hosek (2017), Table 2.1, for a comparison of the legacy and blended retirement systems.

[3] Because our project focused on retention, our enlisted analyses examined retention and reenlistment outcomes directly and include other outcomes, such as early promotion to E-5, that prior research suggest could affect racial-ethnic group differences in enlisted retention and reenlistment. We take a different analytic approach for officers (Chapter 5) by examining officer promotion and retention jointly because prior research (e.g., Asch, Miller, and Malchiodi, 2012) shows that officer promotions have important implications for the retention of racial-ethnic minority officers in higher grades.

Data Sources and Estimation Approach

To construct our analytic file, we used quarterly TAPDB data on all enlisted personnel from October 2001 through July 2021, the most recent data available at the time we began our analyses, merged to RA Analyst data from the time of accession.[4] This gave us several observations for each soldier, one for each quarter they remained in the Regular Army as an enlisted soldier. Using these longitudinal data, we created each of the outcome variables listed at the beginning of this chapter.

We produced two estimates of each predicted outcome by race and ethnicity: *actual* outcomes, which are statistically identical to the average outcome by race and ethnicity, and *adjusted* outcomes, which control for soldiers' demographic and career characteristics using a linear regression model.[5] After estimating the retention models, we simulated how the racial-ethnic composition of a hypothetical accession cohort would change over the course of the entire career by multiplying together the actual and adjusted probabilities of each retention outcome. Further details on the approach are available in Appendix A.

In the following sections, we discuss the actual and adjusted retention rates by race and ethnicity. Full regression results for each outcome, including the estimated associations with all independent variables, are shown in Appendix D.

First-Term Attrition and Reenlistment

Most of the literature that analyzes enlisted retention focuses on first-term attrition (i.e., whether an individual leaves service before completing their initial service obligation) and/or the decision about whether to stay in service once that obligation is complete. This is likely because junior personnel, who are typically still serving their first term, make up a substantial portion of the Army: In September 2020, 25 percent of the Army enlisted force fell into paygrades E-1 to E-3, and an additional 29 percent were in paygrade E-4.[6] Earlier work often focused on the association between retention and pay and/or benefits (e.g., Hansen and Wenger, 2005; Warner, 1995; and Asch, Hosek, and Warner, 2007, provide reviews), while more recent work has looked at other factors, such as leadership, cultural fit, climate, the integration of noncitizen service members, enlistment waivers, and job characteristics (see, e.g., McIntosh et al., 2011; Wenger et al., 2018; Desrosiers et al., 2020; Marrone, 2020; Asch et al., 2021; Marrone et al., 2021; Lim et al., 2021).

The first outcome on which we focus is **first-term attrition**; we follow the literature and examine a subset of these separations, **failure-to-adapt attrition**. These are "separations that could be classified as occurring because the soldier struggled to adapt to the Army system" (Wenger et al., 2018, p. 13);[7] approximately 25 percent of soldiers in our data separate for one of these reasons.[8]

---

[4] TAPDB data provide information on soldiers' demographic characteristics (e.g., gender, race and ethnicity, age) and on characteristics associated with their military service (e.g., military occupational specialty [MOS], paygrade, retention). RA Analyst data provide information on characteristics from when the soldier was going through the recruiting process and at the time of accession, including accession date and initial MOS.

[5] Soldier characteristics in the adjusted model are measured at the time of the previous decision point, e.g., when we analyze whether a soldier remains in the Army past 15 YOS, we measure each characteristic at 10 YOS.

[6] Authors' tabulation of the September 2020 TAPDB.

[7] We used the same Separation Program Designator codes as Wenger et al. (2018) to identify failure-to-adapt attrition. These codes include such codes as weight control failure, desertion, and misconduct.

[8] All estimates in this section are using accessions from FY 2002 through FY 2015. Later cohorts typically had not completed their first term by the time of writing. Nine percent of soldiers separate for other reasons prior to completing their initial service obligation. These are typically transitions to the warrant or commissioned officer ranks or to reserve status or because

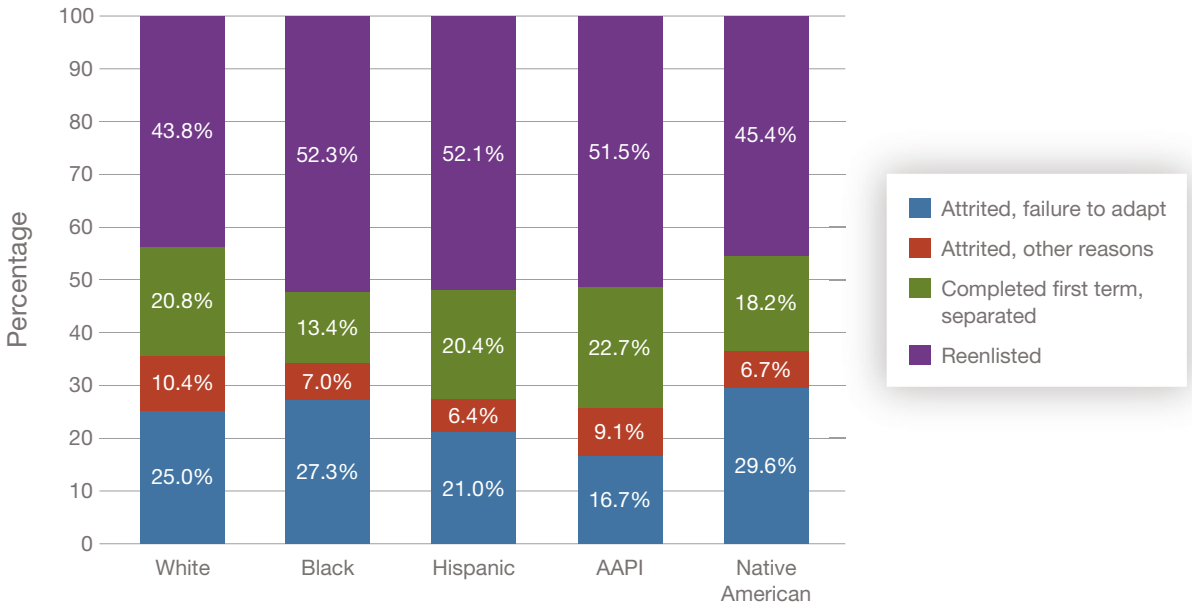
Soldiers who complete their initial service obligation either separate from the Army or, for those who are eligible to do so, choose to stay. For simplicity, we refer to the latter category as **first-term reenlistments**, whether soldiers are formally reenlisting or extending their existing contracts. Of those who complete their initial service obligation, approximately 32 percent of soldiers in our data leave the Army, while 68 percent reenlist.

Figure 3.1 provides a breakdown, for each racial-ethnic group, of the percentage of soldiers who attrited for failure-to-adapt reasons, attrited for other reasons, completed their first term and then separated, and reenlisted after their first term. We discuss each decision point in more detail in the following sections.

Failure-to-Adapt Attrition

Table 3.1 presents our estimates of failure-to-adapt attrition, calculated separately for racial-ethnic groups. The second column lists the actual attrition rates we observed in the data, while the third column presents estimates after controlling for other observed factors. As the second column shows, failure-to-adapt attrition is higher for Native American (29.6 percent) and Black (27.3 percent) soldiers than for White soldiers (25.0 percent). In contrast, failure-to-adapt attrition is lower for Hispanic (21.0 percent) and AAPI (16.7 percent) soldiers.[9] However, when we control for other observed factors, we predict that Black soldiers have slightly *lower* failure-to-adapt attrition than White soldiers. This implies that Black soldiers are more likely than White soldiers to have other observed characteristics that are associated with failure-to-adapt attrition.

FIGURE 3.1
First-Term Retention Outcomes, by Race and Ethnicity



SOURCE: Authors' tabulations of TAPDB/RA Analyst linked data.
NOTE: Individuals of other or undetermined race and ethnicity are excluded from this figure.

the soldier is killed or missing in action or becomes disabled. Asch et al. (2021) finds some statistically significant differences by race and ethnicity in transitions to the warrant or commissioned officer ranks (see Appendix D in this report). However, given the disparate nature of these other reasons for attrition, we do not directly examine this category further.

[9] Figure D.1 shows failure-to-adapt attrition rates by accession cohort.

TABLE 3.1
Predicted Failure-to-Adapt Attrition Rates, by Race and Ethnicity

	Actual (%)	Adjusted (%)
White	25.0	25.6
Black	27.3***	25.3***
Hispanic	21.0***	20.2***
AAPI	16.7***	18.5***
Native American	29.6***	27.3***

SOURCE: Predicted probabilities from linear probability models (see Appendix D for full results).

NOTE: Asterisks indicate that a predicted probability is statistically different from White at the 1 percent (***), 5-percent (**), and 10-percent (*) levels. Adjusted regression includes additional controls for education, gender, marital status, age, Armed Forces Qualification Test (AFQT) score, enlistment bonus, length of initial service obligation, paygrade, MOS, and accession year. Other and unknown race are excluded from the table.

Completion of Initial Service Obligation

We next examined the probability that a soldier completes their initial service obligation. Table 3.2 presents these results. White and Native American soldiers have the lowest completion rate, while AAPI and Hispanic soldiers have the highest rates. Black soldiers are 1.1 percentage points more likely to complete their first term than White soldiers; however, after adjusting for other observed characteristics, that gap increases to 2.4 percentage points. Completion rates are even higher for Hispanic and AAPI soldiers.[10]

First-Term Reenlistment

We next examined the probability that a soldier reenlists, conditional on completing their initial service obligation.[11] Figure 3.2 presents this outcome by accession cohort and race and ethnicity. Notably, there has been a decrease in the conditional reenlistment rate over time, with a rate around 80 percent for 2002–2005 accession cohorts, after which it decreased to less than 70 percent. All racial-ethnic groups follow a similar trend, although the levels differ.

Table 3.3 presents actual and adjusted first-term reenlistments by race and ethnicity. Black soldiers have substantially higher reenlistment rates (79.6 percent) compared to all other racial-ethnic groups. Meanwhile, White soldiers have the lowest rate, at 67.8 percent. Controlling for additional characteristics narrows, but does not eliminate, the gaps between White and other racial-ethnic groups.

[10] Appendix A presents first-term completion rates by accession cohort.

[11] Recall that our definition of *reenlistment* includes both soldiers who formally reenlist and those who extend their existing contract. A soldier is coded as reenlisting if the date of the end of their service obligation moves later than the date of the end of their initial service obligation. Finally, note that these estimated rates include soldiers who were not eligible to reenlist.

TABLE 3.2

Predicted First-Term Completion Rates, by Race and Ethnicity

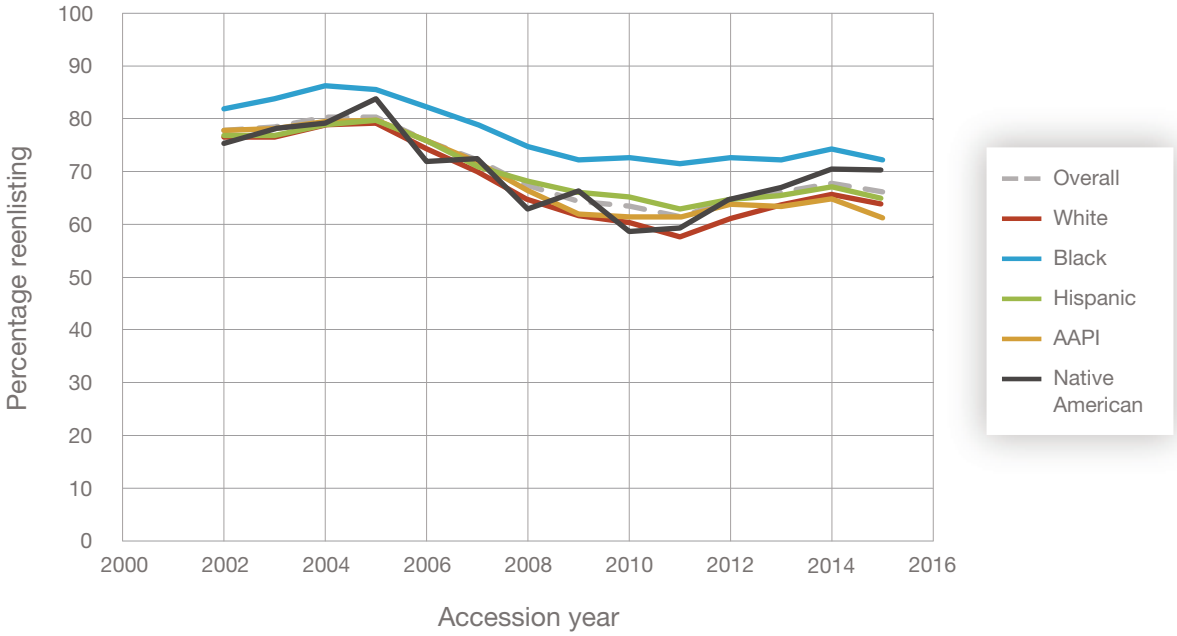
	Actual (%)	Adjusted (%)
White	64.6	64.3
Black	65.7***	66.7***
Hispanic	72.5***	72.7***
AAPI	74.2***	73.9***
Native American	63.7*	64.9

SOURCE: Predicted probabilities from linear probability models (see Appendix D for full results).

NOTE: Adjusted regression includes additional controls for education, gender, marital status, age, AFQT score, enlistment bonus, length of initial service obligation, paygrade, MOS, and accession year. Asterisks indicate that a predicted probability is statistically different from White at the 1-percent (***), 5-percent (**), and 10-percent (*) levels. Other and unknown race are excluded from the table.

FIGURE 3.2

First-Term Reenlistment, by Accession Cohort



SOURCE: Authors' tabulations of TAPDB/RA Analyst linked data.

NOTE: Other and unknown race are excluded from the graph. Percentages are conditional on completion of first term.

Potential Mediators of First-Term Reenlistment

As we have demonstrated, there are racial-ethnic differences in the first-term failure-to-adapt attrition, as well as reenlistment and extension outcomes examined earlier. We explored several potential mediators of these differences related to performance and misconduct: suspension of favorable personnel action, early promotion to E-5, reduction in grade, and eligibility for reenlistment. These mediators were chosen because

TABLE 3.3
Predicted First-Term Reenlistment Rates, by Race and Ethnicity

	Actual (%)	Adjusted (%)
White	67.8	68.6
Black	79.6***	77.8***
Hispanic	71.9***	70.8***
AAPI	69.4***	69.2**
Native American	71.3***	70.1**

SOURCE: Predicted probabilities from linear probability models (see Appendix D for full results).

NOTE: Adjusted regression includes additional controls for education, gender; marital status, age, AFQT score, enlistment bonus, length of initial service obligation, paygrade, MOS, and accession year. Asterisks indicate that a predicted probability is statistically different from White at the 1-percent (***), 5-percent (**), and 10-percent (*) levels. Other and unknown race are excluded from the table.

they have consistently been shown to (1) differ by race and ethnicity and (2) be associated with retention. While we did not directly examine the link between these mediators and retention, the differences we found could shed light on potential reasons for racial-ethnic differences in first-term retention outcomes.

Suspension of Favorable Personnel Action

In general, previous analyses have found that racial-ethnic minorities, especially Black personnel, are more likely than White personnel to have some sort of disciplinary action in their record, such as involvement with the military justice system, suspension for misconduct, or leaving the service due to misconduct (U.S. Government Accountability Office, 2019; Asch et al., 2021; Lim et al., 2021). More specifically, Black, Hispanic, and other soldiers have been shown to be more likely than White soldiers to face suspension of favorable personnel action, while AAPI soldiers are less likely (Asch et al., 2021).

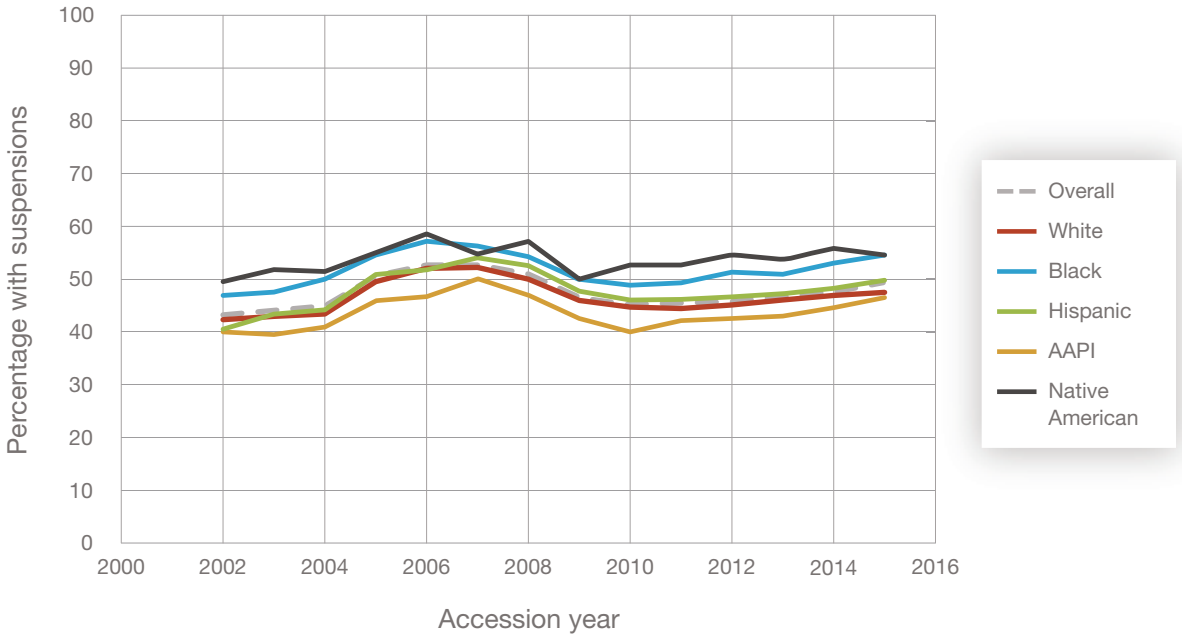
Suspension of favorable personnel action is a flag placed on a soldier's file to indicate that favorable personnel actions cannot take place during an investigation into an infraction that could result in disciplinary or administrative action.[12] Note that the suspension of favorable personnel action is not a final determination but an interim outcome that is in place during the investigation (AR 15-6, 2016). Figure 3.3 presents the rate of suspension of favorable personnel actions during the first term, by accession cohort. These rates were highest for the 2006 and 2007 accession cohorts and have generally ranged between 40 and 50 percent. Trends are similar by race and ethnicity, although levels differ.

Table 3.4 presents racial-ethnic differences in suspension of favorable personnel action rates during the first term of service. Black, Hispanic, and Native American soldiers are more likely to have favorable personnel action suspended at some point during their first terms than are White soldiers. Controlling for other observed characteristics narrows, but does not eliminate, the gaps for Black, Hispanic, and Native American soldiers relative to White soldiers.

[12] These actions can include reduction in grade, delay of promotion, involuntary separation from service, and involvement with the military or civilian justice systems.

FIGURE 3.3

Suspension of Favorable Personnel Action, by Accession Cohort



SOURCE: Authors' tabulations of TAPDB/RA Analyst linked data.
NOTE: Other and unknown race are excluded from the graph.

TABLE 3.4

Predicted Suspension of Favorable Personnel Action, by Race and Ethnicity

	Actual (%)	Adjusted (%)
White	46.0	46.7
Black	54.2***	51.7***
Hispanic	48.6***	47.8***
AAPI	40.9***	43.5***
Native American	55.2***	53.7***

SOURCE: Predicted probabilities from linear probability models (see Appendix D for full results).

NOTE: Adjusted regression includes additional controls for education, gender, marital status, age, AFQT score, enlistment bonus, length of initial service obligation, paygrade, MOS, and accession year. Asterisks indicate that a predicted probability is statistically different from White at the 1-percent (***), 5-percent (**), and 10-percent (*) levels. Other and unknown race are excluded from the table.

Early Promotion to E-5

Enlisted promotion and advancement differ by race and ethnicity across the services, and personnel who are not promoted are less likely to remain in service (e.g., Lim et al., 2021). However, according to Wenger et al. (2018), soldiers who are promoted to E-5 early tend to have lower retention, especially at the end of their first term. Previous analyses have also found that racial-ethnic minorities in the Army have a lower likelihood of

promotion to E-5 by the end of the first term, conditional on having completed a four-year term (Asch et al., 2021).

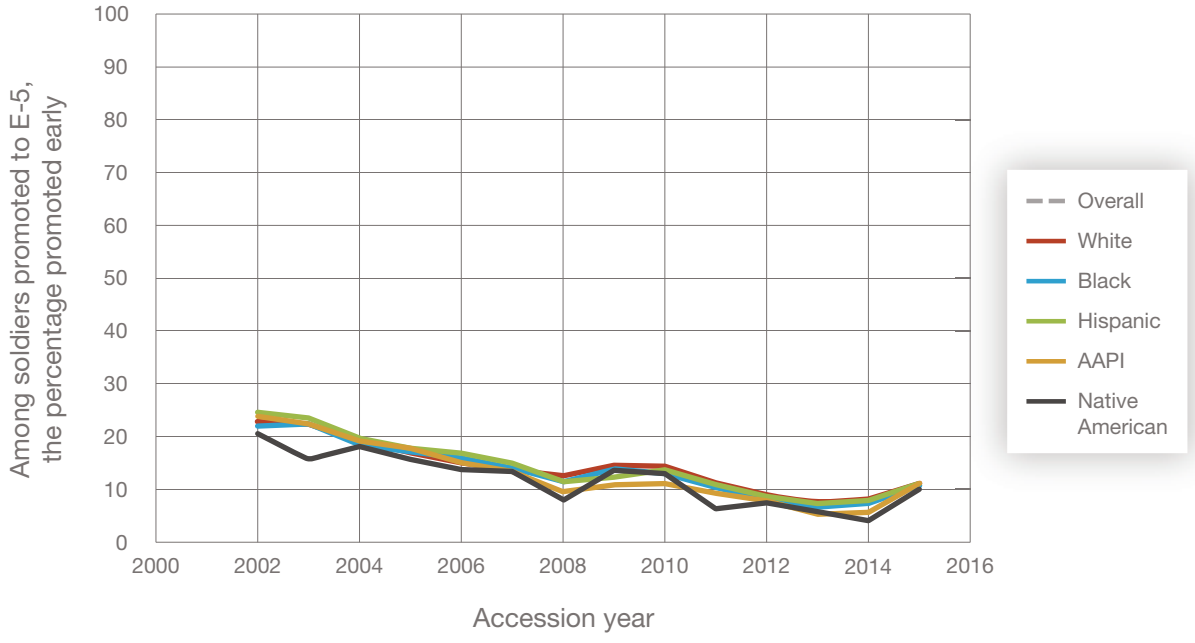
Early promotion is a relative concept, and different studies have defined it differently. For our analyses, we have defined it as being promoted to E-5 in three years or less, conditional on staying in the Army for at least four years. We also restricted our attention to soldiers who are eventually promoted to E-5. Figure 3.4 displays these rates by accession cohort. There has been a notable decline from over 30 percent for the FY 2002 accession cohort to only 10 percent for the FY 2013 cohort. There have been relatively modest increases for the last two accession cohorts on which we focus. Trends are similar for different race and ethnicity groups.

Differences by race and ethnicity are shown in Table 3.5. White soldiers are the most likely to be promoted relatively early to E-5, with 23.8 percent of those who stay at least four years being promoted within three years. Black and Native American soldiers have the lowest early promotion rates, at around 17 percent. After adjusting for additional observed characteristics, differences by race and ethnicity decline but remain statistically significant.

Reduction in Grade

Previous analyses have found differences in reduction in grade by race and ethnicity (Asch et al., 2021; Wenger et al., 2018). Wenger et al. (2018) noted that, for those who reach E-5, reductions in grade are rare in the Army, but, when they do occur, they most often occur within two years of promotion to E-5. We therefore focus on reduction in grade within two years of promotion to E-5.[13] Although reductions in grade can happen for a variety of reasons, they are often an indicator of poor performance. Figure 3.5 shows these rates by accession cohort. There has been a general decline over time, although, as the figure reinforces, these are relatively rare

FIGURE 3.4
Early Promotion to E-5, by Accession Cohort



SOURCE: Authors' tabulations of TAPDB/RA Analyst linked data.
NOTE: Other and unknown race are excluded from the graph.

[13] We focused on E-5 because it is the first NCO rank and first competitive promotion for enlisted personnel.

TABLE 3.5

Predicted Early Promotion to E-5, by Race and Ethnicity

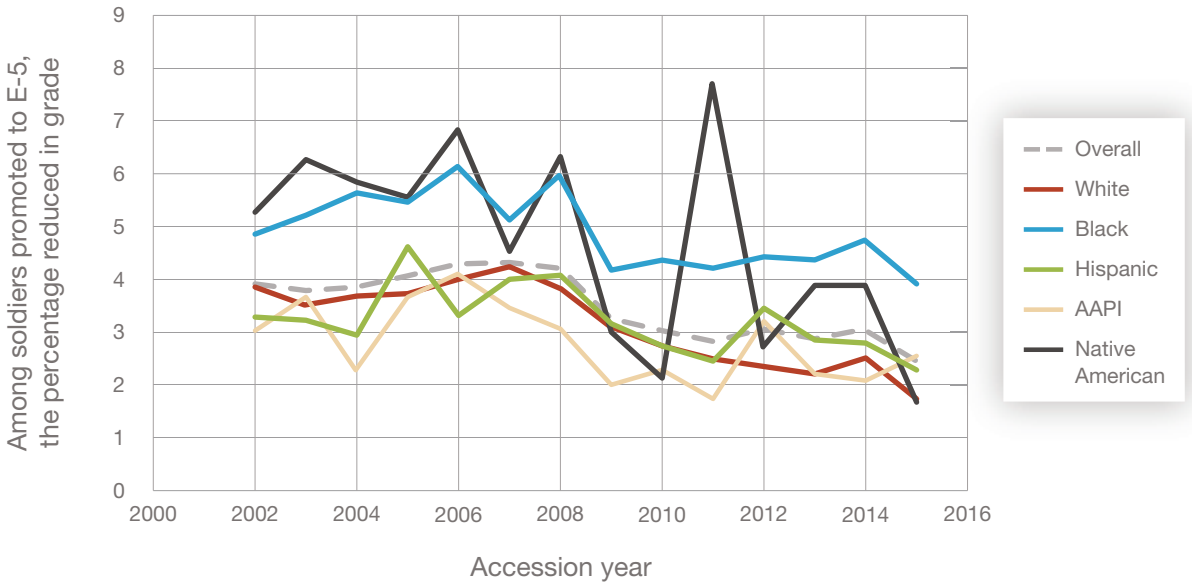
	Actual (%)	Adjusted (%)
White	23.8	22.1
Black	17.1***	20.6***
Hispanic	18.5***	21.4***
AAPI	19.6***	19.5***
Native American	17.3***	18.9***

SOURCE: Predicted probabilities from linear probability models (see Appendix D for full results).

NOTE: Adjusted regression includes additional controls for education, gender, marital status, age, AFQT score, enlistment bonus, length of initial service obligation, paygrade, MOS, and accession year. Asterisks indicate that a predicted probability is statistically different from White at the 1-percent (***), 5-percent (**), and 10-percent (*) levels. Other and unknown race are excluded from the table.

FIGURE 3.5

Reduction in Grade from E-5, by Accession Cohort



SOURCE: Authors' tabulations of TAPDB/RA Analyst linked data.
NOTE: Other and unknown race are excluded from the graph.

events for any accession cohort. Different race and ethnicity groups faced similar trends, although levels differed and there was substantial noise (especially for the Native American group).

Actual and adjusted rates by race and ethnicity are shown in Table 3.6. Black and Native American soldiers have the highest rate of reduction in grade, at about 5 percent. Hispanic soldiers have rates similar to those of White soldiers, at around 3 percent. Differences by race and ethnicity do not change substantially when we control for additional observable characteristics.

TABLE 3.6
Predicted Reduction in Grade from E-5, by Race and Ethnicity

	Actual (%)	Adjusted (%)
White	3.2	3.2
Black	4.9***	4.9***
Hispanic	3.4*	3.3
AAPI	2.5***	2.9**
Native American	5.0***	4.8***

SOURCE: Predicted probabilities from linear probability models (see Appendix D for full results).

NOTE: Adjusted regression includes additional controls for education, gender, marital status, age, AFQT score, enlistment bonus, length of initial service obligation, paygrade, MOS, and accession year. Asterisks indicate that a predicted probability is statistically different from White at the 1-percent (***), 5-percent (**), and 10-percent (*) levels. Other and unknown race are excluded from the table.

Reenlistment Eligibility

Not all soldiers who complete their initial service obligation are eligible to reenlist after the end of their first contract. We examined whether a soldier is eligible for reenlistment, conditional on having completed their initial service obligation. As Figure 3.6 shows, eligibility for reenlistment has been declining over time: It was just over 90 percent for the FY 2004 accession cohort but was about 75 percent for the FY 2015 cohort. Trends are similar across racial-ethnic groups, although levels differ.

Actual and adjusted rates by race and ethnicity are presented in Table 3.7. Once we controlled for other observable characteristics, most racial-ethnic groups have higher eligibility rates than White soldiers. The one exception is Native American soldiers, with the lowest eligibility rate of all groups.[14]

Long-Term Retention and Cumulative Differences by Race and Ethnicity

Thus far, we have focused on retention around the end of the first contract for enlisted soldiers. In this section, we take a longer view of the retention pathways, through 10 years, 15 years, and 20 years. We explore the results for each of these outcomes. Because these results are for smaller cohorts, here we aggregate the Native American and the Other or unknown racial-ethnic groups and label this group *Other*.

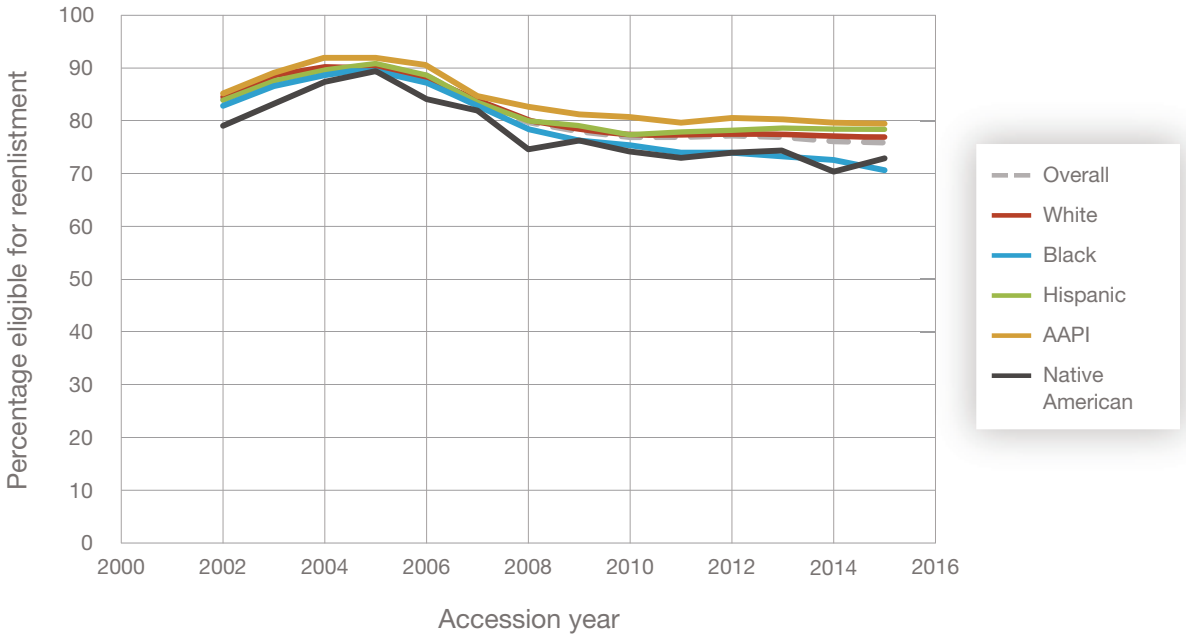
Retention Past Ten Years

Table 3.8 presents the probability of retention past 10 years, conditional on having reenlisted after completing the initial service obligation. White and Other soldiers have the lowest retention rates past 10 years at around 31 percent. Black, Hispanic, and AAPI soldiers have retention rates around 40 percent. Adjusting for control variables does not substantially change the differences between groups.

[14] These results are different from others in the literature. For example, Asch et al. (2021) found that Black and Hispanic soldiers were more likely to be barred from reenlistment (i.e., less likely to be eligible to reenlist) than White soldiers. The different results are likely due to the different cohorts used in the analyses; as Figure 3.6 shows, the eligibility rate varies considerably by cohort.

FIGURE 3.6

Reenlistment Eligibility, by Accession Cohort



SOURCE: Authors' tabulations of TAPDB/RA Analyst linked data.
NOTE: Other and unknown race are excluded from the graph.

TABLE 3.7

Predicted Eligibility for Reenlistment, by Race and Ethnicity

	Actual (%)	Adjusted (%)
White	85.3	85.2
Black	84.8***	85.4*
Hispanic	85.6*	85.9***
AAPI	88.3***	87.7***
Native American	81.5***	81.8***

SOURCE: Predicted probabilities from linear probability models (see Appendix D for full results).

NOTE: Adjusted regression includes additional controls for education, gender, marital status, age, AFQT score, enlistment bonus, length of initial service obligation, paygrade, MOS, and accession year. Asterisks indicate that a predicted probability is statistically different from White at the 1-percent (***), 5-percent (**), and 10-percent (*) levels. Other and unknown race are excluded from the table.

Retention Past 15 Years

Table 3.9 examines retention past 15 years, conditional on having served more than ten years. Adjusting for covariates makes a large difference here. Without adjustment, Black soldiers have a much higher rate of retention than do most other racial-ethnic groups, at 78.8 percent, while White soldiers have the lowest rate, at 71.1 percent. However, the adjusted rate for Black soldiers is estimated at 75.4 percent (if they had had the same observable characteristics at the start of 10 YOS as the average service personnel did at that time). Thus,

TABLE 3.8

Predicted Retention Past 10 Years Conditional on Retention Past First Term, by Race and Ethnicity

	Actual (%)	Adjusted (%)
White	31.1	31.0
Black	39.3***	40.0***
Hispanic	37.2***	36.7***
AAPI	40.7***	41.0***
Other	30.9	32.0

SOURCE: Predicted probabilities from linear probability models (see Appendix D for full results).

NOTE: Adjusted regression includes additional controls for education, gender, marital status, age, AFQT score, paygrade, MOS, and accession year. Asterisks indicate that a predicted probability is statistically different from White at the 1-percent (***), 5-percent (**), and 10-percent (*) levels.

TABLE 3.9

Predicted Retention Past 15 Years Conditional on Retention to Ten Years of Service, by Race and Ethnicity

	Actual (%)	Adjusted (%)
White	71.1	72.2
Black	78.8***	75.4***
Hispanic	71.6	76.1***
AAPI	73.9***	78.6***
Other	80.6***	73.4**

SOURCE: Predicted probabilities from linear probability models (see Appendix D for full results).

NOTE: Adjusted regression includes additional controls for education, gender, marital status, age, AFQT score, paygrade, MOS, and accession year. Asterisks indicate that a predicted probability is statistically different from White at the 1-percent (***), 5-percent (**), and 10-percent (*) levels.

controlling for observable characteristics substantially decreases that gap. Meanwhile, the Hispanic-White retention gap increases when controlling for observable characteristics, from 0.5 percentage point to 3.9 percentage points, and the AAPI-White gap increases from 2.8 percentage points to 6.4 percentage points.

Retention Past 20 Years

We next evaluated retention past 20 YOS,[15] conditional on having served past 15 years. This coincides with eligibility for retirement for many soldiers. Table 3.10 presents these results. The findings are somewhat simi-

[15] For technical reasons here, we use 20.1 YOS as the threshold for "retention past 20 years" instead of 20 years; because retirement eligibility occurs at 20 years, we see a substantial drop-off in retention in the first month of the 20th year of service. By extending to a threshold of 20.1 years, we are able to focus on retention beyond the retirement eligibility more concretely.

TABLE 3.10
Predicted Retention Past 20 Years Conditional on Retention to 15 Years of Service, by Race and Ethnicity

	Actual (%)	Adjusted (%)
White	72.9	72.6
Black	77.7***	76.8***
Hispanic	73.9**	77.9***
AAPI	73.6	77.7***
Other	78.1***	75.9***

SOURCE: Predicted probabilities from linear probability models (see Appendix D for full results).

NOTE: Adjusted regression includes additional controls for education, gender, marital status, age, AFQT score, paygrade, MOS, and accession year. Asterisks indicate that a predicted probability is statistically different from White at the 1-percent (***), 5-percent (**), and 10-percent (*) levels.

lar to those above looking at retention beyond 15 years. Black soldiers have the highest retention rate (except for the Other group). When we adjust for observed characteristics, the gap narrows for Black soldiers, but the gap widens for Hispanic and AAPI soldiers.

Cumulative Differences in Retention by Race and Ethnicity

We next took the 2020 racial composition of new entrants as enlisted personnel in the Army and simulated the changes in racial composition moving forward, assuming that the different probabilities of retention at each career milestone would be the same in the future as we estimated here from recent data. Figure 3.7 first presents the simulated distribution of race and ethnicity without adjusting for demographic or military characteristics. Almost one-half (49.9 percent) of initial accessions are White, but at each juncture, the White share decreases, ending with White soldiers accounting for 37.6 percent of their cohort past the 20-year point. Most of the lost share of White soldiers is made up from gains in the share of Black soldiers, growing from 22.7 percent of their cohort at accession to 31.5 percent by 20 YOS. The Hispanic share has the next largest growth over time, but the change was substantially smaller than for Black soldiers, increasing from 20.8 percent of their cohort at accession to 23.1 percent past 20 years.

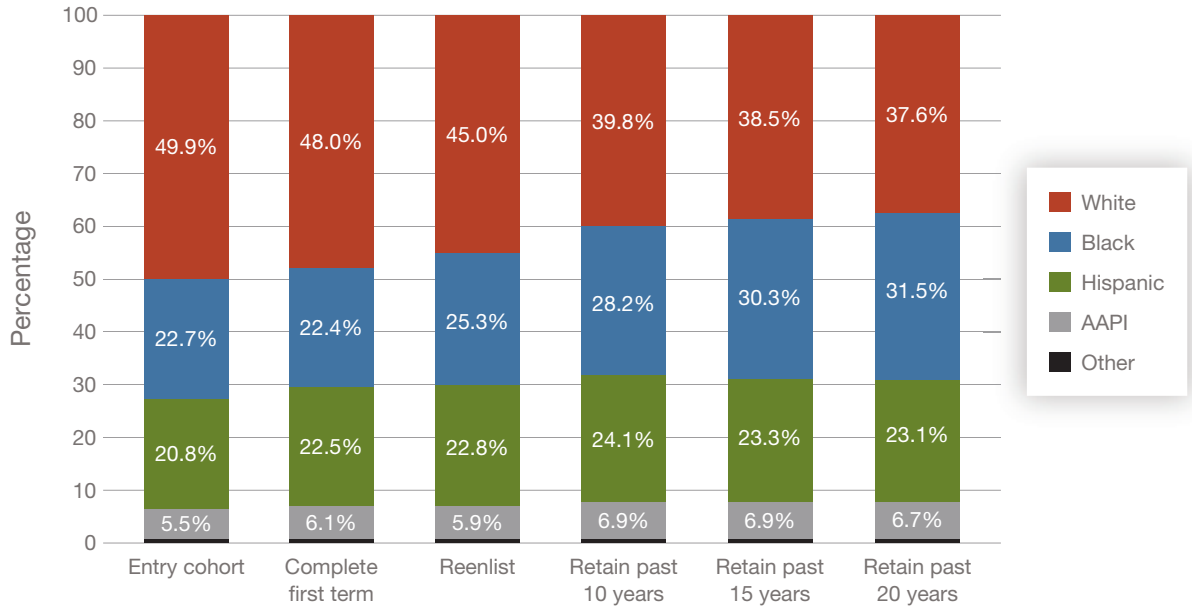
Figure 3.8 shows the same trends after adjustment for observed demographic and military characteristics, as explained at the start of the chapter. The trends are not dramatically different after these adjustments. The share of White soldiers at each career milestone is approximately the same between Figures 3.7 and 3.8. Black soldiers comprise a slightly smaller share reflecting a small reduction in the gap between Black and White soldiers at each point. Meanwhile, the share of Hispanic soldiers at later career milestones is slightly larger, as is the share that is AAPI.

Summary

The empirical findings in this chapter show that, when enlisted personnel make stay-or-leave decisions, White soldiers have lower retention and reenlistment rates than racial-ethnic minority soldiers, who are more likely than their White counterparts to remain in the Army. When we simulated career progression

FIGURE 3.7

Simulated Racial-Ethnic Distribution Using Actual Retention Rates, by Race and Ethnicity

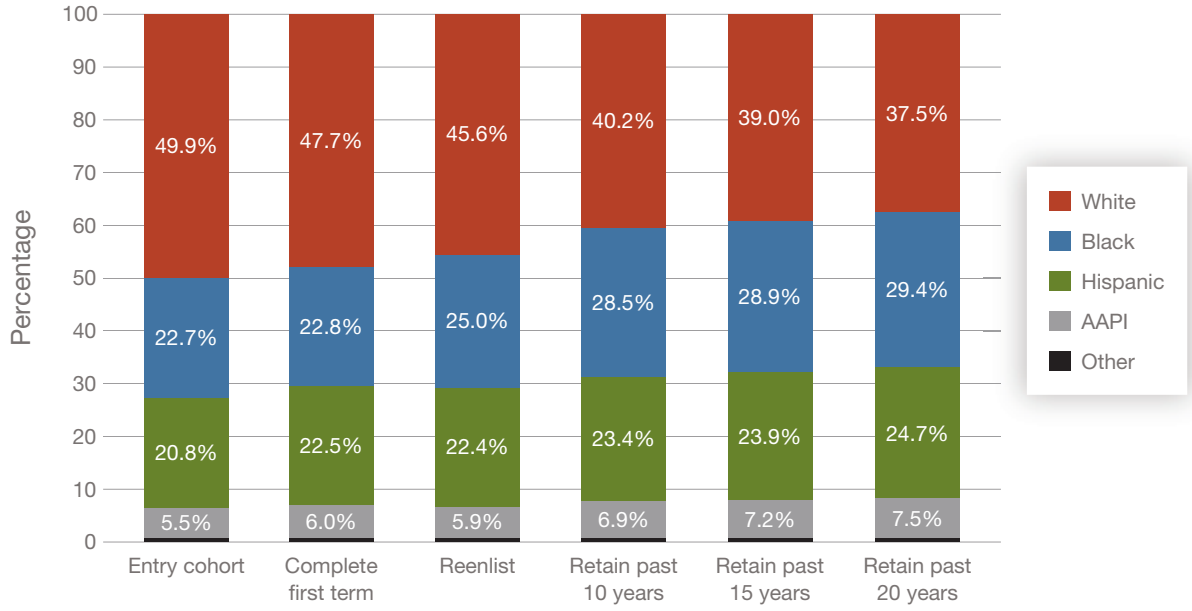


SOURCE: Authors' tabulations of TAPDB/RA Analyst linked data and predicted probabilities from logistic regressions.

NOTE: The percentages within each bar do not add up to 100. We did not include percentages for the Other racial-ethnic category because they are small and would be difficult to see in the figure.

FIGURE 3.8

Simulated Racial-Ethnic Distribution Using Adjusted Retention Rates, by Race and Ethnicity



SOURCE: Predicted probabilities from series of linear regression models as described above.

NOTE: All adjusted regressions include additional controls for education, gender, marital status, age, AFQT score, paygrade, MOS, and accession year. The regressions for completing the first term and being retained past the first term also contain controls for enlistment bonus and length of initial service obligation. The percentages within each bar do not add up to 100. We did not include percentages for the Other racial-ethnic category because they are small and would be difficult to see in the figure.

using estimates of historical differences by race and ethnicity, we estimated that racial-ethnic minority representation improves as junior cohorts move through the ranks (see Figure 3.7).

The analyses also show that White soldiers have higher rates of early promotion to E-5, lower rates of suspensions of favorable personnel actions (flags), and lower rates of reductions in grade from E-5. These findings indicate that White soldiers have higher levels of positive career outcomes (early promotions) and lower levels of negative outcomes (suspensions, reductions in grade) that might mediate the relationship between soldier characteristics and first-term reenlistment. We will examine some potential reasons for these outcomes in the next chapter.

CHAPTER 4

Qualitative Findings About Enlisted Career Outcomes

To better understand what factors might affect career outcomes that could, in turn, affect first-term reenlistment and retention, we interviewed 33 senior enlisted leaders and officers to learn about unit-level decisions associated with enlisted career outcomes. We asked participants about factors that influence unit-level decisions that could affect early promotions, suspensions of favorable personnel actions (flags), reductions in grade and other punishments, and rehabilitation for soldiers (i.e., second chances).[1] We also asked participants if there are constraints on unit leaders in making decisions that could affect these outcomes. For early promotion, we also asked whether there are ways the Army can support unit leaders in the promotion process. Finally, we explicitly asked participants if there are ways that race and ethnicity could directly or indirectly relate to these outcomes.[2] In this chapter, we describe findings from these interviews.

As we will describe in more detail in this chapter, our interviewees generally did not identify direct ways in which race and ethnicity relate to enlisted career outcomes. Indeed, at least one-half of interview participants did not think race and ethnicity relate in any way to decisions tied to career outcomes, such as promotions. Of the participants who did indicate that race and ethnicity could relate to enlisted career outcomes, most cited indirect factors, such as unconscious bias among leaders making decisions about opportunities or punishments that could have downstream effects on enlisted career outcomes. We describe these findings in more detail in this chapter but embed the findings within the broader discussion of what interviewees describe as factors associated with early enlisted promotions, suspension of favorable personnel actions, and second chances.

Early Promotion

In the junior enlisted ranks, early promotion involves a soldier receiving a waiver from the unit to promote ahead of schedule. Perhaps not surprisingly, the most important factors associated with early promotion in these ranks, according to our interview participants, were high levels of performance and the potential to perform well at the next rank. However, the specific indicators for performance and potential vary by rank.

[1] We did not specifically ask participants about reenlistment eligibility, which was explored as a potential mediator of first-term reenlistment in Chapter 3. As our analyses in that chapter indicate, racial-ethnic minority soldiers tend to have *higher* (adjusted) rates of reenlistment eligibility than do White soldiers.

[2] Appendix B includes the interview protocols.

Factors Associated with Early Promotion

Junior Soldiers: Technical Competence, Adherence to Rules, Going "Above and Beyond"

At a minimum, junior soldiers are expected to demonstrate technical competence in their MOS for the rank, as well as other "good soldier" behaviors, such as being punctual, following rules, and not having any disciplinary actions against them. However, these behaviors are usually insufficient for a soldier to receive one of the few early promotion waivers afforded to the unit. Unit leaders therefore look for soldiers who go above and beyond their job and rank in terms of the following: performing extra tasks to help their team (which participants tended to describe in terms of being a "good team player" and "taking initiative"); engaging in self-improvement activities, such as pursuing civilian education or special Army schools (e.g., Ranger school); awards from competitions; and community engagement.[3] One participant described the decision process about waivers for early promotion this way:

> Their on-duty and off-duty performance is looked at. Do I know him because he's in law reports or because he volunteers in the community? Who's the best in the organization? You have to start cutting away. But when they are all rock stars, it's tough. It comes down to those who volunteer because they went above and beyond for junior promotion.

Discretion of Enlisted Leadership and Company Commanders

Decisions about which soldiers receive waivers ultimately rests with the company commander, but enlisted leadership in the chain of command plays the primary role in recommending to the commander who should receive waivers. For example, one participant explained, "For the semi-centralized E-1 to E-4 [promotion process], we usually take the recommendation of the first sergeant based on performance. . . . It keeps objectivity in the process." However, the same participant noted that some unit leaders might not follow the typical process, instead selecting favored soldiers early on, which can bias the process:

> But it comes down to the commander's choice. Do other demographics affect that? Unfortunately, that will come down to the person making the choice. They [commanders] have to follow the rules, but the possibility is there because of individual bias. The way you see that individual may impact how you view their behavior when making the decision.

This discussion indicates that unit leadership has some discretion on what factors beyond the minimum qualifications they can use to break ties among soldiers being considered for early promotion waivers. Several participants mentioned units that use physical fitness test scores,[4] weapon qualifications, and other metrics that are readily available in soldiers' records as ways to make those decisions.[5] Some participants felt there was an overemphasis on the fitness test and body composition requirements as factors to use for early promotion.

Midgrades: Leadership and Preparation for the Boards

For promotion to midgrades (E-5 and E-6), the process becomes more centralized than for promotion in early grades. This means that the commands still execute key promotion activities (e.g., participating in local

[3] In psychology literature, the concept of extra-role behaviors is also referred to as *organizational citizenship behaviors*, which are behaviors that help the organization but are not specifically required as part of the core duties of the job. These behaviors are found to relate to positive outcomes, such as better employee performance and productivity and lower attrition (Podsakoff et al., 2009).

[4] Army Combat Fitness Test (ACFT) scores, sometimes also referred to as *physical training (PT) scores*.

[5] The Army now uses the ACFT to assess soldier physical fitness and readiness.

promotion boards) but that the Army has centralized the requirements for promotion, such that soldiers must earn promotion points against Army-mandated performance and educational criteria.[6] A participant explains it this way:

> It's based on points for performance and level of education. It's more holistic because it's more of a leadership role now. It's also based on time [in service]. But they [the units] are more engaged in terms of counseling of soldiers and if there is a school requirement for promotion.

As this quote indicates, once soldiers are considered for the NCO corps (E-5 and above), they are expected to demonstrate leadership behaviors. One participant describes how their unit evaluates NCO leadership performance:

> We look at two different levels on how to rank you: individual and team performance. If you run an organization with 12 people in a small team, we look at what the team's performance is. Are they green rather than red or amber? Are you a manager who manages well? What about their physical fitness?

Participants mentioned another indicator of whether soldiers are ready for NCO ranks: preparation for the boards. A participant with experience running NCO promotion boards describes looking at whether soldiers put forth effort to be promoted:

> For E-5 and E-6, then you start looking at the amount of effort and energy the service member puts into their preparation for the board, their total package. Are they doing all the right things? Are they passing? . . . . Really, [this is] just the attention to detail, and some of the simple things are the ones that can quickly identify someone who just memorized things.

Senior Ranks: Education, Performance, Assignment History, and the Right Career Field

For senior enlisted ranks (E-7 through E-9), the promotion process becomes centralized, with the Army (not units) running the promotion boards. The main function of the units at this point is to provide performance evaluations and counseling; the board decisions themselves are out of the hands of the units. Participants indicated that, in addition to education and performance requirements, boards also look at the soldier's assignment history:

> It's about your potential to do bigger and better things. Looking at what they did previously so they perform moving forward at the next higher level and do great things for the Army. They look at civilian education: higher levels of education, like associates', bachelors', masters' degrees. They look at the military schools they have been to, like the Ranger School. Also, their duty positions that they have had. Have the positions been "cake" positions? Or has the individual taken on harder positions?

However, access to career-enhancing opportunities can vary by career field, making it harder for soldiers from certain career fields to compare favorably with soldiers from other career fields at the centralized pro-

[6] For the semicentralized promotion process, units are responsible for "considering soldiers for promotion, conducting board appearances, approving and recommending soldiers for promotion list integration, and integrating soldiers onto the recommended list through HRC [Human Resources Command] systems" (AR 600-8-19, 2019, p. 39).

Soldiers recommended for early promotion for E-5 and E-6 grades are considered to be in the *secondary zone* of promotion. Commanders can recommend soldiers for the secondary zone, but a promotion board makes the determination. Most soldiers are expected to promote within the standard amount of time for their rank, known as the *primary zone* (AR 600-8-19, 2019, p. 26).

motion boards for senior NCO ranks. This participant describes the dynamic comparing special operations to public affairs:

> You can grow up in a culture like special operations and be exposed to things outside of your career. At a broad level, those soldiers are looked at favorably. You can also grow up in the Army culture. If you are [in the public affairs career field and] sent to radio and TV [unit early in your career], by the time you reach E-7, you haven't done anything that will help you stand out.

Although this example is not directly tied to race and ethnicity, racial-ethnic minority soldiers are more highly represented in support MOSs, such as public affairs, and less so in combat arms MOSs, such as the special operations community. To the extent that this example generalizes across the Army, variation in career-enhancing opportunities by MOS could, in part, contribute to differences in early promotion outcomes between racial-ethnic groups. We will discuss this topic further in the next section.

Associations Between Race and Ethnicity and Enlisted Promotion Decisions

When asked how race and ethnicity might relate to enlisted promotion decisions, more than one-half of participants (19 individuals) indicated that they did not think there was a relationship or were unsure whether there is one. About one-third of participants (roughly ten individuals) noted how race and ethnicity could relate to enlisted promotion decisions and outcomes.[7] Several of these participants described the potential for leaders to make assumptions about soldier capabilities based on characteristics they believe to be related to the soldier's race or ethnicity (and gender). In the words of one participant,

> It's primal instinct to judge someone. When it comes to someone or a leader, there could there be factors with racial barriers. Of course, there could be. That could be something as simple as physical stature. It always stems from something else. If you have a cultural difference, could it be some kind of racist issue within that leader? It could. It could always come from someone else. For example, Samoan culture—they are a very large-stature people—not known to be runners and are more fighters. But a leader may start talking crap and pick on them. As leaders, we gotta nip it in the bud.

Two participants specifically raised the topic of physical fitness and body composition standards for racial-ethnic minority women being a barrier in terms of how they are perceived and the opportunities afforded to them based on those perceptions. One of these participants described how a black female soldier performed well on the physical fitness test (i.e., PT) but struggled to meet the body composition standard:

> The height, body weight standards. I have an E-4 soldier who is at the top percentile at everything, but, because she's African American, she will fight with her body composition her entire career. The standards are straight up against her. She has the highest PT score but, because of her ethnicity, she's gonna fight it. Every time it comes up, you have leadership that doesn't know her at the personal level say that she's too overweight, and she's not.

Another participant described a case in which a Hispanic woman was not going to be given an early promotion waiver due to perceptions about her physical attributes. The unit cited her PT score as the rationale for not giving her the waiver for early promotion:[8]

[7] This publication quotes from interviews and may contain language some might find insensitive. Because this content is integral to the research and our findings, it is presented verbatim and unedited.

[8] The issue of using PT scores, or ACFT scores, as a way to determine which soldiers should receive early promotion waivers was mentioned by other participants but not generally in the context of race and ethnicity.

> We slowed a female promotion because we didn't want her in charge of the motor pool. She didn't get a waiver even though she was the best. Oh, we say it's because she didn't get a 300 on the PT test. We use those weak areas to make an excuse but it's because she is a female. . . . That soldier happened to be a female Hispanic who is short. And the stereotype was that her body type is thick, so we won't put her in there.

Two participants, both of whom are officers, stated that they heard directly from racial-ethnic minority soldiers that they feel that they do not get the same opportunities in their units as White soldiers.[9] This officer explained what has been described:

> When I speak to minority NCOs, they feel like they are being judged by being something. They don't see the opportunities, they don't get the outlier projects, the communication is not there. There is, I guess, gaps and bridges. I'll say this: "I'm comfortable where I am comfortable." The law of attraction is the same concept. I'm not saying that there is any truth, but the perception for them is that they don't get the opportunities to stand out, to be the outliers, to get mentoring in the way that they should be. They aren't doing well in the areas in which they aren't being mentored.

In addition to the theme of leaders having biases and stereotypes, another common theme involved differences in opportunities by career field. Specifically, some participants noted that some of the support MOSs might not have as many opportunities as combat arms MOSs, which have more White soldiers.[10] As this participant puts it:

> Until your two main combat MOSs become more racially diverse, minorities aren't gonna see the promotions that Caucasians see, and that's just a byproduct of the Army being the Army. Its sole purpose is to fight and win America's war; until the combat MOSs become more diverse, minorities aren't gonna see those promotions.

However, a few participants noted that differences in life experiences associated with where in the United States the Army tends to recruit may also factor into racial-ethnic minority soldiers' experiences in combat arms MOSs. This could have implications for performance and retention outcomes, as one participant's comment illustrates:

> Infantry is different from support, direct support [MOSs]. And this is a common thing for me: If you are an infantry soldier, there is a clear picture of what the infantry soldier looks like, and they aren't usually a minority, they are usually Caucasian. They are usually a Caucasian from a certain part of the country. They've held guns. So, if I'm from there and I'm familiar with all these things, [it's easier for me to transition into infantry]. But if I'm from New York City and I don't know how to handle a gun, then it may be a difficult transition.

Overall, a majority of our participants did not believe race and ethnicity factored into promotion decisions, at least not in a direct way. However, some thought it could factor into leadership biases or stereo-

---

[9] Perceptions of not receiving equitable access to career opportunities are not limited to Army personnel. In a recent study on demographic diversity in the U.S. Coast Guard, focus groups with racial-ethnic minorities in the U.S. Coast Guard revealed similar sentiments:

> URM [underrepresented minority] personnel perceive distribution of developmental opportunities, such as educational, command, and special assignments, to be less fair than other personnel perceive it to be, with focus group participants noting that access to many career development opportunities is through one's social network and being in "the club." (Lim et al, 2021, p. xi)

[10] Racial-ethnic minority personnel across all miliary services are disproportionately concentrated in support occupations (see, e.g., Office of the Assistant Secretary of Defense for Personnel and Readiness, 2019).

types about racial-ethnic minority characteristics and competence. A recent study on leader biases regarding racial-ethnic minority competence suggests a negative spiraling effect on racial-ethnic minority retention. Specifically, the study found that newly hired racial-ethnic minorities' beliefs about their own job-related competence were lower when they perceived their supervisors did not provide adequate supervision and when their supervisors rated new White employees as more capable than newly hired racial-ethnic minority employees. The lower confidence among racial-ethnic minority employees predicted their beliefs of not having a future with the organization, which, in turn, predicted higher levels of voluntary turnover among those employees (Sabat et al., 2021).

Constraints in Making Enlisted Promotion Decisions

When we asked participants whether there were constraints on unit leaders in making recommendations about early promotion (or delaying a soldier's promotion), 12 who responded indicated that they did not think there were any constraints. As one officer participant put it, "They are either promoted or not. It's pretty clear cut: taking the opportunities to go to school, doing these outlier things . . . it's pretty clear-cut from our perspective [as raters]."

For the remaining participants who indicated there are constraints (19), we summarize the key themes of these constraints in Table 4.1, with one or two illustrative quotes per theme. The most commonly mentioned constraints are reflected in the first two rows. These issues are numerical limitations associated with the number of waivers for junior enlisted promotions and the percentage of NCOs commanders can evaluate as being at the top of the NCO evaluation reports (NCOERs) (give a "top block rating").[11]

The constraints described in Table 4.1 vary considerably, touching on themes from the number of senior NCO positions available to concerns that NCOERs do not give a clear picture to commanders of what to look for in terms of whether an NCO will get promoted. On the last point, the implication is that there are NCOs who demonstrate less-desirable behaviors but are still promoted to senior enlisted positions.

The last two themes listed in Table 4.1 are more relevant to junior enlisted ranks than senior ranks. Some participants expressed concern that junior NCOs and newer commanders (typically at O-3 rank) might not have enough experience to counsel and lead soldiers. Prior research lends credibility to this concern: Junior soldiers in units with NCOs who were new to the unit and have less of certain types of experience have higher first-term attrition than soldiers in units with more-experienced NCOs (Wenger et al., 2018). The lack of experience of junior NCOs could result in interpersonal conflicts between NCOs and soldiers, which can lead to situations in which personal biases affect evaluations of soldiers' performance and potential.[12]

The final theme in Table 4.1 refers to the difficulty for units of delaying a soldier's promotion when they do not want to be promoted or of transitioning out soldiers who are not a good fit for the Army. Barring derogatory information in a soldier's file or the soldier not meeting a mandatory requirement (e.g., passing height-weight measurements), soldiers are automatically added (or commands are mandated to add) to the

[11] The numerical limitation on top blocks on the NCOER refers to Army policy that reads: "The intent is for the senior rater to use the 'Most Qualified' box selection to identify the upper-tier, which is limited to the top 24 percent of the NCOs rated at each rank" (AR 623-3, 2019, p. 44).

[12] Experimental studies have found that relationship conflicts among team members increase the likelihood that members will process information affecting their task in a more biased way and hold onto their initial positions more rigidly than when relationship conflicts are not present (de Wit, Jehn, and Sheepers, 2013). It stands to reason that, if leaders and subordinates have relationship conflicts, leaders may hold onto their initial impressions of subordinates and be less willing to process information that contradicts those positions. This could affect their evaluation of the subordinates' performance and potential.

TABLE 4.1
Constraints on Command in Enlisted Promotion Process

Type of Constraint	Illustrative Quote
Units get limited number of waivers to promote junior enlisted soldiers early	I think the actual promotions constraint is what waivers the Army has. There are only so many number of soldiers that we can promote [early].
Commanders can give a top block rating to only 24 percent or less of their NCOs	As an officer, 49 percent of my lieutenants, I can give most qualified for. On the enlisted side, it's 24 percent MQ [most qualified] to two of my first sergeants; based on the timing, now it's about figuring in and out that side of the house.
Limited senior NCO positions slow down senior NCO promotions and could affect retention	The Army says there are 70 spots [available for promotion], so that [person who is number] 71 or 72 [on the OML (order of merit list)] doesn't make that cut.
Leaders might not have a clear understanding on how the enlisted promotion process works	You have a first sergeant who is senior enlisted advisor, and they don't study the new system. It's hard to explain the new system, and it limits them because they don't understand the new system. They are still working in the old systems. The same happens for commanders who may not know how it works and go off what they know.
NCOERs do not provide sufficient information to determine who will be and should be promoted, particularly at senior NCO ranks	The NCOER doesn't provide enough feedback for who is the top person. Even with new limited percentile system—NCOs still—at the E-7, E-8, E-9 level board, the NCOERs are still not that good. There are no distinguishing factors. No way for a colonel to point out an E-6 or E-7 to say, "This is the one."
	Records say one thing, but spending time with someone is another thing. Sometimes records don't reflect true character.
Junior NCOs and newer company commanders might not be good at counseling soldiers, which can lead to interpersonal conflicts and mismatched expectations	Junior NCOs aren't good at counseling, you gotta know your soldiers, what make them go, and junior NCOs and younger commanders just don't have that depth, not all of them, but very often, they don't have that understanding on how people work.
	These young leaders . . . some are just not equipped with the communication, the education, the comprehension to lead other soldiers. You can have a soldier come in at 18, he ranks up, and now he's a sergeant and another soldier with college behind them and now he's a specialist. You have one who only knows the Army and one with the world behind him. You're gonna see a bit of clash.
Difficult for units to help soldiers who do not want to promote or to help transition out those who are not a good fit for the Army	I got a packet here where the soldier is going to be barred from continued service for not being in front of the board. The soldier says he's been dealing with a lot of issues and does not want to be stagnant in the Army but doesn't think he's ready to guide soldiers just yet. But based on regulations, he must come in front of board. If not, he won't be in continued service.
	Not every soldier is a great soldier for a continued career in the Army. . . . There is no mechanism for—you are just not a good fit. Don't have to leave on a bad note.

lists for promotion consideration.[13] Participants indicated that the soldier's supervisor has to provide detailed justifications for recommending delay of a soldier's promotion under this policy. Such justifications are based on documentation of counseling sessions between leaders and soldiers, in which leaders are expected to doc-

[13] The Army's enlisted promotion policy (AR 600-8-19) indicates that soldiers in junior ranks (through E-4) are automatically promoted if they meet minimum time requirements and other standards. For midgrades (E-5 and E-6), commanders are mandated to integrate soldiers into promotion lists when those soldiers enter their primary zone for promotion. Commanders cannot prevent soldiers from being added to the lists if the soldiers meet the eligibility criteria (described in AR 600-8-19, 2019, Table 3-1). However, commanders can, instead, use bars to continued service, with associated counseling, for soldiers "who have no potential for continued service or leadership" (AR 600-8-19, 2019, p. 58).

ument the issues, plans to address the issues, and any follow-up activities (e.g., whether the soldier followed through with the plan).[14]

Army Support to Commands for Enlisted Promotions

When asked whether the Army could better support commands with enlisted promotion processes, about one-third of those who discussed the topic (nine out of 27 individuals) said "no" or were "unsure." Several participants also noted that current processes and programs are working well, including the policy regarding soldiers being added to promotion eligibility lists. As one participant noted, "There are things to protect soldiers if a leader is trying to block them. It's your job as a leader to help fix that."

However, this policy also assumes NCOs who can properly counsel soldiers to develop the confidence and skills needed for the next rank. Several participants indicated that there should be more education for junior leaders on how to counsel soldiers and evaluate their performance. This officer participant advocates additional education on how to write evaluations:

> Continue the teaching of very young officers and very young noncommissioned officers on basic skills on how to write NCOERs and OERs [officer evaluation reports], that they understand the board process and what the boards are looking for so that they can make a decision very young [about what they want to do]: "Do I want to change MOS because I want to make sergeant major one day? Do I want to transition to warrant officer?" Because in some areas, you just won't get it.

A few participants suggested that this type of education, as well as education on how to counsel soldiers, could be put into the professional military education courses, such as the Basic Leader Course for NCOs and Captains Career Course for officers. A couple of participants specifically mentioned that HRC has a training course on how to write evaluations, but not all commands or Army branches use it. This officer explained experience with this course through their branch:

> Some leaders would take the time for it, some don't. [The focus of the training is on] the ability [of the raters] to convey to the board accurately what you are trying to get across. Some branches take the time to hold professional development seminars for the unit [to train them on]. . . . I think some of those things I've got from our branch leader, from HRC. I would have that [be offered] as a captain or a major going through school. That would help immensely.

Several participants also suggested that senior leaders need to hold leaders at lower echelons accountable for counseling soldiers and provide protected time to counsel, as this participant explains: "It all boils down to leaders doing the right thing and providing quality counseling that they're supposed to. The ownership should be on senior leaders to push and pressure junior leaders to do the right things and give them the adequate amount of time to do it." Indeed, research suggests that having enough time to develop cohesive and productive work teams is important in overcoming initial hurdles presented by "surface-level diversity" (e.g., racial-ethnic diversity) of those on the team (Harrison et al., 2002).[15]

---

[14] Several participants cited Department of the Army (DA) form 4856, which is the developmental counseling form that leaders complete when counseling soldiers. Many participants referred to counseling sessions as *counselings*.

[15] The dynamics of team diversity and outcomes are a bit complicated. Although research suggests that people can "get over" surface-level differences, any perceived deep-level differences (e.g., differences in values) could still create challenges for team cohesion and performance (Harrison et al., 2002). Thus, the real challenge becomes mitigating perceived deep-level differences and ensuring they are not conflated with demographic characteristics, such as race.

Some participants shared ways they convey the importance of counseling to their subordinates. For example, one officer described how he is a role model to subordinate leaders: "I counsel my direct reports and folks I senior rate one-on-one quarterly. We check every single box and talk about every topic. We revisit that counseling at the next counseling as well. That's step one. Model behavior." Another participant described setting aside dedicated time that subordinate leaders use to counsel: "I dedicate half a day of the week to do that . . . . Fridays after we do and go in, everybody sits down in the sections [and we discuss]: 'How did the soldiers do?'"

In addition to suggestions about education and accountability, a few individuals mentioned other ideas for supporting enlisted personnel:

- Improvements to NCOERs:
  - Use the comment section of the NCOER to indicate promotion potential, akin to how this is done on the officer side.
  - Align the percentages for NCOER rating blocks to senior rater profiles (not just top block).
  - For small organizations evaluating NCOs, provide more leeway on the 24-percent top block policy, perhaps through a waiver or a range of percentages, instead of a single percentage cap.
- Centralize counseling information: Move away from paper forms and create a centralized counseling documentation system akin to the NCOER system.
- Obtain more information about commander candidate behavior: Put more emphasis on getting information on officers who are next up for command to identify problematic behaviors that could affect unit climate; use external sources to assess Army command climate.

Suspension of Favorable Personnel Action

Chapter 3 mentioned suspension of favorable personnel action, or *flagging*, as one potential mediator of the relationship between race and ethnicity and first-term reenlistment. Several participants in our interviews noted that soldiers can get flagged for many reasons.[16] The following are some of the more common reasons (mentioned by at least one-third of the 33 participants), listed in order of frequency (most to least mentioned):

- drugs and alcohol
- sexual harassment, assault, domestic violence
- disciplinary issues (general)
- failing to meet Army body composition and/or physical fitness standards
- chronic tardiness (late to formation)
- insubordination
- substandard performance or inefficiency.

While most of these items could involve engagement with law enforcement or other formal systems, the last three items are different. Participants described these behavioral issues in terms of "patterns": one behavior or event (e.g., late to formation one time) will not get the soldier flagged, but several will (e.g., being late three times in a row).

[16] Although most examples involving suspensions (flagging) refer to enlisted personnel, some officer participants provided examples of behaviors involving officers they oversee. Those examples tended to focus on how commanders learn about problematic behaviors of the officers who report to them.

How Commands Learn About Behaviors or Incidents to Flag

Certain behaviors or incidents are easier for leaders to identify, such as when a soldier is caught in an illegal act by law enforcement (e.g., arrested for public intoxication) or fails a required test to meet an Army standard (e.g., failing the ACFT). For other situations, such as tardiness, insubordination, and poor performance, others have to observe the behaviors and document them before they can be flagged. Participants indicated that behavioral observation is primarily the job of the direct supervisor, although leaders higher in the chain of command might also observe problematic behaviors. In some cases, leaders learn of problematic situations from bystanders (e.g., other soldiers' reports). For example, one participant, who is a commander, provided an example of a bystander report about inappropriate social media use:

> I have one [person] that posted in their social media about this organization, and it was reported to me from another soldier that is part of this organization and that is really the only way [I found out about it]. . . . Typically, if something like that happens, we wouldn't know unless somebody reports it or the soldier self-reports.

Some unit leaders seek to get soldiers to self-report through other means, as this participant describes:

> I would send them to the chaplain a lot. . . . It worked every single time [to get the soldier talking about their issues]. They [chaplains] didn't talk about religion; it would be football or life. The kid brought up the subject anyway because it was on the top of their minds. It was an amazing tool.

Commanders, who have fewer opportunities to observe soldiers than lower-echelon leaders, can use a tool known as a commander's inquiry to gather information about alleged misconduct. Commanders can conduct the inquiry or designate an inquiry officer to investigate and report findings.[17] One commander described the options for these inquiries:

> Next [after an allegation is made] can be one of these things: commander's inquiry, [where] I keep it at my level, research what happened, talk to people and get more statements; [the other option is to file an] Article 15-16 form, getting an investigating officer to get preliminary findings, talk to people to get more statements, and make a recommendation on pretty much what action is to be taken.

Constraints on Commands in Flagging and Follow-On Actions

When asked if there are any constraints on commands' ability to flag, a majority of participants who responded to the question indicated there are no constraints, describing flagging as "straightforward" and "cut-and-dried." They indicated that the Army regulations describe what to flag and that commanders can receive legal guidance to interpret regulations, as this participant explains: "I think it's well explained, and the legal team is there for questions. . . . It's an administrative action. It's just a code."

Among participants who did mention constraints on flagging and associated actions (e.g., punishments), a few indicated that more-senior commanders in the chain could override the recommendations of their

[17] A *commander's inquiry* is defined in policy as follows:

> A preliminary inquiry into a suspected offense, as defined by Rule for Courts-Martial 303 in the Manual for Courts-Martial. This rule provides commanders with the authority to conduct basic inquiries or more extensive investigations, as needed, to fulfill the commander's obligation to investigate and dispose of offenses in compliance with the Uniform Code of Military Justice (UCMJ). As used in this regulation, commander's inquiry is meant to be broadly interpreted to include any inquiry into charges or suspected offenses made or ordered by a commander. (AR 600-8-2, 2021, p. 28)

AR 15-6 (2016) describes the criteria for selecting an *inquiry officer* for a commander's inquiry.

subordinate commanders, thus constraining the subordinate commanders' authority. One noted that someone of a higher rank or in a higher position might make "an example of people in the unit for whatever reasons and overrid[e] those in company- and platoon-level leadership." Another noted that there are "sometimes [situations] where there is undue influence by the higher commander in closed-door conversations and sometimes commanders can be directed to take action outside of their will and do it anyway."

Another constraint that a few participants raised is not so much a limitation on command authority but one of experience. Specifically, company commanders might not have enough experience to adjudicate difficult cases and might lean toward stricter punishments. As this participant explains:

> Unless you have a person that really knows about leadership . . . . Otherwise, they [commanders] are really trusting the platoon sergeant. Once it reaches the commanders in that manner, they aren't going to ask, "What did you do to reconcile or fix this situation?" They just say, "Hey, we got this soldier. Let me take care of it because it ruins my command."

Overall, participants generally agreed that commands have a fair amount of discretion on how to handle incidents that have been flagged. As this participant put it: "With allegations, you have free realm. Even if the allegation was not true, leadership can decide to investigate or not to investigate it." Command discretion in handling flagged cases will be discussed in more detail in the next section.

Reductions in Grade and Second Chances

Reductions in grade, or demotions, are a fairly severe form of punishment for soldiers who do not meet the standards expected for their rank. Participants indicated that reductions in grade are therefore rare, with several participants indicating that they have not partaken in any cases involving reductions in grade. Only commanders have authority to reduce a soldier in grade, although the soldier's grade affects which level of commander has authority. Company commanders have authority for E-4 and below; field-grade commanders (lieutenant colonel or higher) have authority for E-5 and E-6; and commanders who are colonels or higher have authority for E-7 through E-9 (AR 600-8-19, 2019, Table 10-1, pp. 134–135).

In general, participants indicated that soldiers who receive reductions in grade tend to be those who have continued to engage in a pattern of problematic behavior, despite counseling and the remedial efforts of leadership. Many participants described reductions in grade in the context of other forms of punishment that commanders can levy. To get at the decisions on whether and how to punish (or remediate) soldiers, we asked participants what factors commanders consider in giving soldiers second chances to redeem themselves before a commander would recommend a punishment, such as a reduction in grade, and the types of punishment that commanders can use in addition to reductions in grade.

Factors Associated with Second Chances

When we asked what commanders consider in providing second chances to soldiers, the most commonly mentioned factors include the soldier's age and rank, whether the incident was a first offense, and extenuating circumstances that might have caused a stress reaction. Commanders will often be more lenient on junior soldiers because they are not expected to be as mature and to understand Army values as more experienced soldiers would: "If they can recover from the mistake, typically if the soldier is young, the commander would say, 'Hey, you are young and stupid.' But, the more senior you get . . . . I had a sergeant first class who had 16 years in [the Army] so it was, 'Hey, you knew better.'"

Participants noted that commanders will also consider whether the soldier is in good standing other than for the current situation. Commanders might use the logic of a soldier having a "bad day" to imply that the situation was out of character and deserves some leniency:

> If the soldier has been a "hard charger," that's what commanders use. [Commanders will argue:] "This person is a great soldier, and they just made a bad mistake." . . . it usually is, this is a great soldier, and they deserve a second chance.

Commanders might also be more lenient with soldiers who have acute life stressors, as this quote illustrates: "You did something kinda horrendous and showed up late and cussed out the commander. And it was found out that something bad happened the night before, maybe a fight with your spouse."

Several participants, particularly officers with command experience, indicated that they look for soldiers to be honest about their situations and show a willingness to fix them. Some participants noted that soldiers who are sincere and address their problems can go on to be better soldiers because of the lessons they learned:

> Situations where [I gave second chances are those where] the individual came in and just owned it and told me through their supervisor what they were doing to make themselves better. They didn't just quit; they looked for opportunities for counseling and make it a learning moment and taking a proactive stance to say, "Hey, I messed up, and here's how I can make it better."

Severity of the offense also comes into play, although it was less often mentioned. Drug and alcohol offenses, as well as sexual harassment and assault, were generally used as examples that tend to result in more-severe punishments. As a participant with command experience explained: "I don't give second chances to DUIs [driving under the influence citations] or anything that has to do with sexual harassment or sexual assault or drug abuse. I will get you assistance, but then you need to leave."

Some participants noted that the prior relationship between the soldier and their leadership can affect whether a soldier is given a second chance. Relationships between soldiers and their enlisted leadership factor into how hard those leaders will advocate for soldiers up the chain. As one participant explained, "say the staff sergeant is tight with the first sergeant. They will go to bat for them but not the person who is new or does not get along with them. They will fight for leniency for certain individuals."[18]

Concerns about harming careers could influence how commanders choose to document negative events. A few participants noted that there is some discretion about whether derogatory information should be posted in official Army records or locally at the command. This participant explained that some commanders might choose to locally file "memoranda of reprimand," preventing leadership at a soldier's (or officer's) next assignment from learning of the issue.[19]

A final topic that a few participants raised with regard to second chances is that there could be career-field differences, particularly between combat arms communities and support communities. For example, the stress associated with combat arms could result in more second-chance opportunities for soldiers:

> Back a couple years ago, they [infantry] saw more than we saw [in combat]. That was a time when no one wanted a counselor, and some [soldiers] were self-medicating [with drugs, alcohol], and they [infantry

[18] A few officer participants noted a similar dynamic on the officer side, noting that some commanders might not want to "harm" an officer's career by putting derogatory information in their official records. This might be especially the case in a "high-demand career field" and when the officer has otherwise excellent performance.

[19] AR 600-37 (2020, p. 5) details criteria for leaders to file memoranda of reprimand. In particular, a general officer in the soldier's chain of command has authority to have their memoranda of reprimand filed either locally or in the soldier's official records (referred by the policy as the "Army Military Human Resources Record").

> leaders] understood it. Our [logistics, human resources] community did not; we thought that the rules say ABC, so you follow it. I thought, "Didn't you get a DUI? And you're still here?"
>
> Special Forces will give them a second chance no matter what. Special Forces is stressful, by the way their mission is set, how driven they are. A Signal unit is not stressful and not crazy. Most of the time, soldiers might not get a second chance because they're in a very stress-free area.

Although the participants who mentioned career field differences did not directly tie those differences to race and ethnicity, the demographic compositions vary by MOS. To the extent that leadership preferences for offering second changes systematically differ between combat arms and support MOSs, racial-ethnic group differences in receiving second chances could be partially tied to MOS.[20]

Factors Associated with Reductions in Grade

Commanders can consider various factors in determining forms of punishment, including reductions in grade. Reductions in grade are fairly uncommon in the Army, and commanders tend to use other, lesser forms of punishment before recommending a reduction in grade. That said, participants did note that reductions in grade can happen and that such factors as the severity of the offense, patterns of behavior, and the rank of offender are taken into account.

Several participants noted that most reductions in grade they know about involved UCMJ cases, as this participant states:

> The only times I've seen a grade reduction was through the UCMJ. I know there are boards for performance and inabilities. But everything I've seen is a punishment through UCMJ for some infraction.

Reductions in grade can also occur if soldiers engage in a pattern of behavior, such as chronic poor performance, that has not been remedied through counseling. Soldiers' supervisors have to document the behavior and attempt to remedy it, as this participant describes:

> Usually, just the supervisor building a picture for the commander showing that the soldier is either inept or, you know, doesn't really have what's necessary to do . . . their job, to proceed. It's usually a counseling.

Participants noted that there was less leniency for more senior-ranking soldiers, as this quote describes:

> For NCOs, if it's conduct unbecoming an NCO, and we all agree, then we demote. If it's an enlisted soldier, depending on the severity of the offense and whether we think this person has a future in the Army, we think about demotions.

Because reductions in grade are a serious form of punishment, Army regulations place more restrictions on commander discretion than for other forms of punishment. We describe examples of these other forms of punishment next.

[20] As a reminder, our models examining racial-ethnic group differences in flagging and reductions in grade do account for career field differences (see Tables 3.4 and 3.6 in Chapter 3). The argument here is that some portion of the variance in racial-ethnic group differences explained by career field could reflect leadership preferences.

Other Forms of Punishment

Even when a commander gives a second chance to a soldier, some form of punishment (and rehabilitation) is involved. The punishment can range from the soldier having to perform extra duty, to paying a monetary fine, to being restricted from leaving the post. Many participants noted that commanders will opt to suspend more-severe punishments, such as reductions in grade, for a period. Soldiers are essentially on probation, with the expectation that they will make improvements toward addressing the issue for which they were suspended and will not engage in any problematic behavior.[21] If they violate the agreement, the more-severe punishment(s) will be enforced. Thus, several participants likened suspending punishments to a commander's "tool" to rehabilitate soldiers while also ensuring good order and discipline in the unit. One participant, who is a commander, described considerations of a soldier's personal circumstances and behavior in determining the level and type of suspension and punishment enforced:

> I know that if the soldier has one car and a wife that doesn't work, I probably would suspend action rather than taking your pay, but I will do something else. If you do it again, I will take pay though. . . . This helps as a constructive tool and also is based off of the individual's actions in the room. If they are rude in the room and don't take responsibility, you'll get a worse outcome.

Participants also mentioned that another tool at a commander's disposal is a "bar to continued service," which prevents a soldier from reenlisting after the end of their service term.[22] This participant describes a bar this way: "It's used as a motivational tool if they aren't meeting the standard and gives them a wakeup call so they change their behavior. At which point, the command removes the bar."

Participants noted that Army regulations do stipulate that commands must begin the paperwork to discharge (or *chapter out)* soldiers for certain types of incidents, particularly those involving drugs and alcohol.[23] However, commanders still have opportunities to advocate on a soldier's behalf, as one participant in a command position explained: "I have the opportunity to recommend a soldier be retained and not separated from the Army. Every one of those packets, I have to make remarks."

The decision to recommend a soldier to be retained ultimately comes down to commander's determination about whether the soldier still adds value to the Army. This participant, a commander, described the decisionmaking process using the example of a drug case:

> Like, if we take a drug case, I give the soldier every opportunity and delay the hearing to allow them to bring the witnesses forward and gather people to speak on their behalf. We have to do right by this because most of these are career enders. I consider intent too. Did the soldier knowingly do this? Is this a trend or a trend that continues? Was it a first-time offense? Were soldiers systemically taking drugs? . . . I take a look

[21] The problematic behavior might not be related to the reason for the suspension. For example, a soldier who has a suspended punishment for chronic tardiness and gets into a fight would be in violation of the agreement. Basically, soldiers are expected to stay out of trouble.

[22] A bar to continued service is meant to prevent continued service beyond a soldiers' expiration of term of service for soldiers who are not deemed "of high moral character, personal competence, and demonstrated adaptability to the requirements of the professional Soldier's moral code" (AR 601-280, 2023, p. 36). There are several conditions under which a commander can (but is not required to) initiate a bar, such as "substandard personal hygiene" and being "late for formations, details, or assigned duties" (p. 38).

[23] AR 635-200 (2021) outlines Army policy on discharging soldiers. Different chapters outline criteria for specific reasons, such as separation for pregnancy (Chapter 8, pp. 81–87), "substance use disorder" (Chapter 9, pp. 87–89), "in lieu of trial by court-martial" (Chapter 10, pp. 89–94), and "entry-level performance and conduct" (Chapter 11, pp. 94–95). *Chaptered out* refers to the specific chapters of the regulation.

> at the potential of the soldier based on what's best for the soldier and the Army. Did the Army lose a good soldier? Or is it good for the Army to separate the soldier because they take more than they can give?

Although a commander's remarks are the primary way for the commander to recommend that a soldier be retained who might otherwise face discharge, unit leaders can create process delays to help soldiers avoid separation. This dynamic can create situations of differential treatment, as this participant describes using the example of a failure of physical fitness requirements:

> APFT [Army Physical Fitness Test[24]] failures, you see someone after a second PT test, you're gonna begin paperwork to chapter individuals out of the Army. It doesn't give a timeline: Commanders just have to begin the process, so they can just stop and not push documents forward. . . . They may do for one person because he's shown these skills before but if there's also someone out there who's constantly messing up or doesn't have the right attitude, they can easily say, "Sorry, we're starting your chapter paperwork."

A final topic for punishment and retention involves command discretion in the use of retention boards. One participant indicated that this is more of an issue on the officer side, describing a situation in which his command team learned of previous problematic behavior of a new officer only after that person had arrived, although the previous command could have used a retention board for that officer. Conversely, another participant described how a command's misapplication of a retention board hurt unit morale and, in turn, negatively affected reenlistment:

> It was a division commander who, after his first year of being a division commander, decided to make a new policy where everyone that got a DUI was going to get administratively separated. . . . So, then he made it retroactive to people that had a DUI in the last 12 months. . . . This young man had a retention board and was to be separated from the Army. That had a huge [impact on morale] in the formation. He had already been punished, and for me, that was trouble for the formation. Now try to convince people to reenlist? Noooo, they fear being punished or end up working for that individual.

This participant also relayed that, at a later date, when the division leadership had a holiday party, officers were seen drinking alcohol and then leaving in their vehicles. The participant indicates that soldiers felt this was "hypocritical" behavior given the division's strict no-tolerance policy for DUIs.

Relationships of Race and Ethnicity with Flagging, Second Chances, and Reductions in Grade

When asked how race and ethnicity might relate to flagging, second chances, and punishments (such as reductions in grade), a majority of participants indicated that they did not think there was a relationship or were unsure whether there was one. This quote illustrates the sentiment: "The way I look at it is, if they are doing something wrong, we flag them. Doesn't matter about race. I don't know." Several other participants indicated not being aware of specific issues regarding race or ethnicity but indicating they expect issues exist. One participant indicated that eliminating bias would be challenging: "You would have to make us look and act and speak the same and be born in same neighborhood [to eliminate bias]. It will always be in someone's mind and in the leadership's mind. We just hope objectivity is clear of bias when making decisions."

[24] The Army now uses the ACFT to assess soldier physical readiness.

A few participants also shared that, even if there is no leader bias, there have been incidents in which they or other leaders have been accused of racial or ethnic bias. This participant, a commander, described situations with parents of the soldiers accusing the unit leadership of bias:

> We had multiple parents call, you know, they said we were being unjust to their child, about flagging them. Generally speaking, the infractions are pretty cut and dried. [We tell those parents:] "Your soldier did this, we gotta flag them. Your soldier did that, we gotta chapter them." . . . Definitely, it was a long conversation where they say: "You are just doing this because my son is this . . . ." It's a very frustrating place to be as a commander because they think you are doing this based on race rather than misconduct.

Only a few participants described seeing evidence indicative of racial or ethnic bias. Two participants described seeing records within a command that indicated differential treatment, as the following quotes illustrate:

> But from what I have possibly seen, there is a high flagging on minority or gender individuals where someone else could be doing the same thing that they don't get in trouble for. . . . I've seen a high flagging rate of non-White soldiers, and there are the same soldiers . . . doing the exact same thing and it's just [not flagged].

> Their direct leadership, if they come in and are willing to underweight what this person did. . . . For those times that I noticed, the commander was the same race of the offender when they were afforded the second chance. And the times where they were not afforded a second chance, they were not the same race.

One participant described witnessing a commander exhibit bias against a Black officer:

> He [the commander] was determined, based on his personal beliefs and biases. He wanted to crucify this individual, [and] he [the officer being punished] was a Black officer. He [commander] was ready to set it aside until he found out the race of the soldier.

A few participants noted that they cannot show evidence that there is bias but that racial-ethnic minority soldiers perceived that there is bias, as this participant explains:

> I can't say that there is a trend in minorities or those that are not minorities [having those flags or reductions]. I would say that there is a perception of how those are adjudicated. Do minorities officers have a perception that they are adjudicated harder than nonminorities? Yes, I have been told that. But I can't say that I have proof of, if the two have exact same incident that I've seen a difference in adjudication.

In general, participants did not believe commanders factor in a soldier's race or ethnicity in their decisions, at least not consciously. However, a few participants noted that it is difficult to root out the impact of bias, in part because of how leaders (all the way down to the lowest echelon) interpret soldiers' behaviors through their own experiences and preferences. As one participant explained,

> Behavioral issues or perceived behavioral issues. Again, it's all the same things. If I'm not where you are from, I don't talk the way you talk or operate the way you do. . . . You know, with junior soldiers, and it gets to senior leaders as well. . . . So, if a soldier doesn't behave the way I behave, then it's assumed that the soldier has a behavioral problem.

A study on abusive supervision lends some support to this notion of how leaders might interpret soldiers' behaviors as problematic if they expect the soldier does not share the same values and expectations. Specifically, the study found that supervisors who believe subordinates are dissimilar from them in terms of values and expectations are more likely to report having relationship conflicts with those subordinates. If the super-

visors also believe those subordinates are low performers, the supervisors are more likely to engage in abusive leadership behaviors (e.g., shunning the subordinates) (Tepper, Moss, and Duffy, 2011).

Summary

In this chapter, we have described insights from 33 Army unit-level leaders on leadership decisionmaking regarding career-related outcomes that could affect soldier reenlistment and retention. For early promotion, participants recommended identifying soldiers with high levels of performance and potential for performing well at the next grade. They noted that the most commonly mentioned constraints on commands' ability to recommend soldiers for early promotion are systemic: The Army imposes numerical constraints on how many soldiers can be recommended for early promotion. Other constraints varied (see Table 4.1). When asked how the Army can better support commands with the enlisted promotion process, participants offered different suggestions, but there were two main ones: (1) that the Army should provide more education and training for junior NCOs and company commanders on how to evaluate and counsel soldiers and (2) that senior leadership should hold leaders at lower echelons accountable for providing proper counseling and giving those leaders enough time to provide counseling.

Discussions about suspensions of favorable personnel actions (flags) indicated that Army regulations are fairly cut-and-dried regarding the wide range of behaviors or situations that could result in a soldier being flagged. The most common reasons they offered for soldiers getting flagged were for conduct, such as drug use, which would require some form of action that likely would result in punishment. However, commands have some discretion for rehabilitating soldiers, i.e., offering them second chances.

In general, participants indicated that commanders consider not only the severity of the offense but also the frequency, rank of soldier, and other circumstances that could have contributed to the behavior (e.g., stress-induced drug use after a death in family). Many participants indicated that commanders tend to use such tools as suspending more-severe forms of punishments, such as reductions in grade, in favor of rehabilitating soldiers. They also noted that soldiers' behavior during this process—whether they admit guilt and convey a willingness to improve—factors into commander's decisions on the type and strength of punishment. To that end, participants indicated that a reduction in grade, which is a more severe form of punishment than other punishments available to commanders (e.g., extra duty), tends to come from a pattern of problematic behavior that the soldier has not addressed despite attempts at rehabilitation.

Many participants did not think that or indicated that they were not aware of how race or ethnicity related to any of the outcomes. However, some participants indicated that leadership decisions could be affected by biases or stereotypes about racial-ethnic minority soldiers' characteristics and competence, affecting opportunities that would help with early promotion and second chances offered to soldiers. Most participants could not point to specific cases in which they witnessed a leader exhibit a blatant form of racial-ethnic discrimination. However, a few indicated hearing from racial-ethnic minority soldiers that they believe there are such biases in terms of not receiving as many career-enhancing opportunities as White soldiers in their units and receiving more significant punishments than White soldiers for the same infractions. Some participants pointed to inexperience at junior leadership levels, particularly new NCOs and new company commanders, as being where the Army needs to focus more effort to address dynamics that could result in differential outcomes by racial-ethnic group.

CHAPTER 5

Quantitative Analyses of Commissioned Officers' Career Progression

We now turn to a discussion of commissioned officers' career progression. Consistent with the earlier literature (e.g., Hosek et al., 2001; Asch, Miller, and Malchiodi, 2012), we analyzed officer career progression as a series of sequential decision points. Conceptually, these can be disaggregated into two types:

- whether an officer remains in the Army until the point at which they are eligible for promotion to the next grade
- whether an officer is promoted to the next grade.

For simplicity, we refer to the first type as *retention* and the second type as *promotion*.

We analyzed each decision point conditional on its predecessors; for example, we analyzed promotions to O-4 only for those who remain in the Army as an O-3 until the point at which they are eligible for promotion to O-4. Furthermore, we analyzed these decision points through promotion to the grade of O-6, the highest grade recorded in our data. Finally, because our focus is on career progression, we focused only on branches with officers that start at the grade of O-1.[1]

Data Sources and Estimation Approach

To construct our analytic file, we used monthly TAPDB data on all commissioned officers from October 2001 through January 2022.[2] Appendix A discusses the structure of our data and the construction of outcome variables, such as eligibility for promotion. With the exception of the retention and promotion variables, discussed next, all other variables are measured at the time the officer is first observed in a grade.

Similar to the enlisted analysis, we produced two types of predicted outcome variables: actual outcomes, which are statistically identical to the average of each outcome by race and ethnicity, and adjusted outcomes, which are what differences by race and ethnicity would be if individuals in each racial-ethnic group had the same observed characteristics. Both sets of predicted outcomes are estimated using logistic regressions. Appendix A presents a more-detailed discussion of our estimation approach.

We have limited this discussion to the actual and adjusted retention and promotion rates by race and ethnicity. Full regression results for each outcome, including the estimated associations with all independent variables, are shown in Appendix E.

[1] More than 90 percent of officers start at the grade of O-1. Other branches include the Chaplain Corps, the Judge Advocate General's Corps, and the Medical Corps. Officers in these branches are also in separate competitive categories for promotion.

[2] These data provide information on officer demographic characteristics (e.g., gender, race and ethnicity, age) and on characteristics associated with their military service (e.g., accession source, branch, retention and promotion histories).

Retention as O-1 Through Promotion to O-3

While we analyze each of these decision points separately, we note at the outset that retention rates for second lieutenants (O-1), promotion rates to first lieutenant (O-2), retention rates for first lieutenants, and promotion rates to captain (O-3) are all very high (i.e., 90 percent or higher). These officers have generally not completed their active-duty service obligation, and the time-in-grade requirements are relatively short (i.e., 1–2 years). Nevertheless, in this section, we highlight differences by race and ethnicity that we did observe in the data.

Table 5.1 presents our estimates of second lieutenant retention rates, calculated separately for racial-ethnic groups. The second column lists the actual retention rates we observed in the data, while the third column presents estimates after controlling for other observed factors. As this table shows, there is one statistically significant, but small, difference by race and ethnicity. Specifically, retention of White O-1s is 99 percent, while Black O-1s have slightly lower retention rates (at 98.5 percent). While most of the other factors for which we control are statistically significant,[3] their inclusion does not dramatically change the predicted retention rates.

While these differences by race and ethnicity are very small, we observed larger differences in the *reasons* that second lieutenants separate. Figure 5.1 presents data for the small number that separate before they are eligible for promotion to first lieutenant. For each racial-ethnic group,[4] the figure shows the percentage of these officers who separate for performance or conduct reasons. Of these White O-1s, 24 percent separate for these reasons, but the percentages for Hispanic (37 percent) and Black (43 percent) O-1s are much higher. In contrast, White O-1s most commonly separate for medical and disability reasons. The data do not indicate *why* Black and Hispanic O-1s disproportionately separate for performance or conduct reasons, whether their actual performance or conduct is lower, whether their performance or conduct is more likely to be observed by leadership, or whether they are less likely to be given a second chance.

Table 5.2 presents our estimates of promotion to first lieutenant for the O-1s who did not separate before being eligible for promotion, calculated separately for racial-ethnic groups. As this table shows, there are some statistically significant, but small, differences by race and ethnicity. Specifically, the White O-1 promo-

TABLE 5.1
O-1 Predicted Retention Rates, by Race and Ethnicity

	Actual (%)	Adjusted (%)
White	99.0	99.0
Black	98.5***	98.6***
Hispanic	98.8	98.8
AAPI	99.0	99.0
Native American	99.2	99.2

SOURCE: Predicted probabilities from logistic regressions (see Appendix E for full results).

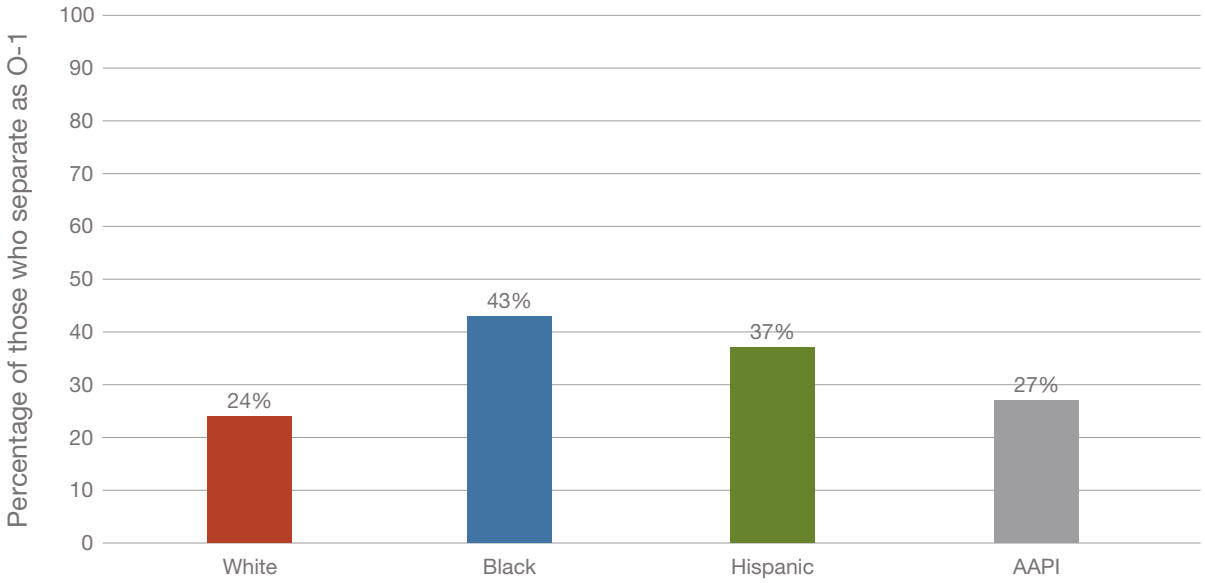
NOTE: Asterisks indicate that a predicted probability is statistically different from White at the 1 percent (***), 5 percent (**), and 10 percent (*) levels. Adjusted regression includes additional controls for gender, age, marital status, children, accession source, branch, and FY.

[3] As Appendix E shows, age and having children are both statistically significant, and the sets of marital status, accession source, and branch variables are each jointly significant.

[4] There are too few Native American O-1s in this category to present their data.

FIGURE 5.1

Of O-1s Who Separate, Percentage That Separate for Performance or Conduct Reasons



SOURCE: Authors' tabulations of the TAPDB.

NOTE: Includes Separation Program Designation Codes for substandard performance (BHK, JHK, KHK), unacceptable conduct (coded in TAPDB as BNC, JNC, KNC), misconduct (coded in TAPDB as JKA, JKB, PKF), in lieu of trial by court martial (coded in TAPDB as DFS, KFS), and court martial (coded in TAPDB as JJD).

TABLE 5.2

Predicted Promotion Rates to O-2, by Race and Ethnicity

	Actual (%)	Adjusted (%)
White	99.5	99.4
Black	98.6***	98.7***
Hispanic	99.1***	99.1***
AAPI	99.3	99.3
Native American	99.0*	99.0

SOURCE: Predicted probabilities from logistic regressions (see Appendix E for full results).

NOTE: Asterisks indicate that a predicted probability is statistically different from White at the 1 percent (***), 5 percent (**), and 10 percent (*) levels. Adjusted regression includes additional controls for gender, age, marital status, children, accession source, branch, and FY.

tion rate is 99.5 percent, while the rates for Hispanic (at 99.1 percent), Native American (at 99 percent), and Black (at 98.6 percent) O-1s, are slightly lower. While many of the other factors for which we control are statistically significant,[5] including them leaves the predicted promotion rates virtually unchanged.[6]

[5] As Appendix E shows, gender is statistically significant, and the sets of accession source and branch variables are each jointly significant.

[6] Once we control for these other factors, Native American promotion rates are no longer statistically different from White promotion rates.

Table 5.3 presents our estimates of first lieutenant retention rates, calculated separately for racial-ethnic groups. The table shows some statistically significant differences by race and ethnicity that are small but larger than those we observe for second lieutenant retention. Specifically, retention of White O-2s is 93.1 percent, but Hispanic (at 93.7 percent), AAPI (at 94.0 percent), Black (at 94.3 percent), and Native American (at 94.6 percent) O-2s have higher retention rates. As the third column shows, differences by race and ethnicity would be even larger if racial-ethnic groups had the same observed characteristics.[7] For example, the difference between Black and White O-2 retention increases from 1.2 to 2.4 percentage points, and the difference between Hispanic and White O-2 retention increases from 0.6 to 1.3 percentage points.[8]

As with O-1s, we observed larger differences in the *reasons* that first lieutenants separate. Figure 5.2 presents data for the small number who do separate before they are eligible for promotion to captain.[9] For each racial-ethnic group,[10] the figure shows the percentage of these officers who separate for performance or conduct reasons. Of these White O-2s, 8 percent separate for these reasons, but the percentages of Hispanic (18 percent) and Black (22 percent) O-2s are much higher. The data do not indicate *why* Black and Hispanic O-2s disproportionately separate for performance or conduct reasons.

Table 5.4 presents our estimates of promotions to captain for the O-2s who did not separate before being eligible for promotion, calculated separately for racial-ethnic groups. As this table shows, there are some statistically significant, but small, differences by race and ethnicity. Specifically, the promotion rate for White O-2s is 96.5 percent, while those for AAPI (at 95.9 percent) and for Hispanic and Black (both at 95.1 percent) O-2s are lower. While many of the other factors for which we control are statistically significant,[11] their inclusion does not dramatically change the predicted promotion rates.[12]

Retention as O-3

Officers typically complete their active-duty service obligation with the rank of captain, so O-3 retention rates provide some insights into the extent to which different racial-ethnic groups are choosing to stay in or leave the Army. To begin, however, Figure 5.3 shows overall retention rates by year and by race and ethnicity.[13] A comparison of these data with the retention rates in Table 5.1 and Table 5.3 shows that, as anticipated, captain retention rates are much lower than at earlier grades. Furthermore, over the period we analyzed, there were fairly large changes in retention rates, with a low of about 45 percent (2018) and a high of around 60 percent (2013). The fluctuations over time are broadly consistent with changes in the size of the Regular Army, from the Temporary End Strength Increase announced in 2009,[14] the planned reductions in end

[7] All of the other factors for which we control are statistically significant (see Appendix E).

[8] Once we control for these other factors, Native American retention rates are no longer statistically different from White retention rates.

[9] Not surprisingly, the percentages in Figure 5.2 are lower for each racial-ethnic group than they are in Figure 5.1, as individuals adapt to Army service.

[10] There are too few Native American O-2s in this category to present their data.

[11] As Appendix E shows, having children is statistically significant, and the sets of marital status, accession source, and branch variables are each jointly significant.

[12] Once we control for these other factors, AAPI promotion rates are no longer statistically different from White promotion rates.

[13] For simplicity, we present these data by the year an officer would be eligible for promotion to O-4, although some officers who leave do so in earlier years.

[14] See Kruzel (2009).

TABLE 5.3

O-2 Predicted Retention Rates, by Race and Ethnicity

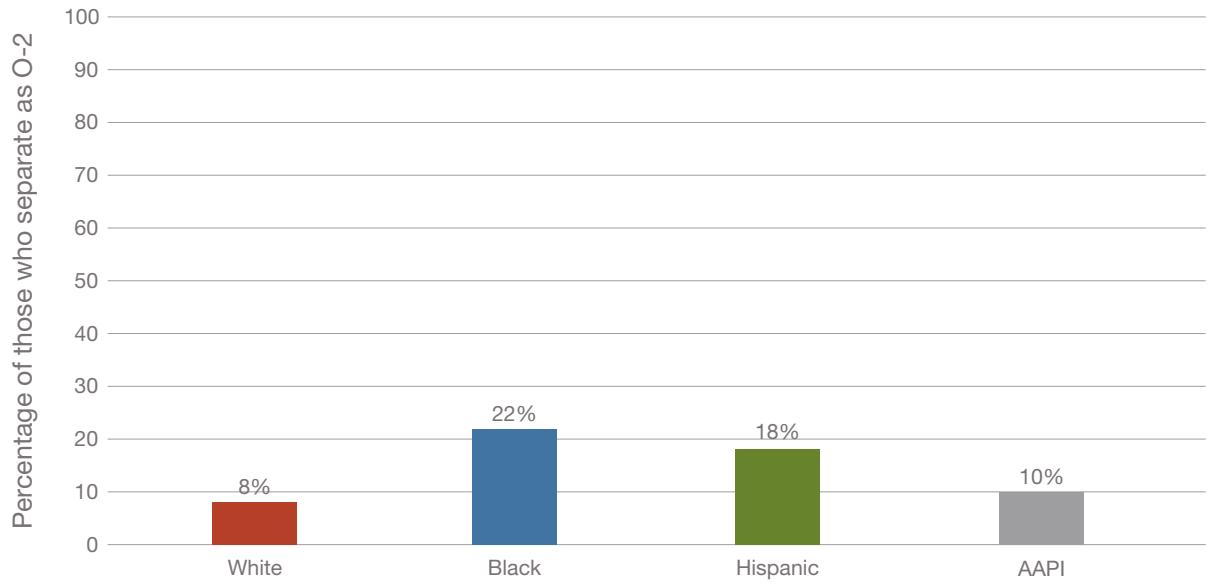
	Actual (%)	Adjusted (%)
White	93.1	92.8
Black	94.3***	95.2***
Hispanic	93.7**	94.1***
AAPI	94.0***	94.2***
Native American	94.6*	93.5

SOURCE: Predicted probabilities from logistic regressions (see Appendix E for full results).

NOTE: Asterisks indicate that a predicted probability is statistically different from White at the 1 percent (***), 5 percent (**), and 10 percent (*) levels. Adjusted regression includes additional controls for gender, age, marital status, children, accession source, branch, and FY.

FIGURE 5.2

Of O-2s Who Separate, Percentage That Separate for Performance or Conduct Reasons



SOURCE: Authors' tabulations of the TAPDB.

NOTE: Includes Separation Program Designation Codes for substandard performance (BHK, JHK, KHK), unacceptable conduct (coded in TAPDB as BNC, JNC, KNC), misconduct (coded in TAPDB as JKA, JKB, PKF), in lieu of trial by court martial (coded in TAPDB as DFS, KFS), and court martial (coded in TAPDB as JJD).

strength beginning in 2012,[15] and the subsequent increases in end strength under the Trump administration.[16] Trends are broadly similar across race and ethnicity, though levels differ.

[15] In January 2012, the Army announced it would reduce Regular Army end strength from 570,000 to 490,000 by the end of FY 2016 (Odierno, 2012). Two years later, the Secretary of Defense announced that end strength would need to be in the 440,000 to 450,000 range (Jordan, 2014).

[16] Regular Army end strength increased in the first three National Defense Authorization Acts after President Trump's election. See Public Law 114-328, 2016; Public Law 115-91, 2017; Public Law 115-232, 2018.

TABLE 5.4

Predicted Promotion Rates to O-3, by Race and Ethnicity

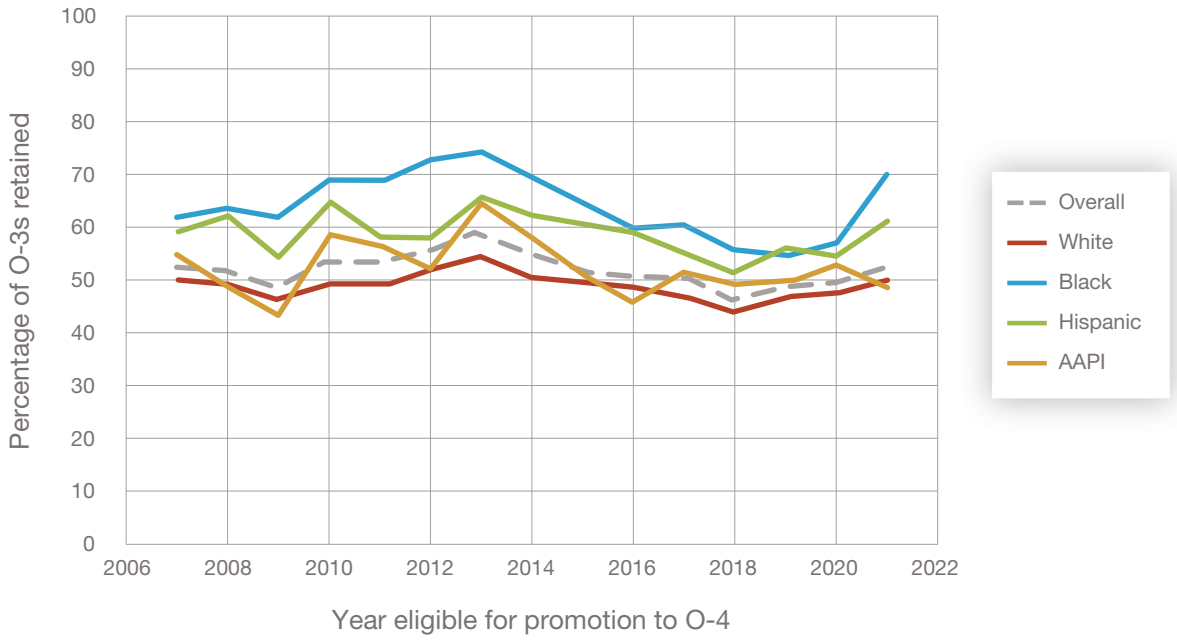
	Actual (%)	Adjusted (%)
White	96.5	96.4
Black	95.1***	95.4***
Hispanic	95.1***	95.1***
AAPI	95.9**	96.1
Native American	97.5	97.1

SOURCE: Predicted probabilities from logistic regressions (see Appendix E for full results).

NOTE: Asterisks indicate that a predicted probability is statistically different from White at the 1 percent (***), 5 percent (**), and 10 percent (*) levels. Adjusted regression includes additional controls for gender, age, marital status, children, accession source, branch, and FY.

FIGURE 5.3

O-3 Retention Rates, by Year



SOURCE: Authors' tabulations of the TAPDB.
NOTE: Other excluded due to small cell size.

Table 5.5 presents our estimates of captain (O-3) retention rates, calculated separately for racial-ethnic groups. There are relatively large and statistically significant differences: Racial-ethnic minority groups have *higher* retention than their White counterparts. For AAPI O-3s, retention is 3.4 percentage points higher than for White O-3s. The gaps are even larger for Hispanic and Black O-3s, at 9.5 and 15.0 percentage points, respectively.[17] Once we control for other factors, retention for racial-ethnic minorities is still higher than

[17] Native American O-3s also have higher retention rates than White O-3s, but the difference is not statistically significant.

TABLE 5.5
O-3 Predicted Retention Rates, by Race and Ethnicity

	Actual (%)	Adjusted (%)
White	48.7	49.4
Black	63.7***	60.7***
Hispanic	58.2***	55.7***
AAPI	52.1***	54.3***
Native American	50.8	51.2

SOURCE: Predicted probabilities from logistic regressions (see Appendix E for full results).

NOTE: Asterisks indicate that a predicted probability is statistically different from White at the 1 percent (***), 5 percent (**), and 10 percent (*) levels. Adjusted regression includes additional controls for gender, age, marital status, children, accession source, branch, and FY.

for Whites.[18] For Hispanic and Black O-3s, the gap with White retention shrinks, to 6.3 and 11.3 percentage points, respectively. For AAPI O-3s, however, predicted retention rates are 4.9 percentage points higher than for White O-3s.

Promotion to O-4

Figure 5.4 presents our estimates of promotion to major for the O-3s who did not separate before being eligible for promotion, by year and race and ethnicity.[19] As with captain retention, there were fairly large changes in promotion rates over the period we analyzed, with a low of about 80 percent (2015) and a high of about 97.5 percent (2009). Once again, these fluctuations are consistent with how the Army was shaping its force. For example, in 2012, the Chief of Staff of the Army indicated that "the Army is preparing to return to the selection opportunity levels that were in place before the wars in Afghanistan and Iraq," when selection opportunity for promotion to major was 80 percent (Joyner, 2012). Indeed, the promotion rate to major was 80 percent in 2014 and 2015, before rising with the subsequent increases in end strength. The rates for Black and Hispanic officers dropped below the overall trend in 2012, although we did not test for statistical significance in individual years because of the small cell sizes.

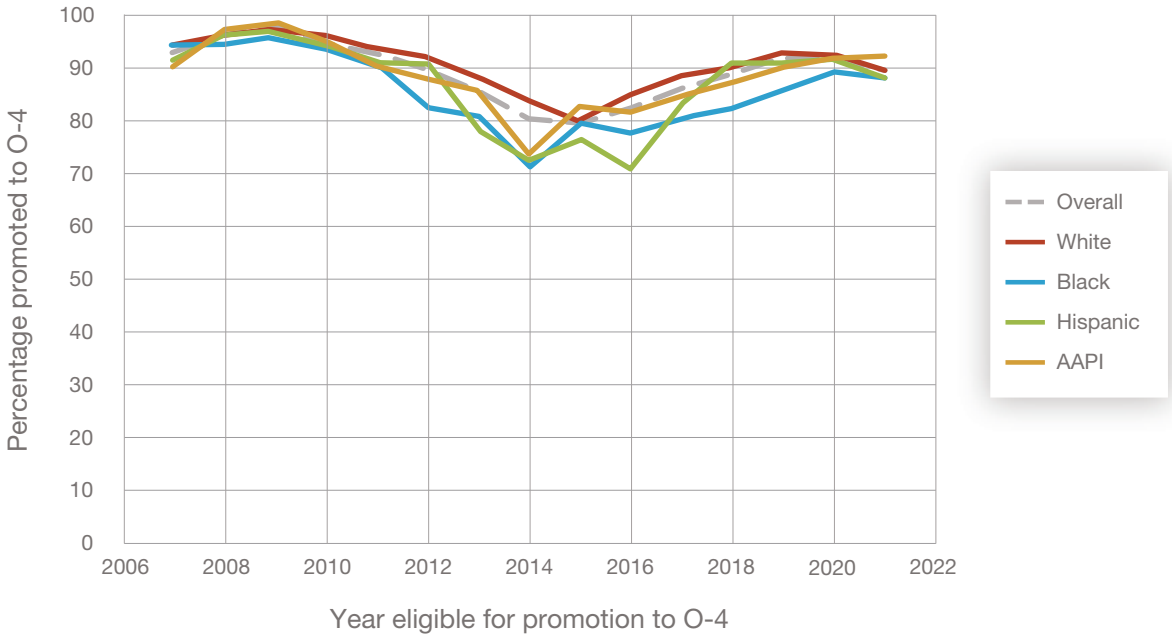
Table 5.6 presents our estimates of promotion to major, calculated separately for racial-ethnic groups. As with captain retention rates, there are statistically significant differences. Unlike retention, however, racial-ethnic minority groups have *lower* promotion rates than their White counterparts. For AAPI O-3s, the promotion rate is 2.5 percentage points lower than for White O-3s. The gaps are even larger for Hispanic (3.3 percentage points), Native American (3.6 percentage points), and Black (5.1 percentage points) O-3s. Once we control for other factors, the differences in promotion rates are still statistically significant but generally shrink.[20] For example, the predicted promotion rate for Black O-3s is now 3.4 percentage points lower than for White O-3s.

[18] As Appendix E shows, all variables are either statistically significant or jointly significant when considered as a set.

[19] We present these data by the year an officer's cohort was eligible for promotion to O-4, although some officers are promoted below the zone, and some officers are promoted later.

[20] As Appendix E shows, all variables except gender are either statistically significant or jointly significant when considered as a set.

FIGURE 5.4
Promotion Rates to O-4, by Year



SOURCE: Authors' tabulations of the TAPDB.
NOTE: Other excluded due to small cell size.

TABLE 5.6
Predicted Promotion to O-4, by Race and Ethnicity

	Actual (%)	Adjusted (%)
White	90.9	90.5
Black	85.8***	87.1***
Hispanic	87.6***	87.9***
AAPI	88.4***	88.8**
Native American	87.3*	86.7*

SOURCE: Predicted probabilities from logistic regressions (see Appendix E for full results).

NOTE: Asterisks indicate that a predicted probability is statistically different from White at the 1 percent (***), 5 percent (**), and 10 percent (*) levels. Adjusted regression includes additional controls for gender, age, marital status, children, accession source, branch, and FY.

Below-the-Zone Promotions

We also analyzed below-the-zone promotions because, as Rostker et al. (1993, p. 13) noted, these officers "have demonstrated outstanding potential," and how these outcomes vary by race and ethnicity is of interest.[21] Table 5.7 presents our estimates of below-the-zone promotion to major, calculated separately for racial-

[21] *Below-the-zone promotion* is defined as a "promotion eligibility category that consists of commissioned officers or warrant officers of the same grade and competitive category on the ADL [active duty list] who are eligible for promotion consideration and whose date of grade is junior to any officer in the promotion zone" (AR 600-8-29, 2020, p. 54).

TABLE 5.7
Predicted Below-the-Zone Promotion to O-4, by Race and Ethnicity

	Actual (%)	Adjusted (%)
White	7.8	7.7
Black	4.7***	4.7***
Hispanic	4.3***	4.3***
AAPI	5.1***	5.3***
Native American	3.0**	2.7***

SOURCE: Predicted probabilities from logistic regressions (see Appendix E for full results).

NOTE: Asterisks indicate that a predicted probability is statistically different from White at the 1 percent (***), 5 percent (**), and 10 percent (*) levels. Adjusted regression includes additional controls for gender, age, marital status, children, accession source, branch, and FY.

ethnic groups. As with overall promotion, there are statistically significant differences, with racial-ethnic minority groups being less likely to receive a below-the-zone promotion than their White counterparts. While the percentage point differences are small (e.g., Hispanic O-3s are 3.5 percentage points less likely to be promoted below the zone than are White O-3s), the relatively low occurrence of below-the-zone promotions implies that these are large differences (e.g., Hispanic O-3s are 45 percent less likely to be promoted below the zone than are White O-3s). Once we control for other factors, the differences in promotion rates are still statistically significant.[22]

Retention as O-4

Figure 5.5 presents O-4 retention rates by year and for White and racial-ethnic minority officers.[23] A comparison of these data with the captain retention rates in Figure 5.3 shows that retention rates for majors are appreciably higher and have ranged from a low of about 69 percent (2019) to a high of about 80.5 percent (2012). The correlation between captains' and majors' retention rates is 0.65, suggesting that, while the two rates generally move in the same direction, the year-to-year fluctuations are not identical. The trends are also similar between White and racial-ethnic minority officers (who were aggregated due to small cell sizes).

Table 5.8 presents our estimates of major (O-4) retention rates, calculated separately for racial-ethnic groups. Looking at actual retention rates, AAPI O-4s have higher retention than White O-4s, a statistically significant difference of 4.1 percentage points. For other racial-ethnic minorities, however, actual retention rates are not statistically different from the rates for White O-4s. Once we control for other factors, predicted retention rates for Black and Hispanic O-4s are statistically larger than for Whites:[24] For both racial-ethnic groups, the predicted difference with White O-4 retention is 4.1 percentage points.[25]

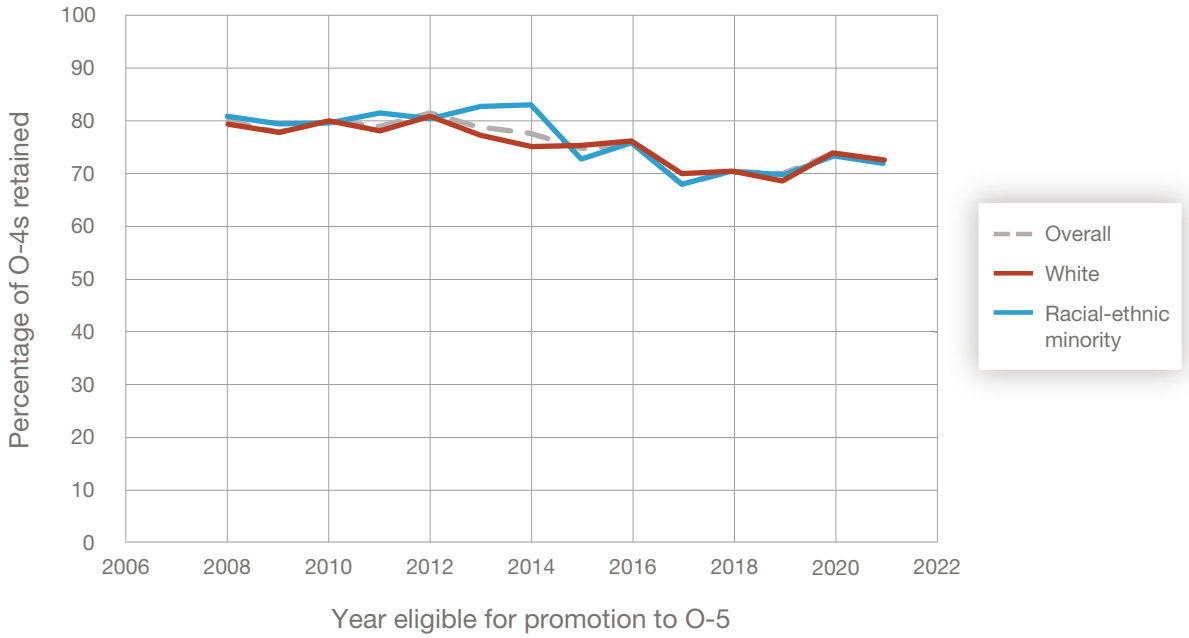
[22] As the results in Appendix E show, all variables except gender and having children are either statistically significant or jointly significant when considered as a set.

[23] Again, we present these data by the year an officer would be eligible for promotion to O-5, although some officers who leave do so in earlier years.

[24] As Appendix E shows, gender, age and below-the-zone promotion to major are all statistically significant, while the sets of accession source and branch variables are each jointly significant.

[25] As Table 5.8 shows, the predicted difference between AAPI and White retention increases to 5.2 percentage points.

FIGURE 5.5
O-4 Retention Rates, by Year



SOURCE: Authors' tabulations of the TAPDB.

TABLE 5.8
O-4 Predicted Retention Rates, by Race and Ethnicity

	Actual (%)	Adjusted (%)
White	76.1	74.9
Black	75.5	79.0***
Hispanic	76.8	79.0***
AAPI	80.2***	80.1***
Native American	69.6	73.6

SOURCE: Predicted probabilities from logistic regressions (see Appendix E for full results).

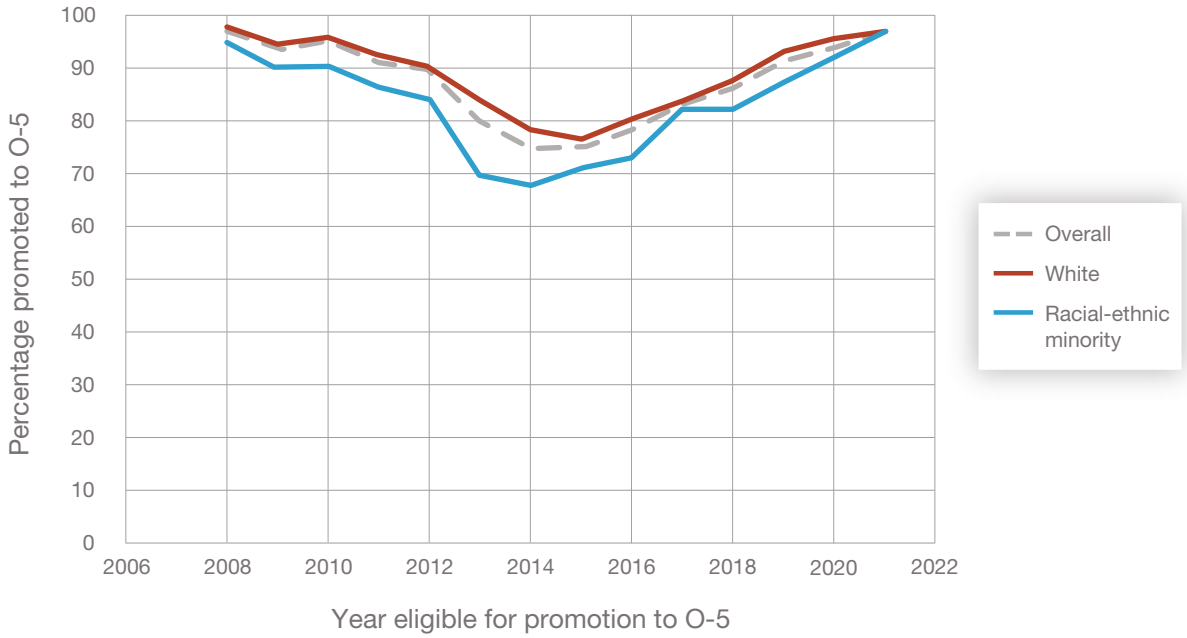
NOTE: Asterisks indicate that a predicted probability is statistically different from White at the 1 percent (***), 5 percent (**), and 10 percent (*) levels. Adjusted regression includes additional controls for gender, age, marital status, children, accession source, branch, below-the-zone promotion to major, and FY.

Promotion to O-5

Figure 5.6 presents our estimates of promotion to lieutenant colonel for the O-4s who did not separate before being eligible for promotion, by year and for White and racial-ethnic minority officers.[26] The correlation between these promotion rates and promotion rates to major (Figure 5.4) is extremely high (0.92), which

[26] Again, we present these data by the year an officer's cohort was eligible for promotion to O-5, although some officers are promoted below the zone, and some officers are promoted later.

FIGURE 5.6
Promotion Rates to O-5, by Year



SOURCE: Authors' tabulations of the TAPDB.

again reflects how the Army was shaping its force during this period. From a high of 97 percent in 2008, promotion rates steadily declined and approached their prewar levels of 70 percent,[27] reaching a low of about 75 percent in 2014. However, promotion rates to lieutenant colonel then rose with the subsequent increases in end strength; by 2021, these rates were at about the same level as in 2008. The trends are also similar between White and racial-ethnic minority officers, although the levels differ.

Table 5.9 presents our estimates of promotion to lieutenant colonel, calculated separately for racial-ethnic groups. As with promotion to major, most racial-ethnic minority groups have lower promotion rates to lieutenant colonel than their White counterparts. For AAPI O-4s, the promotion rate is 3.1 percentage points lower than for White O-4s. The gaps are even larger for Hispanic (5.9 percentage points) and Black (8.5 percentage points) O-4s. Once we control for other factors, the differences in promotion rates are still statistically significant but generally shrink.[28] For example, predicted promotion rate for Black O-4s is now 5.5 percentage points lower than for White O-4s.

Below-the-Zone Promotions

Table 5.10 presents our estimates of below-the-zone promotion to lieutenant colonel, calculated separately for racial-ethnic groups. As with below-the-zone promotion to major, there are statistically significant differences, with racial-ethnic minority groups being less likely to receive below-the-zone promotions to lieutenant colonel than their White counterparts. While the percentage point differences are small, the relatively low occurrence of below-the-zone promotions implies that these are large differences (e.g., a 3.2 percentage-point

[27] See Joyner (2012).

[28] As Appendix E shows, gender, age, and below-the-zone promotion to major are all statistically significant, while the sets of marital status, accession source, and branch variables are each jointly significant.

TABLE 5.9
Predicted Promotion to O-5, by Race and Ethnicity

	Actual (%)	Adjusted (%)
White	89.2	88.6
Black	80.7***	83.1***
Hispanic	83.3***	86.2**
AAPI	86.1**	86.0**
Native American	88.4	91.1

SOURCE: Predicted probabilities from logistic regressions (see Appendix E for full results).

NOTE: Asterisks indicate that a predicted probability is statistically different from White at the 1 percent (***), 5 percent (**), and 10 percent (*) levels. Adjusted regression includes additional controls for gender, age, marital status, children, accession source, branch, below-the-zone promotion to major, and FY.

TABLE 5.10
Predicted Below-the-Zone Promotion to O-5, by Race and Ethnicity

	Actual (%)	Adjusted (%)
White	7.3	6.9
Black	4.1***	4.7***
Hispanic	4.4***	5.2*
AAPI	4.7***	5.3*

SOURCE: Predicted probabilities from logistic regressions (see Appendix E for full results).

NOTE: Asterisks indicate that a predicted probability is statistically different from White at the 1 percent (***), 5 percent (**), and 10 percent (*) levels. Adjusted regression includes additional controls for gender, age, marital status, children, accession source, branch, below-the-zone promotion to major, and FY. We did not observe any Native American below-the-zone promotions to lieutenant colonel, so they are excluded from this table.

difference between White and Black below-the-zone promotion implies that Black O-4s are 44 percent less likely to be promoted below the zone than are White O-4s). Once we control for other factors, the differences in promotion rates are smaller but still statistically significant.[29]

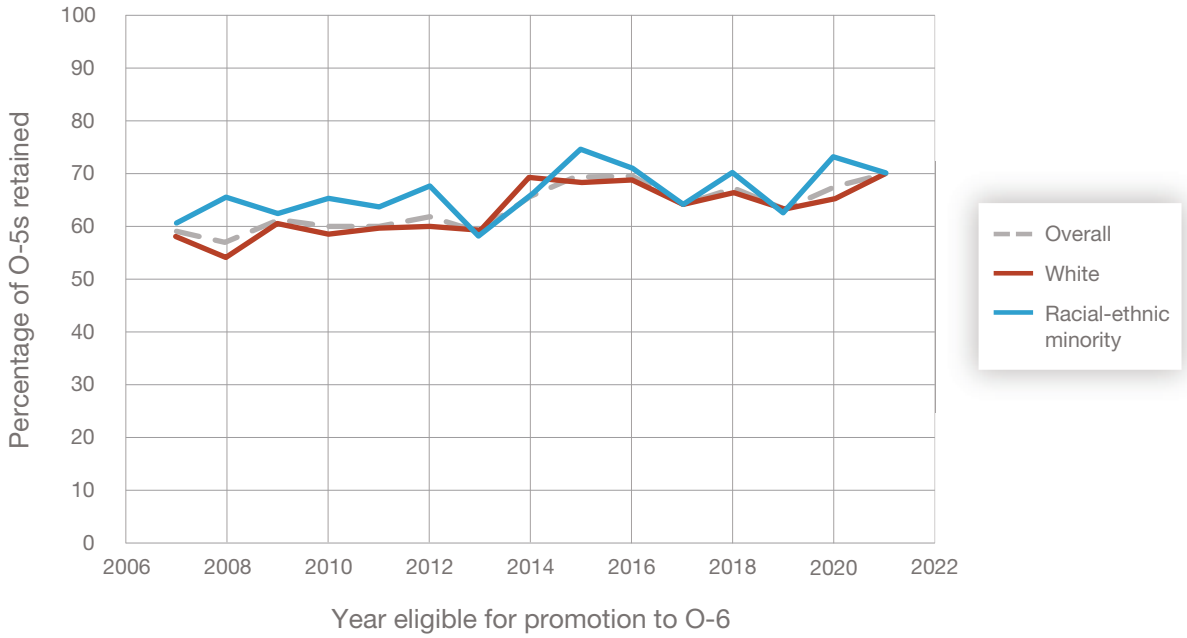
Retention as O-5

Figure 5.7 presents O-5 retention rates by year and for White and racial-ethnic minority officers.[30] There are no dramatic trends in these data. Before 2013, lieutenant colonel retention rates varied slightly and were just under or just over 60 percent. From 2014 to 2021, however, retention rates were generally higher, ranging

[29] As Appendix E shows, gender, age, and below-the-zone promotion to major are all statistically significant, while the sets of marital status, accession source, and branch variables are each jointly significant.

[30] Again, we present these data by the year an officer would be eligible for promotion to O-6, although some officers who leave do so in earlier years.

FIGURE 5.7
O-5 Retention Rates, by Year



SOURCE: Authors' tabulations of the TAPDB.

from 63 (2019) to almost 70 percent (2021). Trends are similar for White and racial-ethnic minority officers, especially in 2013 and later.

Table 5.11 presents our estimates of lieutenant colonel retention rates, calculated separately for racial-ethnic groups. Once again, we see that some racial-ethnic minority groups have higher retention than Whites. For Black O-5s, retention is 3.2 percentage points higher than for White O-5s; for AAPI O-5s, the gap is slightly larger, at 4.1 percentage points. Once we control for other factors, predicted retention rates for Hispanic, AAPI, and Black O-5s are statistically larger than for Whites.[31] For example, the predicted difference between Black and White O-5 retention is 6.2 percentage points.

Promotion to O-6

Figure 5.8 presents our estimates of promotion to colonel for the O-5s who did not separate before being eligible for promotion, by year and for White and racial-ethnic minority officers.[32] The correlation between these promotion rates and promotion rates to lieutenant colonel (Figure 5.6) remains high (0.77), which again reflects likely force-shaping decisions. The promotion rate was about 70 percent at the beginning of the period but steadily declined and was just above the prewar level of 50 percent in 2012.[33] The rate reached a low of about 50 percent in 2013. However, the promotion rate to colonel rose with the subsequent increases in end strength;

[31] As Appendix E shows, gender, age, and below-the-zone promotion to lieutenant colonel are all statistically significant, while the sets of marital status, accession source, and branch variables are each jointly significant.

[32] Again, we present these data by the year an officer's cohort was eligible for promotion to O-6, although some officers are promoted below the zone, and some officers are promoted later.

[33] See Joyner (2012).

TABLE 5.11

O-5 Predicted Retention Rates, by Race and Ethnicity

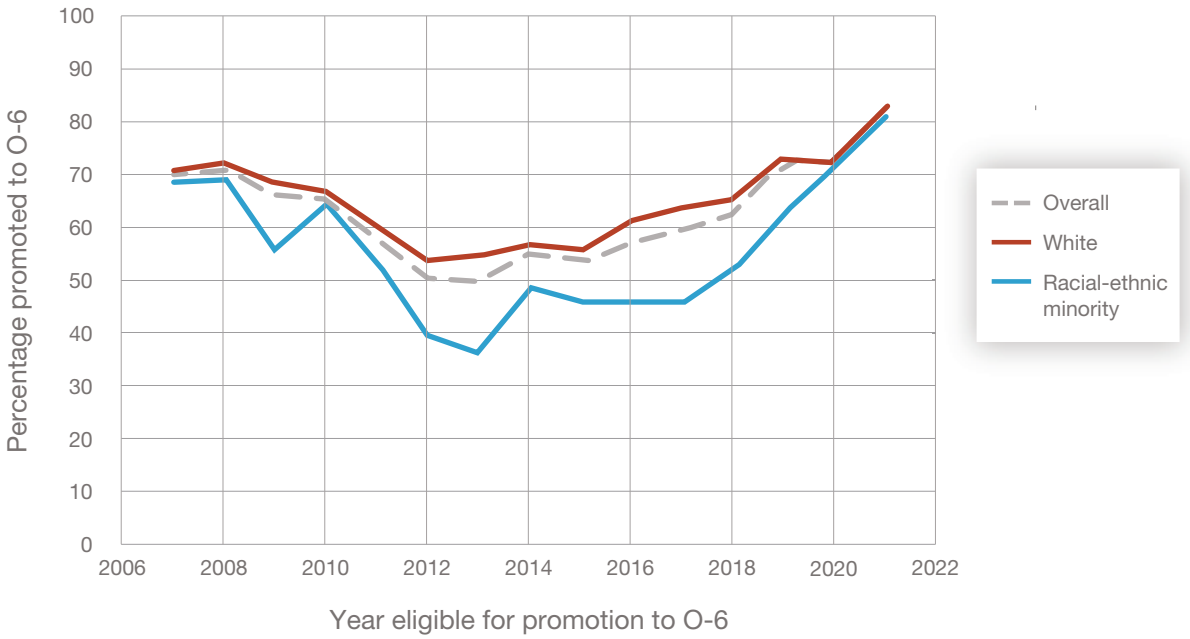
	Actual (%)	Adjusted (%)
White	62.6	62.0
Black	65.8***	68.2***
Hispanic	65.0	66.0**
AAPI	66.7*	66.1*
Native American	61.3	65.4

SOURCE: Predicted probabilities from logistic regressions (see Appendix E for full results).

NOTE: Asterisks indicate that a predicted probability is statistically different from White at the 1 percent (***), 5 percent (**), and 10 percent (*) levels. Adjusted regression includes additional controls for gender, age, marital status, children, accession source, branch, below-the-zone promotion to lieutenant colonel, and FY.

FIGURE 5.8

Promotion Rates to O-6, by Year



SOURCE: Authors' tabulations of the TAPDB.

by 2021, the rate was above 80 percent. The trends were broadly similar for White and racial-ethnic minority officers, although levels differed and racial-ethnic differences were smaller prior to 2011 and in 2020 and 2021.

Table 5.12 presents our estimates of promotion to colonel, calculated separately for racial-ethnic groups. As with promotion to major and to lieutenant colonel, most racial-ethnic minority groups have lower promotion rates to colonel than do Whites. For AAPI O-5s, the promotion rate is 8.9 percentage points lower than for White O-5s. The gaps are even larger for Black (10.3 percentage points) and Hispanic (13.9 percentage points) O-5s. Once we control for other factors, the differences in promotion rates are still statistically sig-

TABLE 5.12
Predicted Promotion to O-6, by Race and Ethnicity

	Actual (%)	Adjusted (%)
White	63.5	62.5
Black	53.2***	57.2***
Hispanic	49.6***	53.0***
AAPI	54.6***	55.6**
Native American	56.5	63.4

SOURCE: Predicted probabilities from logistic regressions (see Appendix E for full results).

NOTE: Asterisks indicate that a predicted probability is statistically different from White at the 1 percent (***), 5 percent (**), and 10 percent (*) levels. Adjusted regression includes additional controls for gender, age, marital status, children, accession source, branch, below-the-zone promotion to lieutenant colonel, and FY.

nificant but are smaller.[34] For example, the predicted promotion rate for Hispanic O-5s is now 9.5 percentage points lower than for White O-5s.

Below-the-Zone Promotions

Unlike below-the-zone promotions to major and to lieutenant colonel, we did not observe any statistically significant differences in below-the-zone promotions to colonel by race and ethnicity.[35]

Cumulative Differences by Race and Ethnicity

Consistent with the literature (e.g., Asch, Miller, and Malchiodi, 2012), while there are idiosyncratic differences at each decision point, the preceding analysis points to two general findings:

- Conditional on reaching a given paygrade, racial-ethnic minorities have *higher* retention rates than White officers.
- Conditional on achieving eligibility for promotion, racial-ethnic minorities have *lower* promotion rates than White officers.

Because these associations are in opposite directions, the net effect depends on the relative magnitudes of these differences.

However, we can use our empirical estimates from this chapter to simulate what the cumulative effects could be on the racial-ethnic composition of the officer corps. For this simulation, we began with the racial-ethnic mix of junior officers from FY 2020 and assumed an entry cohort had the same mix.[36] We then moved this cohort through each of the ten decision points outlined in this chapter, applying our estimates of retention and

[34] As Appendix E shows, age and below-the-zone promotion to lieutenant colonel are both statistically significant, while the sets of marital status, accession source, and branch variables are each jointly significant.

[35] See Appendix E.

[36] The choice of a specific racial-ethnic composition of the entry cohort is only meaningful when compared with the composition of the cohort once it reaches promotion to colonel.

promotion rates at each point. Finally, we compared the racial-ethnic mix of those who we simulated as eventually being promoted to colonel with the racial-ethnic mix of the entry cohort. This simulates how racial-ethnic representation would change over the career life cycle *if the historical differences we observe were to persist*.

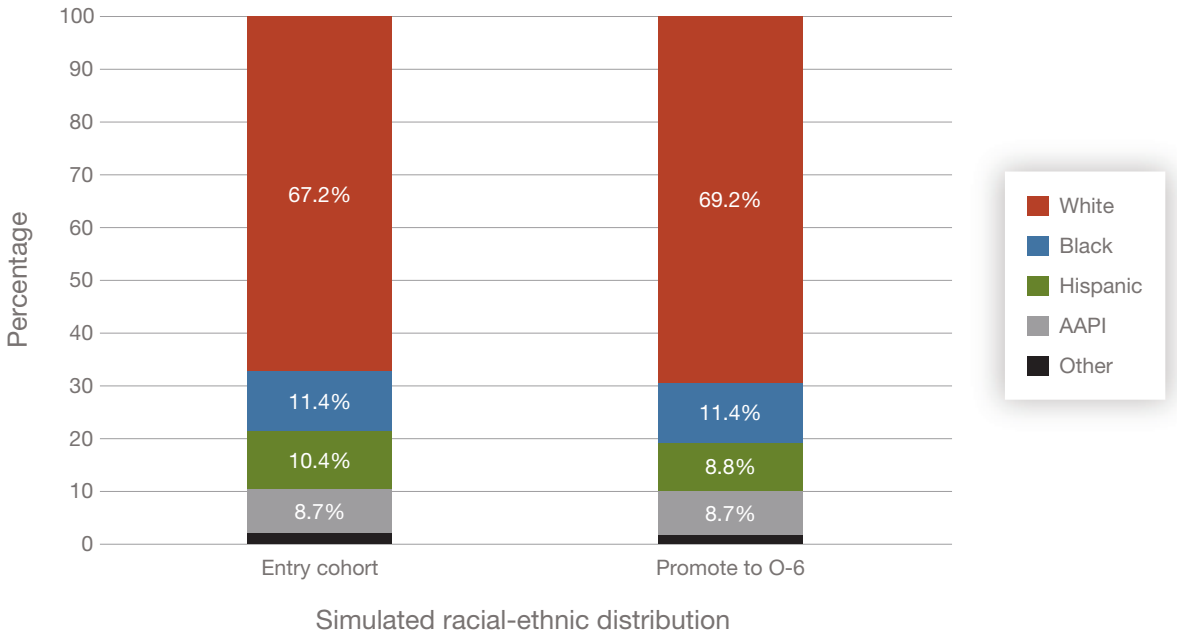
Our first simulation used the actual retention and promotion rates by race and ethnicity that we presented in the preceding tables. Figure 5.9 summarizes the results of this simulation.[37] The net effect of these differences in retention and promotion rates is that the officers we simulated as eventually being promoted to colonel are more likely to be White and less likely to be Hispanic than the entry cohort. The percentages that are Black and AAPI are unchanged.

As the preceding analysis has shown, however, some of the differences in retention and promotion rates by race and ethnicity are attributable to other observed factors. Therefore, our second simulation used the adjusted retention and promotion rates by race and ethnicity that we presented in the preceding tables. Specifically, at each decision point, we applied the adjusted rates for each racial-ethnic group *if they were statistically different from the rates for White officers*.[38]

Figure 5.10 summarizes the results of the second simulation.[39] A comparison with Figure 5.9 shows some striking differences. Now, the officers we simulate as being eventually promoted to colonel are *less* likely to

FIGURE 5.9

Simulated Racial-Ethnic Distribution Using Actual Retention and Promotion Rates by Race and Ethnicity



SOURCE: Authors' tabulations of the TAPDB and predicted probabilities from logistic regressions.

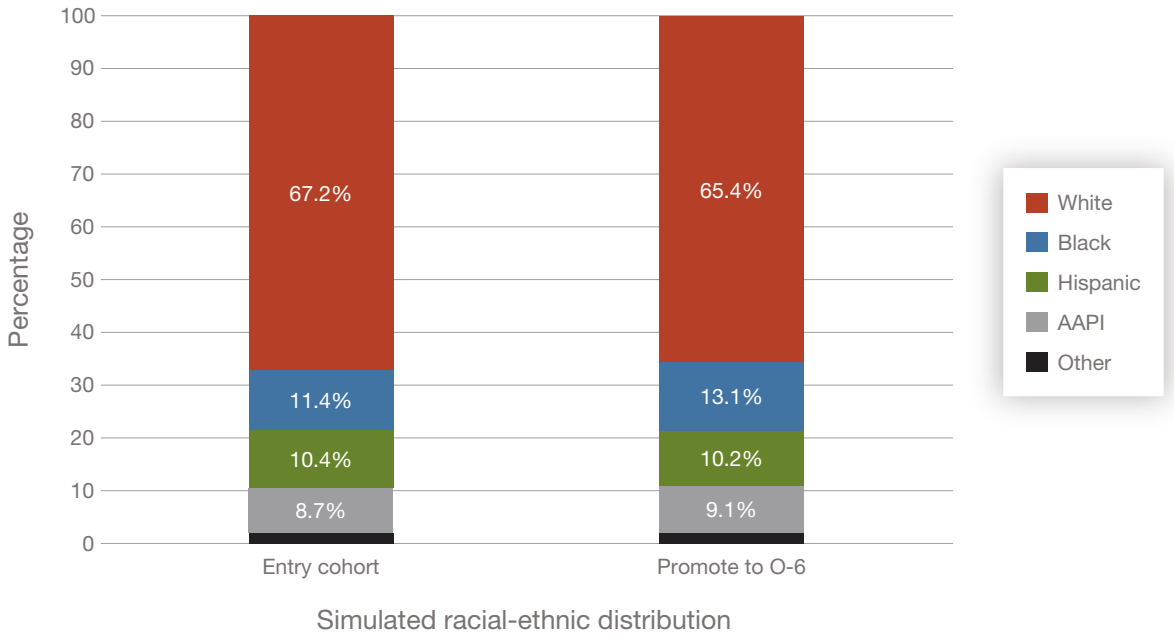
NOTE: The "Entry cohort" distribution is the actual racial-ethnic distribution of O-1s and O-2s in September 2020. The "Promote to O-6" distribution is what we would expect if the actual retention and promotion rates by race and ethnicity at each decision point applied.

[37] The entry cohort is the same distribution that we presented in Figure 2.3; the only visual difference is that we include one additional significant digit here.

[38] When there was no statistically significant difference, we applied the rate we estimated for White officers to a racial-ethnic group to ensure that our simulation was not affected by large, but statistically imprecise, percentage-point differences.

[39] For consistency, we used the same entry cohort in each simulation.

FIGURE 5.10
Simulated Racial-Ethnic Distribution Using Adjusted Retention and Promotion Rates by Race and Ethnicity



SOURCE: Authors' tabulations of the TAPDB and predicted probabilities from logistic regressions.
NOTE: The "Entry cohort" distribution is the actual racial-ethnic distribution of O-1s and O-2s in September 2020. The "Promote to O-6" distribution what we would expect if the adjusted retention and promotion rates by race and ethnicity at each decision point applied.

be White and *more* likely to be Black than the entry cohort. The percentage that is AAPI increases slightly, while the percentage that is Hispanic decreases slightly.

While some of the differences in promotion rates by race and ethnicity are attributable to other observed factors, our analysis shows that we cannot completely explain differences by race and ethnicity with these factors. Therefore, our third simulation examined what the racial-ethnic distribution would look like if all promotion differences by race and ethnicity were eliminated. Figure 5.11 uses the adjusted retention and promotion rates by race and ethnicity that we presented the preceding tables. Specifically, at each promotion point, we applied our estimates of White promotion rates *to each racial-ethnic group*.

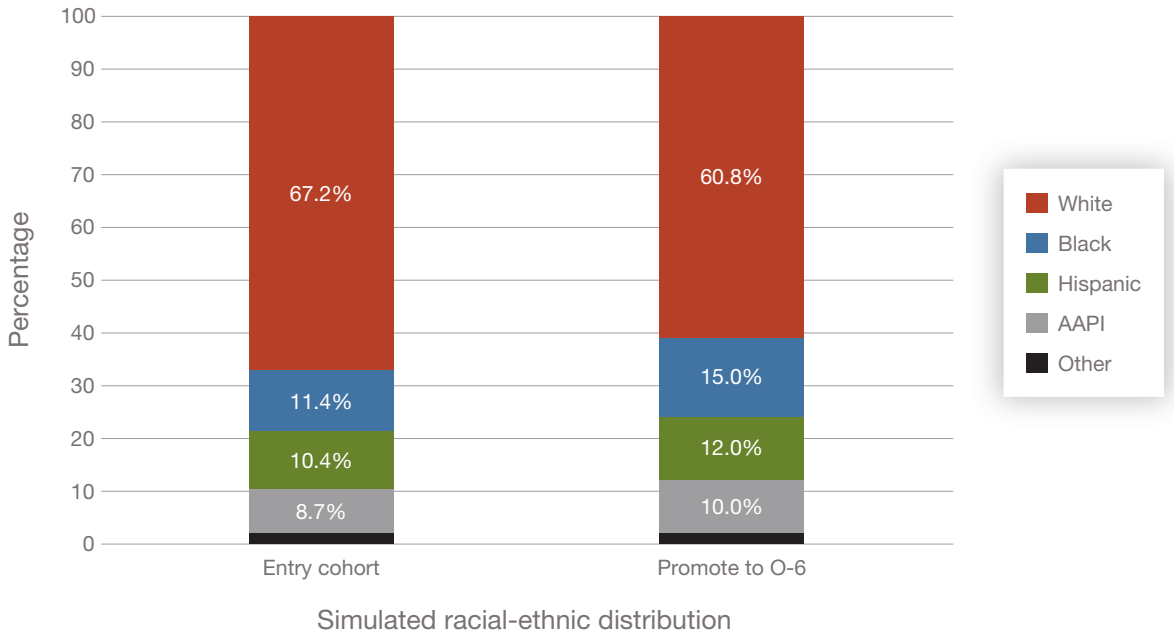
Figure 5.11 summarizes the results of the third simulation.[40] A comparison with Figure 5.10 shows even more striking changes: Representation of all racial-ethnic minority groups is higher among the officers we simulated as eventually being promoted to colonel than the entry cohort. These results suggest that, even accounting for observable differences between officers of different racial-ethnic groups, there would be higher representation of all racial-ethnic minority groups at the O-6 level if racial-ethnic differences in promotion rates were removed.

Race and Ethnicity Identification Data for Selection Boards

Given the role that differences in promotion rates play in shaping the racial-ethnic distribution of the force, we now assess the extent to which a recent policy change is associated with any change in outcomes. On

[40] For consistency, we continue to use the same racial-ethnic distribution for the entry cohort.

FIGURE 5.11
Simulated Racial-Ethnic Distribution Using Adjusted Retention Rates, by Race and Ethnicity, and White Promotion Rates



SOURCE: Authors' tabulations of the TAPDB and predicted probabilities from logistic regressions.
NOTE: The "Entry cohort" distribution is the actual racial-ethnic distribution of O-1s and O-2s in September 2020. The "Promote to O-6" distribution what we would expect if the adjusted retention rates by race and ethnicity and White promotion rates at each decision point applied.

June 26, 2020, the Army announced that, effective August 1, 2020, it would suspend the requirement to include official photos for selection boards and that any data that identifies race and ethnicity or gender would be redacted (McConville and McCarthy, 2020). This announcement was explicit about the intent of the policy change, "to help ensure that selection boards are as fair and impartial as possible" and that "our promotion processes remain consistent with our Army Values, the Army People Strategy, and our Talent Management initiatives" (McConville and McCarthy, 2020, pp. 1–2). Furthermore, this decision was made after considering the results of an experiment that showed improvement in outcomes for racial-ethnic minorities and for women (Rempfer, 2020).

While this policy change was effective near the end of the period for which we have data (October 2001 through January 2022), we observed enough promotions to examine whether and how racial-ethnic differences in promotion rates changed after its implementation. To do so, we reestimated our promotion to O-4, promotion to O-5, and promotion to O-6 regressions, with two differences in how we categorized officers.[41] First, to highlight any differences before and after the policy change, we aggregated racial-ethnic minority groups into a single category (non-White).[42]

Second, we categorized officers into one of two groups, those who likely were affected by the policy change and those who were not. We could be certain that the board files for officers first observed in the next grade

[41] The regressions presented earlier and in this chapter used the identical populations of officers. Recall that each sample consists of officers who did not separate before being eligible for promotion.

[42] Separate analyses for each racial-ethnic minority group yielded qualitatively similar results, although there was less statistical precision.

before August 1, 2020, contained official photos and racial-ethnic information (i.e., were not affected by the policy change).

However, because we could not directly observe when an officer's file went before a selection board, we had to make some assumptions for other officers based on the available data. We assumed that all officers first observed in the next grade after August 1, 2020, were affected by the policy change. It is likely that this included some officers who were selected for promotion by a board before August 1, 2020, but who were not promoted until after August 1, 2020. This will bias our results for this group against finding an effect of the change in policy.[43]

We categorized all officers not observed in the next grade according to their estimated eligibility month of promotion. Specifically, if the month we estimated an officer to be eligible for promotion was on or after August 1, 2020, we assumed that they were affected by the policy change; if before that date, we assumed that they were not affected. Given how we estimated eligibility month (i.e., the month an officer is actually eligible can be earlier or later than the estimated eligibility month), the direction of any bias is unclear.

Promotion to O-4

Table 5.13 presents our estimates of differences in promotion rates to major, calculated separately for racial-ethnic groups. To highlight the key findings, the layout of this table is different from those earlier in the chapter. For O-3s whose board files contained official photos and racial-ethnic information, we estimated a difference between White and non-White promotion rates of 3.0 percentage points, once we controlled for other factors. This difference is statistically significant at the 1-percent level and is consistent with the differences by race and ethnicity that we presented in Table 5.6.

As the table also shows, our estimate for O-3s whose board files did not contain this information is extremely small, about 0.05 percentage point.[44] The difference is not statistically different from zero, which means that, after the policy change, White and non-White promotion rates to major are statistically identical.

The third row helps us assess whether the promotion rate gap changed after the policy change and requires some additional interpretation. If the promotion rate gap was the same before and after the policy change, the third row would show a difference of zero. At the other extreme, if the promotion rate gap was eliminated after the policy change, the third row would show the same estimate as the first row (in this case, 3.0 percentage points). As Table 5.13 shows, we estimate a difference of 3.05 percentage points, a difference that is statistically significant at the 10-percent level. The results thus suggest that the policy change was associated with the preexisting racial-ethnic disparity in promotion rates to major shrinking to zero.

Promotion to O-5

Table 5.14 presents our estimates of differences in promotion rates to lieutenant colonel. For O-4s whose board files contained official photos and racial-ethnic information, we estimated a difference between White and non-White promotion rates of 4.86 percentage points, once we controlled for other factors. This difference is statistically significant at the 1-percent level and is consistent with the differences by race and ethnicity that we presented in Table 5.9.

[43] This will also include some officers who were reviewed by a board before August 1, 2020, and not selected but who were selected by a subsequent board, after August 1, 2020. This would *not* bias our results, as the officer is accurately characterized as affected by the policy change.

[44] The point estimate suggests that non-White promotion rates were slightly *higher* than White promotion rates, although, as we note, the two rates are not statistically different from one another.

TABLE 5.13
Predicted Promotion to O-4, by Race and Ethnicity and Period

	Difference (percentage points)
White minus non-White, before August 1, 2020	3.00***
White minus non-White, after August 1, 2020	−0.05
Difference	3.05*

SOURCE: Predicted probabilities from logistic regressions (see Appendix E for full results).

NOTE: Asterisks indicate that a predicted difference in probabilities is statistically different from zero at the 1 percent (***), 5 percent (**), and 10 percent (*) levels. Adjusted regression includes additional controls for gender, age, marital status, children, accession source, and branch. P-value of the difference in racial-ethnic differences before and after the removal of photos is 0.077.

As the table also shows, our estimate for O-4s whose board files did not contain this information is smaller, about 0.63 percentage point. The third row shows a difference between the two estimates of 4.23 percentage points. However, neither of these two estimates is statistically different from zero. The interpretation is that, while the point estimates imply that the policy change was associated with a reduction in racial-ethnic disparities in promotion rates to lieutenant colonel, we also cannot rule out the possibility that there was no change.

Promotion to O-6

Finally, Table 5.15 presents our estimates of differences in promotion rates to colonel. The results are qualitatively similar to those for promotion to lieutenant colonel. While the point estimates imply that the policy change was associated with a reduction in racial-ethnic disparities in promotion rates to colonel, we also cannot rule out the possibility that there was no change. A comparison of the point estimates in Table 5.14 and Table 5.15 shows that a larger gap between White and non-White promotion rates remained for colonel than for lieutenant colonel, although the difference is not statistically significant.

Summary

Consistent with the literature (e.g., Asch, Miller, and Malchiodi, 2012), our primary analyses of officer career progression show the following:

- Conditional on reaching a given paygrade, racial-ethnic minorities have higher retention rates than White officers.
- Conditional on achieving eligibility for promotion, racial-ethnic minorities have lower promotion rates than White officers.

We also conducted simulations to estimate the cumulative impact of these promotion and retention trends by race and ethnicity. Based on historical promotion and retention rates, we simulated officers eventually promoted to colonel as being more likely to be White than their share in the entry cohort (see Figure 5.9). When we accounted for other observed factors, however, the officers we simulated as being eventually promoted to colonel were *less* likely to be White and *more* likely to be Black than the entry cohort (see Figure 5.10). Despite

TABLE 5.14
Predicted Promotion to O-5, by Race and Ethnicity and Period

	Difference (percentage points)
White minus non-White, before 1 August 2020	4.86***
White minus non-White, after 1 August 2020	0.63
Difference	4.23

SOURCE: Predicted probabilities from logistic regressions (see Appendix E for full results).

NOTE: Asterisks indicate that a predicted difference in probabilities is statistically different from zero at the 1 percent (***), 5 percent (**), and 10 percent (*) levels. Adjusted regression includes additional controls for gender, age, marital status, children, accession source, branch, and below-the-zone promotion to major. P-value of the difference in racial-ethnic differences before and after the removal of photos is 0.404.

TABLE 5.15
Predicted Promotion to O-6, by Race and Ethnicity and Period

	Difference (percentage points)
White minus non-White, before 1 August 2020	6.52***
White minus non-White, after 1 August 2020	2.10
Difference	4.42

SOURCE: Predicted probabilities from logistic regressions (see Appendix E for full results).

NOTE: Asterisks indicate that a predicted difference in probabilities is statistically different from zero at the 1 percent (***), 5 percent (**), and 10 percent (*) levels. Adjusted regression includes additional controls for gender, age, marital status, children, accession source, branch, and below-the-zone promotion to lieutenant colonel. P-value of the difference in racial-ethnic differences before and after the removal of photos is 0.659.

these simulated results, not all of the racial-ethnic group differences in promotion rates can be attributed to other observed factors. If all promotion differences by race and ethnicity were eliminated, representation of all racial-ethnic minority groups would be higher among the officers we simulated as eventually being promoted to colonel than among the entry cohort (see Figure 5.11).

In addition to these findings, we also conducted exploratory analyses of promotion outcomes after the Army removed race and ethnicity identification data from officer selection boards in 2020. We found evidence that this policy change is associated with improved outcomes for racial-ethnic minority groups. There is enough statistical precision to be fairly confident about the findings for promotion to major. For promotion to lieutenant colonel and to colonel, the estimates are suggestive of improvements, but there is too much variance in the data to draw definitive conclusions. It is also worth noting that relatively little time has passed since the policy change and that our statistically significant findings are where we observe the most promotions (meaning, our analysis was unable to find statistically significant differences for lieutenant colonel and colonel promotions because of the small sample size).[45] Finally, the racial-ethnic gaps in O-4, O-5, and O-6

[45] Our data show approximately 3,000 promotions to major from August 2020 to January 2022. In contrast, there were approximately 1,100 promotions to lieutenant colonel and approximately 400 promotions to colonel over the same period.

promotion rates tended to be smaller prior to 2012, when promotion rates were higher (and promotions were therefore less competitive), and promotion rates in 2020 and 2021 were higher than in previous years (see Figures 5.4, 5.6, and 5.8). This makes it more difficult to be certain that the policy change was truly behind the shrinking of racial-ethnic differences in promotion rates without data from years in which promotions were more competitive. Our findings warrant continued data collection and follow-on analyses as more selection boards convene.

CHAPTER 6

Qualitative Findings on Officer Promotions

The quantitative analyses presented in Chapter 5 show that racial-ethnic minority officer promotion rates tend to be lower than those for White officers, which somewhat limits racial-ethnic minority officer representation in higher grades. To better understand why promotion rates for racial-ethnic minority officers might be lower, we interviewed officers who were then currently (or were recently) in command or other leadership positions in which they would be involved in evaluating (or rating) their subordinate officers. These ratings play a key role in officer promotion decisions because of the importance of performance evaluations and rater recommendations in providing information to promotion boards.

Specifically, we interviewed 12 officers about rater recommendations regarding officer promotions.[1] We asked what factors raters and senior raters consider when evaluating officers for below-the-zone promotions and above-the-zone promotions, what information raters use for the evaluations, and whether there are constraints on raters' ability to perform the evaluations. We also asked about ways the Army can support raters who provide officer evaluations. Finally, we explicitly asked participants whether there were ways that race and ethnicity could associate (directly or indirectly) with officer evaluation and promotion recommendations.

Similar to our interview findings on enlisted career outcomes in Chapter 4, about one-half of the 12 officers we interviewed did not point to ways in which race and ethnicity might relate to officer promotion decisions. Among the participants who discussed how race and ethnicity could relate to officer promotions, topics ranged from negative biases to differences among officer career fields in their career advancement potential. We offer more details on these discussions later in this chapter, after we provide broader context on what interviewees describe as the factors associated with officer promotions and constraints in the officer evaluation system.

Factors Associated with Promotability

Table 6.1 summarizes the factors interview participants identified as being associated with below-the-zone promotion and above-the-zone promotion. Key factors for below-the-zone promotion focus on the performance and potential of officers and on having strong recommendations from senior raters. Key factors for above-the-zone promotion tend to focus on why officers may not have been promoted during their primary zone, including performance issues, poor timing issues, and personality conflicts with one or more previous raters.

Below-the-Zone Factors

In line with previous literature (e.g., Rostker et al., 1993), most of the officer participants mentioned that an officer needs to perform extremely well and have a high level of potential to be considered for below-the-zone promotion. Some participants elaborated by giving examples of what raters look for. Three participants

[1] Although we had 14 officer participants, two were captains and had limited experience evaluating other officers.

TABLE 6.1
Key Factors Associated with Officer Evaluations That Affect Promotability

Promotion Zone	Key Factors
Below the zone	• High levels of performance (as indicated by rater evaluations) – Success in key and developmental assignments, special projects – Attending certain special schooling • Strong recommendation and rating of potential by senior rater – High enumeration/top block ("most qualified") – Strong recommendation language
Above the zone	• Prior performance issues and potential for next grade not demonstrated • Bad timing for assignments and evaluations • Personality conflict with previous raters

specifically mentioned continued success in key developmental assignments. As one participant put it, "they have a continued pathway and have had success in very hard leader positions, and they do it very well, and that is what it comes down to." Examples related to key developmental assignments include performing well on "special projects" given by their commanders and advancing to attend special schools (e.g., Airborne).

Several participants specifically raised the importance of demonstrating leadership. Examples of leadership attributes include the ability to think strategically, solve problems, and communicate well. One participant identified several such attributes:

> I was grading them on their competence, confidence. Can they answer the question, or are they only smart on what they've read? Can they have a conversation? Are they prepared to engage a senior leader at the level that would be commensurate with their next rank? Also, [I'm] looking at leadership style, talking to the formation they are in charge of leading and their peers. Do they want or need to feed off of teamwork and building that organization as a whole? In some of the cases for those that I recommended for promotion, they were able to talk to senior leaders [and were] comfortable handling challenges [and] dealing with soldiers who get arrested and soldiers who end up in the hospital. Are they panicking, or are they taking it in stride and understanding it's not about the situation, [but] it's about how you react to it?

Another key element of below-the-zone promotions comes from the ratings and recommendations of senior raters, who are usually two levels above the ratee (e.g., a brigade commander for officers who report to a battalion commander). Participants mentioned that an officer needs a "high enumeration" and strong message about their potential from the senior rater for a promotion board to consider the officer for below-the-zone promotion.[2] A participant explains the factors that a senior rater has to consider:

> How a senior rater sends the right message [is important]. The easy answer is, "Am I going to block-check him and give him a most qualified or qualified?" The other message is, if the below-zone officer is to clearly enumerate, where does the officer stand based on their unit or career? A message for a below-zone officer [would be]: Is the officer number 1 out of X, or out of 50, or out of 40?

[2] *Enumeration* refers to the ratings of potential that a senior rater provides, with "most qualified" being the "top block" on an OER.

Above-the-Zone Factors

As noted, most participants who discussed above-the-zone promotion described reasons that officers might have been previously passed over for promotion. Six participants described performance-related issues. One participant gave an example about one of his subordinates:

> This guy was a captain, and as a lieutenant colonel, I asked a question to make sure we are on the same page. I said: "Do you got it? Do you know what my intent is?" And they would say, "Yes." But, then they would come back with nothing that I asked for and completely missed the mark. At some point, you have to understand your boss.

Three participants also pointed to misalignments between officer assignments and performance evaluations. As one participant put it, "he still loves to serve. It was just bad timing when he assumed command. He has potential to promote, just has to demonstrate those behaviors and attributes."

Five participants also mentioned cases where they, as raters, believed the officer being evaluated had had a personality conflict with a previous rater, resulting in a lower rating. One participant described such a situation:

> I had two captains that got passed over for their primary zone to major and they came to work for me, and they became rockstars. It was a personality issue with their senior raters; the environment wasn't conducive for their styles, but we worked heavily to get them to majors.

Some participants also noted that a strong recommendation from the senior rater is needed to overcome derogatory information in their files or a previous less-than-stellar evaluation. However, senior raters might be reluctant to do so, especially if they do not know the officer well.

When a rater does not believe an above-the-zone officer is promotable, the question then turns to one of retention. As a participant describes it:

> I think they [raters] are considering, are they still a valuable asset to the organization? Maybe they are not considered to have potential for the next ranking grade or a command, but maybe they still have a trait or additional value to the organization by being there and doing their job. Other consideration is time in grade in relation to retirement, if they are only a few years out, do you really want to do that? It doesn't make sense for them to get passed down and lose everything.

Ultimately, as with below-the-zone promotion recommendations, there is subjectivity in these decisions. As a participant put it: "What you used to distinguish above or below officer-select is really subjective to every leader, to how well you know the objectives of the organization and what it means to be successful at your job. It's very subjective, so that's what makes it really hard."

How Raters Evaluate Officers

Most officer participants spoke of their roles as primary raters and indicated that they had learned about officer (ratee) performance through direct interaction on a regular basis. For example, one participant noted: "Much of what I glean is from firsthand experiences with them. That population, I have daily interaction with, both in garrison and in training and during deployment." Some participants indicated that they also talked directly to the officer's subordinates to learn about their leadership styles. As one participant explained, "I have touch points with subordinate leaders twice a week and also circulate to watch senior NCOs and see how they interact with soldiers when I'm not there."

Participants also emphasized the role of counseling their subordinates as a way to communicate expectations for promotion and to give them opportunities to demonstrate their potential. One participant described such a situation with two captains determined not yet competitive for promotion: "What I tell those one or two captains that are not competitive is just to not compete and give yourself another year, and I will talk with your senior rater on how to showcase your performance and ability. We are providing different schools to give him [one of the captains] the ability to lead others."

The last quote also points to the importance of the relationship between a rater and senior rater. Participants mentioned that senior raters generally review the ratees' records and get input from the primary rater. Some participants noted that senior raters might go beyond conversations with the rater and seek direct feedback from the ratee's peers and subordinates.

In general, the way that raters and senior raters gather inputs to complete their evaluations is not particularly noteworthy. That is, many organizations' leaders use direct observations and discussions with subordinates to evaluate performance and determine potential. However, as discussed in the next section, certain constraints within the Army could limit how well raters and senior raters can evaluate officer performance and potential. These constraints could have implications for promotion differences between racial-ethnic groups.

Constraints in the Officer Evaluation System

Just under one-half (five out of 12) of the officer participants did not believe there were any constraints in evaluating officers and recommending officers for promotion. In this section, we describe the types of constraints the remaining seven participants identified.

Profile Policy

The most commonly mentioned constraint is the policy that restricts the rater's "profile:" the percentage of officers who can fall into each "block," or rating category, with the top block being MQ.[3] As one participant explains, "It's regardless of how highly I think of my population, I'm limited to 49 percent of a block check—so is the boss [senior rater]—so that is the constraint that is ever present."

Participants who mentioned this policy as a constraint generally acknowledged there is a logical reason for it (i.e., to force raters to differentiate among the officers they rate). The flip side is that the limited number of MQs that a senior rater can give requires a risk assessment on the part of senior raters; they want to give top blocks to officers with who have a good chance at being promoted. This risk assessment is particularly challenging for officers who have been passed over for promotion and are above the zone. As this participant explains: "[The senior rater has already decided:] 'The [rate of] promotion for above the zone is low and giving this MQ is a waste of time unless they have a high likelihood of making it.' It's up to the senior rater." Given that our quantitative analysis shows that White officers are more likely than racial-ethnic minority officers to be promoted below the zone to major and lieutenant colonel, racial-ethnic minority officers might have fewer opportunities to receive MQs than White officers.

[3] AR 623-3 specifies the policy: "In order to maintain a credible profile, the senior rater must have less than 50 percent of the ratings of a rank in the 'Most Qualified' top box" (AR 623-3, 2019, p. 43).

Ability for Raters to Differentiate Performance and Identify Problematic Behaviors

In addition to the constraint imposed by the profile policy, a few participants pointed to the challenge of differentiating among different levels of officer performance and how that difficulty introduces subjectivity into evaluations. One participant explained:

> You look at performance at a level that indicates that, if I put you in the next job today, you would excel at that job, not only tread water. But if I put you as a commander, you'll be in the top 3. Again, it's very subjective.

Another participant pointed to the difficulty for raters of identifying officers who display problematic leadership behaviors:

> Is the officer invested in the mission and taking care of their soldiers? We call it a "Spotlight Ranger": Is the person only in the business for their own self-promotion and stepping on subordinates to get there or taking credit for their subordinate's work or engaging in hazing or bullying or tolerating equal opportunity issues or sexual assault? It starts as a gateway drug, like making off-color jokes. Difficult to find things to weed out, but if we do, the top performers will rise to the top.

Although the Army has recently begun to implement assessment programs (e.g., the Battalion Commander Assessment Program) to identify officers fit for command positions, such programs will not be able to include all officers, particularly junior officers. Thus, it remains up to raters and senior raters to identify junior officers who are engaging in poor leadership behaviors.

Leadership Transitions and Number of Officers to Evaluate

A few participants also pointed to systemic challenges that limit the amount of time that raters and senior raters have to get to know the officers they are evaluating. Two participants raised the challenge of leadership transitions. One participant explained: "Issues in the Army that I see are limited touch points [between leaders and subordinates], because [of] changing of commanders or deployments. It is a significant time investment. . . . I mean, there are virtual [interactions], but you can't replace face to face."

Two participants also noted that some senior raters have a lot of officers to evaluate and do not have time to get to know everyone well enough. A participant described this issue: "The senior raters are responsible for writing for officers who have 30, 40, or 50 officers. Gives me concern because how can we make the assessment if you have that many? There's no way to touch base with all of them directly."

Interaction Between Career Field and Unit Type

A few participants noted that another constraint has to do with which career field or branch is dominant in a particular unit. For example, an infantry battalion will be commanded by an infantry officer. Officers from other branches, such as military intelligence, will be in the racial-ethnic minority in such units. This can put officers from those branches at a disadvantage for receiving developmental opportunities and in their evaluations. One participant explained this interaction, noting the different attributes that military intelligence units in Intelligence and Security Command value compared with FORSCOM units:

> A lot of it is in military intelligence. You can go into Forces Command or Intelligence and Security [Command]. They tell you in school [for intelligence officers] that you are rolling the dice with your career in FORSCOM. We want our best to go to FORSCOM, but they don't value promoting you in it. So, people opt

> to go to intelligence security [i.e., Intelligence and Security Command]. But FORSCOM is not a level playing field. Expectations are higher for a maneuver leader than an intel leader. If you are smart and not good at PT, they won't care about you in FORSCOM. But intel will value it. ACFT factors play a big role into it.

This example does not have a clear link to racial-ethnic group differences in opportunities. However, prior research shows that racial-ethnic minority officers are more likely to be in support career fields than combat arms (MLDC, 2011). To the extent that officer assignments in support career fields are more likely to be dispersed among combat arms units than vice versa, it could be the case that racial-ethnic minority officers are more likely to be in units where their career field members are in the numerical minority. This might present another potential barrier for racial-ethnic minority officers to receive career opportunities and be promoted.[4]

Associations Between Race and Ethnicity and Officer Evaluations and Promotions

We asked participants how race and ethnicity might relate to officer evaluations and promotion processes. The responses were split down the middle, with six of the 12 officer participants indicating no knowledge of how race and ethnicity might relate to officer evaluations and promotions, and the others providing examples of how race and ethnicity might relate to officer evaluations and promotions. Below, we describe what the latter six participants identified as potential race and ethnicity factors.

Potential Bias and Negative Perceptions

Three participants pointed to the potential for unconscious bias and negative perceptions to play a role in how leaders and racial-ethnic minority officers interact.[5] For example, one participant described how the different demographics between Army leaders (who tend to be White) and racial-ethnic minority officers might manifest as unconscious bias:

> How does his unconscious bias not play a role when you don't get many interactions? Small interactions and unconscious bias will play a role. They answer all the questions, but this one time, this person did this, and it rubbed me the wrong way. I am also looking at the current generation of senior raters who were 90s and 80s kids who also come from the South [southern United States]. In the 80s and 90s in the South, "racism light" was the default. We assume this doesn't play a role, but it's illogical to say otherwise.

Two participants pointed to racial-ethnic minority officers' perceptions that they have to work harder than others and might not have access to as many opportunities in their units. As one participant explains:

---

[4] We are not aware of research showing evidence of a relationship between assignment opportunities by branch and differences in career outcomes by race and ethnicity group. However, a study of Army officer mentorship found that mentees (in this case, Army captains) who had "high-performing mentors" (operationalized in the study as battalion commanders previously promoted below the zone) were more likely to promote early than mentees without "high-performing" mentors. Although race and ethnicity were not the focus of the study, the authors explored whether race and ethnicity of the mentee and race and ethnicity match of mentor-mentee pairs predicted the mentee's likelihood of ever having a high-performing mentor. They did not find evidence that race and ethnicity affected racial-ethnic minority mentees' chances of ever having a high-performing mentor (Lyle and Smith, 2014). This analysis required combining Army administrative records with OER data, the latter of which were not available for our analysis.

[5] Unconscious, or implicit, bias has been generally framed as prejudice for or against certain groups of people that is not conscious to the person with the prejudice. See De Houwer (2019) for a discussion about the definition and measurement of implicit bias.

> Yeah, they [racial-ethnic minority officers I know] say that they are working more than others in the company or in the organization, that they are put to work on the weekends more, or they are not sent to school. Like, for example, someone just got to the command, and they perceive, because they are from another race, they don't go to Airborne [school].

Some research lends support to these challenges for racial-ethnic minorities. A study on the interactions between supervisor-supervisee race and performance evaluations found that racial-ethnic minorities received less-favorable performance evaluations if the evaluator was of a different race, even after controlling for other demographic characteristics and worker productivity (Elvira and Town, 2001).

Another potential mechanism by which racial-ethnic minority officers might not receive as high evaluations as their White peers has to do with what is known as the *Pygmalion effect*, which refers to people internalizing beliefs others have about them and behaving in ways consistent with those beliefs.[6] One participant raised this possibility: "There is a bias present that minority officers might struggle with written and oral communication . . . . Minority officers recognize that, and that could be harmful. This is in their own head and might impact them." This participant suggested that leaders should engage in more open dialogue with junior officers from underrepresented groups to ensure that these officers do not internalize negative beliefs like those just described.

Other Potential Factors

Two participants identified other factors that might tie race and ethnicity to officer evaluations and promotions. One participant pointed to the role of career field and promotability, noting that the "cluster of disciplines" that racial-ethnic minority officers go into "don't necessarily rise to upper-level leadership positions." This idea aligns with the discussion in Chapter 4 about access to career opportunities varying by career field, which might affect racial-ethnic group differences in enlisted promotions. Indeed, our quantitative analysis in Chapter 5 does show that racial-ethnic group differences in officer promotion rates are somewhat smaller after accounting for Army branch.

Yet another participant indicated a belief that removing demographic indicators from the officer promotion packets could exacerbate racial-ethnic differences in officer promotions:

> Commanders I spoke with believed removing photos, things like that, it was not productive because, if we're trusting leaders to have an unbiased look at individuals, now people are starting to guess: "Am I only picking people because their name sounds Black?" You don't get the whole look of a person when you can't see them. A lot of people thought it was a bad idea, that it wasn't helpful at all. Folks who want to champion diversity, you're throwing another constraint on them, they can't process the complete person without understanding who they're talking about.

However, in Chapter 5, we showed that racial-ethnic group differences in promotion rates were smaller (at least for promotion to major) after the Army implemented the policy to remove demographic identifiers from the boards. It is also worth noting that raters and senior raters are still able to interact with the officers they rate, which would allow demographic identification during the evaluation process preceding the promotion boards.[7]

[6] See Sabat et al. (2020) for a discussion about this concept and how it relates to the experience of racial-ethnic minorities in the workplace.

[7] Previous studies on racial-ethnic minority group differences in officer promotions suggest that, once officers' records are adjusted statistically to "look alike," promotion board outcomes show few racial-ethnic group differences (see, for example,

Ways the Army Can Support Commands in Evaluating Officers

We asked participants if the Army could better support the officer evaluation process. Nine of the 12 participants provided ideas. Participants identified two main themes: (1) additional information and education to help raters improve evaluations and (2) policy or systemic changes that would provide more time for raters to get to know officers.

More Information and Education for Raters

A few participants talked about additional information to help with evaluations and developing officers. Two specifically mentioned more education for junior officers on how to write evaluations and what promotion boards look for. As one participant put it: "I think they need to educate officers earlier in their career. That way, if they are senior raters or raters, they know how to write that stuff. I mean, I didn't know how to write that. I mean, the board looks for 'x,' and I didn't know how to write that until I was a field grade officer."

One participant suggested that the Army remove "the 'green curtain'" and be "open about board guidance," that is, what the promotion board members are told to look for in officers' records. This participant also suggested that the Army provide raters with assessment results, such as those from the Talent Assessment Battery, which "provides Cadets with feedback on their emotional and intellectual strengths" as part of the Army's talent-based branching system that aligns Army cadets with Army branches (Windmueller, 2021). The participant thought the information could be used as part of counseling and developing officers.

Another participant offered a suggestion that involves giving more information to senior raters *and* is directly tied to race and ethnicity. Specifically, the participant suggested that senior raters review the demographic distributions to whom they give MQ and "highly qualified" ratings. As the participant put it, this is not currently required but could help increase awareness for senior raters on the impacts of their decisions:

> There is no one doing the numbers. My senior rater is not asking about the percentages for tracking which races get MQs and HQs [highly qualified individuals]. We just scrub it out of centralized boards, but no one looks at the senior raters. I sincerely doubt they do because they can delegate their profile. No one has someone who gives racial demographic information on it. If you showed that, I think it would be an eye-opening experience for them.

Research lends some support to this idea about increasing awareness as a way to increase leader accountability. Specifically, decisionmakers are less likely to make biased decisions when they believe they will be held accountable for their decisions and are informed of "equity norms" (Koch, D'Mello, and Sackett, 2015, p. 131).

Policy and Systemic Changes to Give Raters More Time

Some participants felt the Army needed to make policy or systemic changes that would allow raters, including senior raters, more time to know their officers, which they surmised would help improve officer development and evaluations. Two participants suggested that the amount of time that a senior rater needs to have before evaluating someone should be extended.[8] As a counterpoint to this argument, the participant noted that the Army does have an extended OER policy that allows raters to request an extension for the period

Lim et al., 2021). These authors noted that racial-ethnic group differences in career opportunities and evaluations prior to the boards are the main sources of racial-ethnic group differences in promotion outcomes.

[8] AR 623-3 documents this policy: "To render a written OER, the senior rater must have been designated as the rated officer's senior rater for a minimum period of 60 calendar days, except as otherwise provided in this paragraph" (AR 623-3, 2019, p. 11).

under review.[9] Because the Army already has a policy in place to extend evaluation periods, it could be a matter of determining the extent to which raters use the policy for cases where they do not feel they have had enough time to know the officer they are evaluating.

Two participants noted more-systemic changes that they believe would help. One mentioned leaving officers in assignments for longer than 12 months so that they can learn their jobs well enough to perform and give raters more time to observe performance after the initial learning period ends. Another participant suggested that a way to address the challenge of senior raters having too many officers to evaluate is to have more "consolidated teams" with "additional leaders" in the senior rater's organization. While this would not reduce the total number of officers that a senior rater would have to evaluate, it would add additional leaders who could observe the ratees and give inputs to the senior rater.

Although these suggestions for policy or system changes are not directly related to racial-ethnic group differences in officer promotion, efforts to address racial-ethnic group differences could be constrained by time-related factors that these suggested changes would address. The implication is that efforts the Army could take to address racial-ethnic differences in officer evaluations and promotions, such as providing additional education for junior officers to learn how to write evaluations, will be limited by how many hours in the day the officers can dedicate to that education, given all their other duties.[10]

Summary

Raters and senior raters play central roles in the officer promotion system, even if they are not the ones making the final promotion decisions. Officers who promote early (below the zone) are evaluated as top performers with high potential to succeed. Officers who promote later than their peers (above the zone) are more likely to have information in their records that does not reflect stellar performance and may even include derogatory information. However, the reasons for not having unblemished records can range from actual performance issues to personality conflicts with their bosses to misalignment of promotion timing and assignments.

How raters (who focus on performance) and senior raters (who focus on potential) gather information to evaluate officers is similar to what is done in other organizations: direct observations, conversations with ratees, and discussions with each other (raters and senior raters). The constraint of not having enough time to develop and evaluate is also not unusual across organizations; neither is the latitude afforded to senior raters in how they recommend who has potential to succeed. And just as in other organizational settings, the combination of time constraints with a fair amount of latitude in decisionmaking can result in greater subjectivity, opening the door for biases to seep into decisions.

Although most of the officer participants did not point to discrimination as a reason that racial-ethnic minority officers may not promote at the same rate as White officers, a few participants indicated that such bias could exist among raters. Bias may manifest in fewer career-enhancing opportunities given to racial-ethnic minority officers. In a related vein, racial-ethnic minority officers might behave in ways that limit their potential if they believe they are being held to different standards than White peers. Although participants did not offer many solutions to address these issues, the ones they did suggest tended to fall into two broad categories: (1) more education and information for raters and senior raters to improve how they evalu-

[9] The "extended annual" OER option is described in AR 623-3 (AR 623-3, 2019).

[10] Previous RAND Arroyo Center research found that Army company commanders have a high level of "time burdens" because they are, in part, overtasked by higher headquarters and lack enough resources and experience to successfully address their time constraints (Saum-Manning et al., 2019).

ate officers and (2) systemic changes to assignment and evaluation timelines to give officers more time to develop as leaders and to give raters (and senior raters) more time with the officers they evaluate.

CHAPTER 7

Local Labor Markets and Differences in Retention by Race and Ethnicity

In this chapter, we take a different perspective on the issue of the retention of racial-ethnic minorities in the Army by considering the role of local labor markets in retention. As mentioned in Chapter 3, there is a large literature that examines the association between compensation and service member retention.[1] Various analytic approaches have been used to estimate this relationship, and research has pursued different ways to measure compensation.[2] The findings in this literature are consistent with conventional wisdom, finding a positive relationship between relative compensation (i.e., the compensation available to service members compared with their expectations of what they would earn on leaving the service) and retention.

In this chapter, we examine whether some of the patterns we have observed can be at least partially explained by earning inequality outside the Army. We emphasize that this analysis is intended to be illustrative, not definitive. As the literature we cited in Chapter 3 suggests, many factors, not just financial opportunities, influence soldiers' decisions about remaining in service, and we have not attempted to capture these factors here. Furthermore, we do not present a formal model of soldiers' decisionmaking and do not try to identify the "right" way to measure soldiers' opportunities if they were to leave the Army.

Measuring Soldier Expectations About Earnings Outside the Army

The foundation of military compensation, basic pay, varies by paygrade and YOS, ensuring that two soldiers at the same grade and length of service receive the same basic pay. Differences in military compensation by race and ethnicity occur only because of factors *other than race and ethnicity*, including differences in occupation (e.g., enlistment and retention bonuses vary by MOS), promotion (e.g., some soldiers are promoted at faster rates than others), and geographic location (e.g., housing allowances vary by location).

In contrast, there are relatively large and persistent earnings differences by race and ethnicity in the United States; for example, Zhou and Pan (2023, p. 2) considered the "disparity between Black and White Americans in economic status" to be "one of the most glaring and unrelenting forms of inequality."[3] It stands to reason, then, that some of the relatively high retention rates for racial-ethnic minorities that we document in Chapters 3 and 5 could be due to the relatively favorable economic opportunities associated with serving in the Army.

Economic theory implies that soldier retention depends, in part, on soldiers' *expectations* about civilian earnings, and empirical analyses of the relationship between compensation and retention assume, either

[1] Warner (1995) and Asch, Hosek, and Warner (2007) provide reviews of earlier literature; Mattock et al., (2019) is an example of more recent work in this area.

[2] Hansen and Wenger (2005) highlights some of the analytic choices made in the literature.

[3] Also see Leonhardt (2020).

explicitly or implicitly, that these expectations are a factor in making stay-or-leave decisions.[4] In practice, however, we do not know exactly what information source, or sources, soldiers use to form their expectations about opportunities outside the Army. Similarly, we do not know what geographic region, or regions, soldiers would consider if leaving the Army and the extent to which those areas inform expectations about civilian compensation. For example, some soldiers, particularly those nearing the completion of their initial service obligation, might be focused on returning to the area in which they lived before joining the Army. Other soldiers might be focused on where they are or have been stationed, or on where their spouses initially lived. Soldiers with plans for specific postservice employment opportunities could rely on more targeted sources (e.g., job postings or information provided by the government).[5] It is likely that many soldiers consider multiple sources and that different soldiers use different combinations.

Given this uncertainty, combined with the fact that our analysis is intended to be illustrative, our empirical approach was to use multiple variables that serve as proxies for labor market conditions and to examine the extent to which they are associated with retention. In the following section, we outline our methodological approach and data and discuss these proxies.

Methodological Approach and Data

To illustrate the role that economic conditions can play in stay-or-leave decisions, we focus on soldiers' decisions once they complete their initial active-duty service obligation. For enlisted personnel, this is the first-term reenlistment decision; for officers, we focus on whether O-3s remain in the Army until the point at which they are eligible for promotion to O-4. We return to the adjusted regressions summarized in Table 3.3 and Table 5.5 but now include additional controls that are proxies for labor market conditions.

To generate these proxies, we used the American Community Survey data.[6] For enlisted personnel, we used individuals ages 18 to 31 whose educational attainment is lower than a bachelor's degree; for commissioned officers, we used individuals ages 24 to 35 with at least a bachelor's degree. We then create a variable equal to hourly earnings for those who report being employed, zero for those who report being unemployed, and missing for those who report that they are not in the labor force.[7] Accounting for both earnings for those who are employed, and for the fact that some individuals are not employed, is meant to capture the relative strength of the labor market.

Next, we estimated the average of this variable at two different levels: the state and the commuting zone. According to the U.S. Department of Agriculture (Economic Research Service, 2019), commuting zones are "geographic units of analysis intended to more closely reflect the local economy where people live and work."[8] For enlisted personnel, we used the location that they listed at the time of enlistment and their unit's geographic location at the time of the reenlistment decision. For commissioned officers, we did not have information on geographic location at the time they joined the Army and so limited our analysis to their unit's

[4] For example, the Dynamic Retention Model incorporates expectations about both current and future civilian earnings (see Mattock and Arkes, 2007). Hansen and Nataraj, 2011, considers the extent to which improving the accuracy of expectations about civilian compensation could affect retention.

[5] Some sources are specifically targeted to soldiers as they transition from service (see, for example, Wenger et al., 2017).

[6] The American Community Survey is fielded by the U.S. Census Bureau and helps inform how federal and state funds are distributed to communities (see U.S. Census Bureau, undated).

[7] College students who report holding a job are counted as employed and, therefore, are in our sample.

[8] The American Community Survey masks the county (and, thus, the commuting zone) for individuals in counties with very low populations. For these individuals, we calculated the average across all masked counties in the state, which represents the average for very rural counties.

location. Finally, we merged these variables to the Army personnel data to use as additional controls in our adjusted regressions.[9]

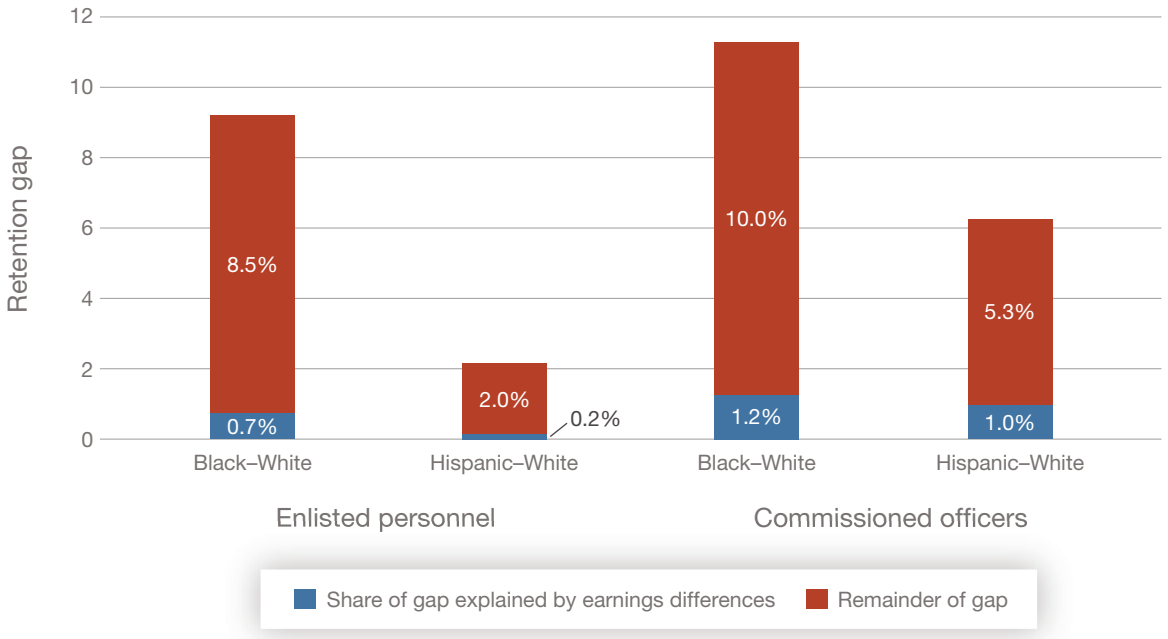
Results

We hypothesized a negative association between the strength of opportunities in local labor markets and reenlistment. Our empirical results are consistent with this hypothesis. For example, we estimated that an increase in our labor market measure (for the location of accession) of $1,000 per year is associated with a 0.6-percentage-point lower probability of reenlistment. We also observed a negative association for commissioned officers, although it is statistically different from zero only at the 15-percent level.[10]

Figure 7.1 summarizes our findings for Black and Hispanic soldiers. For example, 0.7 percentage points of the 9.2-percentage-point difference between Black and White reenlistment (approximately 8 percent), can be explained by the relatively strong labor-market opportunities for White soldiers outside the Army. For commissioned officers, we could explain 11 percent of this gap.

The portion of the observed gap in retention explained by our labor market measures is small relative to the overall gap. There are several potential explanations for this. First, as we emphasized at the beginning of this chapter, financial opportunities are not the only factors that influence soldiers' decisions about remaining in service. Second, our measures are admittedly crude and imperfect proxies of labor market conditions. As we have argued, soldiers could (and likely do) use different sources for forming expectations. Our mea-

FIGURE 7.1
The Extent to Which Earnings Inequality Explains Differences in Retention



SOURCE: Authors' calculations using TAPDB.
NOTE: Results based on adjusted regressions. Full regression results included in Appendixes D and E.

[9] We also included commuting zone fixed effects.

[10] The full regression results for enlisted personnel and commissioned officers are presented in Appendix D and Appendix E, respectively.

sures also do not take into account within-state or within–commuting zone racial differences in labor market opportunities, which could lead us to understate the true impact of labor market conditions. Similarly, soldiers could weigh additional aspects of compensation, such as expected earnings growth and availability of benefits. Nevertheless, our illustrative analysis does suggest that the Army benefits from higher racial-ethnic minority retention because of earnings inequality in the United States.

Summary

We estimated racial-ethnic group differences in how local labor market conditions could affect reenlistment and retention decisions. Although local labor market conditions are associated with some of these differences, the bulk of racial-ethnic differences in retention are *not* associated with local labor market conditions. However, because of data limitations, our analysis might underestimate the true impact of local labor market conditions on soldier and officer retention. Even with these limitations, we provided some evidence that racial-ethnic minority soldiers and officers might be more likely to remain in the Army due to earnings inequalities in the United States.

CHAPTER 8

Qualitative Findings About Enlisted and Officer Retention

In Chapter 7, we provided the results of an illustrative analysis suggesting that earning inequality between White and racial-ethnic minority groups contributes somewhat to the relatively high retention of racial-ethnic minorities in the Army. In this chapter, we supplement that analysis by considering factors that can influence retention, whether voluntary or involuntary, and what relation these factors could have to race or ethnicity. Specifically, we describe findings from a qualitative analysis from our interviews with 33 Army unit leaders to discuss retention factors. We asked interviewees what factors influence reasons that soldiers and officers choose to leave the Army when eligible to do so (i.e., voluntary separation), as well as factors that affect the reasons for soldiers and officers being forced to leave (i.e., involuntary separation). We asked whether separation factors could relate to race or ethnicity. Finally, we asked whether the Army can better address retention issues the participants raised.

Reasons for Separation

The participants suggested various reasons for separation:

- voluntary
  - job opportunities
  - higher quality of life
  - family-related reasons
  - problematic leaders and work climates
  - soldier dissatisfaction with assignment choices, lack of career opportunities
  - low job satisfaction
- involuntary
  - UCMJ violations, especially drug and alcohol use, harassment, and domestic violence
  - failing the ACFT and body composition standards
  - medical issues that prevent the soldier from performing their job
  - failure to complete a family care plan for soldiers who have dependents
  - loss of security clearances (mainly for military intelligence and related career fields)
  - behavior that indicates failure to adapt to the Army (among junior soldiers)
  - force reductions, lack of control points.

We briefly discuss the main reasons in the following subsections.

Voluntary Separation

Participants described several reasons that soldiers might choose to leave. Twenty-six participants (more than three-quarters) mentioned that soldiers might leave for better job opportunities (particularly for soldiers from more-technical MOSs). A similar number of participants (23 total) mentioned higher quality of life (e.g., not having to deal with early call times, long hours, deployments) or family-related reasons (e.g., lack of child care while deployed) as reasons that soldiers might choose to leave. This participant described quality of life and family issues for junior officers:

> The Army is not an easy job. For junior officers who tip over into the captain position, they think about marriage and family. The stress and long hours, deployment cycles, are not conducive to having a family and high quality of life.

Fourteen participants mentioned that soldiers might leave because of problematic leaders and work climates. This participant described hearing about leadership problems from soldiers who choose to separate: "I hear soldiers say, 'I don't like my leadership. I don't like my unit. I don't like how I'm treated.' It's changing over time, but it really boils down to them not liking the way they are treated in the Army."

Other voluntary separation factors participants mentioned include soldier dissatisfaction with their assignment choices, slow promotion or lack of career opportunities, and low job satisfaction. Many participants spoke of these and other reasons as interrelated. The following two quotes (one about officers, one about senior NCOs) illustrate interrelationships among such factors as pay, work environment, and promotion opportunity:

> Officers leave because all good officers get out at captain. Every time I meet a quality officer, they get out. It's the paygrade system, and [getting out of the Army] you can make so much more money and work in an environment with less nonsense. . . . They are not fulfilled by the lack of prestige. They don't want to deal with the Army nonsense. There are better opportunities on the outside.

> We do cap out [on salary] at E-9, and I'm an E-9 sergeant major. I cannot be promoted again. I'm planning my escape route now because we cap off at E-9. But also, I would say that the major reasons why we get out as senior enlisted is just because we are tired of how we get treated.

In general, participants did not tie voluntary separation factors to demographic or unit-level characteristics. A few participants noted that some reasons, particularly external job opportunities, are more common among soldiers from career fields that have higher civilian transferability of skills (e.g., logistics).

Involuntary Separation

When asked about why soldiers might be forced to leave the Army, many participants referred back to the reasons that soldiers get flagged and punished. Notably, the most commonly cited reason for involuntary separation involves UCMJ violations, with drug and alcohol use, harassment, and domestic violence cited as examples.

Other reasons cited for involuntary separation included failing the ACFT and body composition standards, medical issues that prevent soldiers from performing their jobs, failure to complete a family care plan for soldiers who have dependents, loss of security clearances (mainly for military intelligence and related career fields), and behavior that indicates failure to adapt to the Army (among junior soldiers). A few par-

ticipants also noted other factors, such as force reductions and soldiers who do not have enough retention control points to stay in the Army.[1]

Associations Between Separation Reasons and Race or Ethnicity

Although many participants did not think that separation reasons are related to race or ethnicity, several other participants indicated that race and ethnicity are, or could be, related to separation reasons. We discuss these findings by separation category (voluntary and involuntary).

Voluntary Separation

About one-half of participants (15 individuals) did not think race or ethnicity relates to reasons that soldiers choose to leave. One participant took the argument a step further, indicating that the Army provides a "level playing field" regardless of a soldier's identity:

> I think the opportunities in the military are a level playing field. I think they do a good job. You can really do anything. Whether it's the 1950s and joining from working in fields all day and becoming a psychiatrist like my uncle. It puts you on that playing field regardless of class. You have a chance to go to college, make a great income, and have a nice place to live. That's what retention is about. What it should be about. We should focus on leveling the playing field. No one in the military cares if you're gay or if you're of color. They care so little about your race.

Among participants who did think that separation reasons could be related to race and ethnicity, the main themes included perceived bias, lack of racial-ethnic minority role models in higher-level leadership positions, and career-field related reasons. Each of these themes was raised by at least five participants.

Discussions of perceived bias tended to focus on leaders' preferences for closer relationships with soldiers from the same demographic group, which could leave soldiers from other demographic groups feeling left out and not understood. Quotes from two participants illustrate this sentiment:

> Some people feel they're being treated different[ly] or [that] leadership doesn't look like them, so they don't understand them. Sometimes that has influenced people to leave the Army and not stay in.

> It goes back to relationships, and some people who hold power to make certain moves are biased and cater to other races or ethnicities for whatever reason. You see that a bit. . . . I only hang out with one demographic, and all of them are getting good assignments. But others get leftovers. Some fare well and others don't. You always ensure your circle gets good jobs. It gives the perception that there is an ethnicity issue.

Related to perceived bias were discussions about the lack of racial-ethnic minority role models in leadership positions, particularly at senior Army levels and in combat arms. One participant explained: "Not seeing minorities [African Americans were mentioned] in positions of leadership in the Army impacts their decision to leave because they feel there is no point in trying to advance to a higher echelon." A few participants

[1] *Retention control points* are the maximum number of years that a soldier can serve at a particular rank before having to be promoted to the next rank. If a soldier is not promoted before reaching the retention control point, the soldier is expected to separate or retire (Department of the Army Pamphlet 601-280, 2019).

linked the relative lack of racial-ethnic minorities in senior Army leadership to the underrepresentation of racial-ethnic minorities in combat arms branches.[2]

Discussions about career field choices focused on different reasons racial-ethnic minorities might choose to leave. Two participants shared that their career fields have assignments in certain geographic regions of the world that attract certain demographic groups (e.g., Hispanic soldiers wanting assignments in Columbia), implying that is a reason soldiers from those racial or ethnic groups would stay in the Army. Three participants indicated that soldiers in support MOSs, which have higher representation of racial-ethnic minority soldiers than combat arms MOSs, tend to have civilian job opportunities that lure soldiers out of the service. Two participants mentioned that racial-ethnic minorities who are in combat arms MOSs or other MOSs in which they are underrepresented might not feel that they belong, which could influence the decision to leave the Army. As this participant explains, racial-ethnic minority soldiers might feel lonely in combat arms units: "It can be very difficult to not have another person who has that shared experience that you had growing up. That can make it a lonely place. Some of them may decide to get out based on that, but there's so many other spots in the Army, and that's what we try to let our soldiers know."

A few participants mentioned other reasons that racial-ethnic minority soldiers might leave the Army. Three participants discussed how racial-ethnic minority soldiers who want to support their home communities might choose career fields in the Army that will give them experience they can use in their communities after they leave the Army. For example, one participant said,

> They branch into some of these low-density branches, like sustainment logistics, and off-ramp from the Army and go back to the communities that they came from to kind of give back. . . . Kind of interesting, altruistic desires there that could impact officer retention.

Another described the experience of a Native American Army medic:

> I had a medic who recently got out of the Army after 12 years. . . . He made it very clear that he came [into the Army] to get that medical knowledge and give back to his reservation. . . . I've seen Black guys coming from affluent environment[s] who did it for the service; they enjoyed it and stayed. There are others from the same race and different environment, and that was different.

A few participants also mentioned that recruiting is a challenge for getting more racial-ethnic minorities to enter and stay in combat arms MOSs. Two participants mentioned that racial-ethnic minorities might not want to enter MOSs in which they do not see other members of their racial-ethnic group represented. One participant noted that the Army tends to recruit from certain geographic regions (e.g., Southern United States) where the cultural background matches the infantry mold. For soldiers from different regions and who are also racial-ethnic minorities, fitting into the infantry culture could be particularly challenging.

Involuntary Separation

A majority of participants did not think or were not aware of how race and ethnicity are related to involuntary separation. Participants tended to focus on UCMJ reasons for involuntary separation and noted that soldiers from "all groups" fall into behavior that gets them into trouble.

Ten participants indicated that race or ethnicity could be related to involuntary separation. However, no consistent themes emerged. A few participants spoke to rates of UCMJ actions in their units varying by race

[2] The link between combat arms and other operational career field categories with senior leadership is not limited to the Army. The MLDC (2011) discussed this topic at length: Across the military services, operational career fields tend to be feeders for senior leadership in each service. Racial-ethnic minorities tend to be underrepresented in these career fields.

and ethnicity, but the direction of the rates differed by participant. Moreover, participants generally did not elaborate on why they would observe racial-ethnic group differences in UCMJ actions.

One participant mentioned that racial-ethnic minority officers experience difficulties promoting past the O-4 grade and are retired at major by the Army. As this participant explained, it is unclear why this is a trend: "The trend that I've seen, officers are typically . . . minority officers are having a hard time getting promoted past the O-4 grade. . . . I don't know what contributes to that. I don't know them well enough. But what I've seen is that minority officers are having a hard time to get promoted beyond major, which means that they get retired at major, at least getting that retirement."

Another participant mentioned that records of separation packets suggest different outcomes by race or ethnicity:

> I would see that some would not get as . . . would not get the benefit of the doubt that others got. When I was a brigade S-1 [principal human resources advisor], I would see soldiers getting separated. They [leaders] would ask for the relief from or transportation for one guy, but they don't ask about the other guy. Only difference was skin color.

In general, participants were not able to pinpoint clear examples of how race or ethnicity relates to involuntary separation. As we described in earlier chapters, interview participants suggested that the challenge is that any bias that might exist would be hard to identify. This participant's sentiment about how leaders interpret guidance provides an example of this general theme of sensing there might be bias but not being able to point to evidence of it:

> I don't have a story—It's just the feeling that you get from old guards. You think [about the old guard:] "Are you applying the policy equally across the board?" You can't find a regulation or EO [equal opportunity] policy [they're violating] but if you have to wonder, then there is automatically something wrong. They aren't violating policy or regulation. Just a feeling.

Suggested Improvements to Army Retention Policies, Programs, and Practices

When asked whether the Army can make any changes to address retention issues that they raised, participants provided a variety of answers. Participants tended not to tie their suggestions to race or ethnicity. The most commonly mentioned suggestions to improve retention are as follows:

- giving soldiers (especially senior NCOs) more options on assignments (14 participants)
- increasing monetary incentives for soldiers to stay (13 participants)
- providing more educational opportunities or better communication with soldiers about the existing educational opportunities available to them (ten participants)
- offering more support to Army families (six participants).

Five participants explicitly stated that there is no clear policy fix for the Army's retention problems. These participants indicated that changing Army culture and its composition takes time, and there is no simple policy solution. This participant described the challenge in the context of having more role models in senior Army leadership:

> I don't know what my recommendation would be from a policy standpoint. If it boils down to needing or wanting a role model, I don't know that there's a policy fix for that. . . . Well, if there's not a lot of minorities who continue through the 25-year mark, that continue to perform well and show potential, it's because they're getting out, because they don't see those role models. It's a vicious cycle I surmise that we're all trying to fix.

Summary

To understand whether reasons that soldiers separate could relate to race or ethnicity, we conducted interviews with a sample of Army unit leaders. Most of the discussion about retention, however, did not focus on race or ethnicity. In general, participants cited a variety of reasons that soldiers might choose to leave once eligible, such as better job opportunities outside the Army, or be forced to leave, such as activities that fall under UCMJ. About two-thirds of participants (21 individuals) did not think involuntary separation reasons vary across racial-ethnic groups, and about one-half of participants (15 individuals) did not think voluntary separation reasons vary across racial-ethnic groups.

About one-half of participants (16 individuals) did indicate that there could be ways that race and ethnicity relates to voluntary separation. Topics included racial-ethnic minority soldiers perceiving that their leaders are biased and limiting their opportunities (or unfairly punishing them), a lack of racial-ethnic minority role models in higher-level leadership positions, and a variety of career-field related reasons (e.g., struggling to fit in majority-White career fields, more job opportunities for support MOSs that have higher racial-ethnic minority representation).

Only one-third of participants offered examples of how race and ethnicity could relate to involuntary separation. No consistent theme emerged from these examples. A few participants cited trends they saw in their units of UCMJ cases by race and ethnicity, but the direction of the trends varied across participants. Only two participants pointed to seeing official records that suggested racial-ethnic minority soldiers might struggle with retention, with one participant noting racial-ethnic minority officer evaluations as a challenge for promotion (and, in turn, retention), and another noticing racial-ethnic group differences in separation packets.

Overall, participants did not offer suggestions to improve retention that would directly relate to race or ethnicity. Participants cited several potential areas for improvement, such as better assignment choices for senior NCOs, more monetary incentives, more educational opportunities, and better support for Army families. Some participants noted there is no policy fix to address Army retention as it relates to changing the culture and demographics. A few of these participants indicated that culture change will occur evolutionarily, as the old guard retires.

CHAPTER 9

Key Findings and Courses of Action

In this chapter, we summarize key findings from our analyses to understand trends in racial-ethnic group differences in retention in the Regular Army. We follow the discussion of key findings with a description of courses of action for the Army to consider as it aims to "ensure the diversity of leadership it needs for the future" (Wardynski, 2020, p. 2).

Key Findings

Racial-Ethnic Composition of Junior Cohorts

As we demonstrated in Chapter 2, the Army has generally succeeded at recruiting a diverse racial-ethnic population. The U.S. population has become more racially and ethnically diverse over time and, mirroring this trend, so too have the Army's junior enlisted personnel and commissioned officers. The changes have been more dramatic within the junior enlisted ranks, virtually closing a historical gap in racial-ethnic minority representation.

While officers are less diverse than the enlisted corps, this is consistent with differences in the U.S. population, where the segment that successfully completed bachelor's degree programs has a very different racial-ethnic composition than that with only a high school diploma. Since racial-ethnic minorities are less likely to obtain college degrees, it should not be surprising that racial-ethnic minority representation within the Army's junior officer cohorts is lower than in the junior enlisted ranks.

As a result, the Army has given itself the opportunity to develop a diverse group of leaders as junior cohorts progress along their career paths, setting the stage for what the Army can ultimately retain. We now turn to a summary of our empirical findings.

Career Progression

The empirical findings in Chapters 3 and 5 show that, for both enlisted personnel and commissioned officers, when personnel make stay-or-leave decisions, racial-ethnic minorities are more likely to remain in the Army than their White counterparts. The empirical analyses in Chapter 7 show that local labor market conditions might explain some of the reasons that racial-ethnic minorities choose to stay in the Army.

For enlisted personnel, when we simulate career progression using estimates of historical differences by race and ethnicity, we estimate that racial-ethnic minority representation improves as junior cohorts move through the ranks (see Figure 3.7). For officers, however, conditional on achieving eligibility for promotion, racial-ethnic minorities have lower promotion rates than White officers. Since the retention and promotion associations are in opposite directions, the net effect depends on the relative magnitude of these differences by racial-ethnic group. When we used historical differences by race and ethnicity, we simulated that the officers eventually promoted to colonel are more likely to be White than their share in the entry cohort would suggest (see Figure 5.9). However, some of the differences in retention and promotion rates by race and ethnicity are attributable to other observed factors. When we account for these other factors, there are striking

differences: The officers we simulated as eventually being promoted to colonel are *less* likely to be White and *more* likely to be Black than the entry cohort (see Figure 5.10).

Some, but not all, of the differences in officer promotion rates by race and ethnicity are attributable to other observed factors. Therefore, we also simulated what the racial-ethnic distribution would look like if all promotion differences by race and ethnicity were eliminated. If these differences were removed, representation of all racial-ethnic minority groups would be higher among the officers we simulated as eventually being promoted to colonel than the entry cohort (see Figure 5.11).

Removing Race and Ethnicity Identification Data from Selection Boards

Given the role that differences in promotion rates play in shaping the racial-ethnic distribution of the officer corps, we also assessed the extent to which a recent policy change is associated with any change in outcomes. Specifically, we examined commissioned officer promotions before and after the 2020 decision to suspend the requirement to include official photos for selection boards and to redact any data that identifies race and ethnicity or gender. Overall, the results provide some evidence that removing race and ethnicity identification data was associated with improved outcomes for racial-ethnic minority groups, although we cannot claim that removing identification data *caused* improved outcomes. There is enough statistical precision to be confident about the findings for promotion to major. For promotion to lieutenant colonel and to colonel, the estimates are suggestive of improvements, but there is too much variance in the data to draw definitive conclusions.

Performance and Conduct Issues and Retention Trends

While our findings reflect a generally positive narrative about racial-ethnic minority retention and career progression, there are exceptions. For enlisted personnel, we found that Black, Hispanic, and Native American soldiers are more likely to have suspensions of favorable personnel actions (flags) at some point during their first term than are White soldiers. White soldiers are the most likely to be promoted relatively early to E-5, while Black and Native American soldiers have the lowest early promotion rates. Black and Native American soldiers have the highest rate of reduction in grade from E-5. These differences do *not* offset the higher racial-ethnic minority retention rates that we observed. Rather, they suggest that racial-ethnic minority retention would be even *higher* than we observed, if not for these differences in performance and conduct issues.

For commissioned officers, retention of second lieutenants and of first lieutenants is very high for all racial-ethnic groups. However, we did see relatively large differences in the *reasons* officers separate before they are eligible for promotion to the next paygrade. Of those who do separate, Black and Hispanic officers are much more likely to separate for performance or conduct reasons; in contrast, the most common reason that White officers separate at this point in their careers is medical or disability. Again, these differences do not offset the higher racial-ethnic minority retention rates that we observed; they just reflect the recorded reasons that officers leave the Army.

Unit Leader Decisionmaking and Implications for Outcomes by Racial-Ethnic Group

Findings from our interviews with Army unit-level leaders reveal that these leaders exercise some discretion when evaluating and counseling soldiers (see Chapter 4). Although Army regulations and laws bound command authorities under various conditions, such as when a soldier commits a crime punishable under UCMJ, commanders still have a fair amount of decisionmaking authority when it comes to rehabilitation and pun-

ishment. When a soldier is flagged for failing to meet a standard or for some form of problematic behavior, commanders decide whether soldiers should receive second chances to rehabilitate. Participants identified the soldier's level of maturity, personal life circumstances (particularly life stressors), and demonstrated willingness to rehabilitate as factors that affect commanders' decisions about second chances. A soldier's enlisted leadership is also integral to the decisionmaking process about second chances, offering advice and recommendations to commanders.

As discussed in Chapter 4, a junior soldier's leadership chain, starting with the direct supervisor, plays a critical role in determining which soldiers receive early promotion waivers. Soldiers who receive early promotion waivers are those who go above and beyond their rank by volunteering, pursuing civilian education or special Army schools, and excelling at special projects. The leadership chain in the unit evaluates soldier performance, recommends or provides special assignments to soldiers, and recommends who should receive promotion waivers. Although the commander officially decides who should receive waivers, the enlisted leadership chain does most of the adjudication on which soldiers should receive waivers.

For both enlisted promotions (Chapter 4) and officer promotions (Chapter 6), the senior rater plays a pivotal role in the promotion process because the senior rater's promotion recommendation factors heavily into promotion board decisions. In particular, NCOs and officers who receive top blocks (MQ ratings) from senior raters have a better chance of being promoted ahead of their peers than those who are not as highly rated. However, as participants noted, how any particular senior rater assesses whether someone has enough potential to merit a top block is not always clear. Moreover, a few participants indicated that there is no transparency about whether there are any racial-ethnic trends associated with a senior rater's rating profile. That is, neither ratees nor senior raters really know whether there are racial-ethnic patterns to who receives MQs or other highly favorable evaluations.[1]

Given the discretion involved in Army unit leader decisions, we asked participants if race or ethnicity could be directly or indirectly related to leader decisions that affect different outcomes, such as flagging, early promotions, and retention. Although many interviewees stated that they were not aware of or did not think there were relationships between leader decisions and racial-ethnic group differences in any of these outcomes, several other participants did suggest that race and ethnicity might relate to these outcomes. A few participants suggested that racial-ethnic group differences could partly relate to differences by career field, noting that combat arms branches (which tend to be less racially and ethnically diverse) might provide more career opportunities and more lenient forms of punishment than support branches (which tend to be more racially and ethnically diverse). Several participants also suggested that unconscious bias or stereotypes about racial-ethnic minorities could factor into a leader's decisionmaking, resulting in racial-ethnic group differences in career outcomes. To this point, a few participants noted that they have heard racial-ethnic minority soldiers and officers state that they believe they do not receive equitable access to opportunities in their units and receive harsher punishments than White peers. Some participants further indicated that these perceptions, as well as a lack of racial-ethnic minority role models in senior leadership positions, could be reasons that racial-ethnic minority soldiers and officers would choose to leave the Army (see Chapter 8).

Although some participants cited the potential for leadership bias about racial-ethnic minorities, many could not point to examples of blatant displays of bias and discrimination.[2]

[1] Several participants also raised concerns about the level of information provided in NCOERs and commanders' limited understanding of the enlisted promotion process. These issues could present challenges for promoting the right senior NCOs, which is an issue that the Army should consider investigating further. However, because this issue does not have a clear link to potential career barriers for racial-ethnic minorities, we do not expand on it here.

[2] The true impact of unconscious bias and stereotypes on real-world employment outcomes is under debate in the scientific literature. Some scholars (e.g., Landy, 2008) argue that too many studies on unconscious bias and stereotypes are in artificial settings (e.g., laboratory experiments) with nonworking populations (e.g., college students) and, therefore, do not generalize to

Impact of Junior Leader Inexperience in Counseling and Evaluating Soldiers

In addition to the issues of potential bias in leadership decisionmaking, a theme that resonated throughout the discussions with Army unit leaders was that of the inexperience of junior NCOs and company commanders (see Chapters 4 and 6). Junior NCOs are the first line of supervision, evaluating junior soldiers' performance and counseling them. Company commanders are the first official level of command over soldiers and have a fair amount of authority over junior soldier outcomes (e.g., recommendations for early promotion waivers) in particular. Yet, many participants noted that junior-level leaders have not yet acquired the experience to handle particularly difficult situations with soldiers. Some participants noted that junior leaders might not get to the root causes of problems their soldiers face and, because of their inexperience, might not give soldiers the benefit of the doubt. To address these issues, some participants suggested that junior leaders could benefit from more education on how to evaluate and counsel soldiers. As we note in Chapter 4, previous RAND research demonstrates that junior soldiers who have experienced NCOs tend to have lower first-term attrition (Wenger et al., 2018).

The impacts of junior leader inexperience would not be limited to racial-ethnic minorities. However, as discussed in the next subsection, surface-level differences between leaders and soldiers, such as those associated with demographic identity, could add a layer of complexity to the early stages of development in leader-soldier relationships.

Importance of Time for Leaders to Get to Know Soldiers

As discussed in Chapters 4 and 6, several interview participants also spoke of the need for leaders to take the time to get to know their people and to properly counsel them. Having enough time to develop leader-subordinate relationships could help mitigate conflicts and biases, which might then reduce racial-ethnic group differences in career outcomes. Research on the impact of diversity on workgroup dynamics and abusive leadership highlights the need for time to move past surface-level differences (such as those associated with race and ethnicity) and build cohesive relationships that can overcome deep-level differences

Although the timing of assignment and evaluation cycles can constrain time for leaders to get to know their people (see Chapter 6 for a discussion), the Army recognizes the value of leaders investing in relationships. In particular, the Sergeant Major of the Army's (SMA's) "This Is My Squad" initiative promotes the importance of leaders taking care of their squads to build team cohesion and mitigate against problematic behaviors, such as harassment and discrimination.[3] A few participants offered examples of practices that would align with the concept of "This Is My Squad." For example, one participant shared how he requires his subordinate leaders to set aside dedicated time each week to counsel subordinates. This participant also role models this behavior by setting aside time to counsel his subordinates. Although these practices could be implemented by any leader now, giving leaders more time to do so could further promote the SMA's initiative to take care of the "squad."

real-world work settings. These scholars suggest that more real-world experiments would be needed to determine how much such biases affect real-world employment outcomes.

[3] In Episode 6 of the "SMA Talks" video series, then-SMA Michael Grinston explains that, in the context of the initiative, *squad* is not limited to a typical rifle squad and infantry squad leaders but focuses more generally on "small unit leadership" (U.S. Army, 2021).

Courses of Action

We outline five courses of action for the Army to consider. These courses of action align with key findings from our analyses.

Disseminate the Positive Narrative

As the empirical findings reflect, the Army has a positive narrative about racial-ethnic minority retention in its ranks and would be well served by ensuring that the narrative is known. Through the Acquire Talent line of effort of the *Army People Strategy* (Grinston, McConville, and McCarthy, 2019), the Army has given itself the opportunity to develop a diverse group of leaders. Furthermore, when personnel are making stay-or-leave decisions, racial-ethnic minorities are more likely to choose to remain in the Army. If soldiers continue to progress through their careers as we observed historically, this implies that racial-ethnic minority representation improves as junior cohorts move through the ranks.

On the surface, some empirical findings do not appear as positive but, nevertheless, reflect a positive narrative for the Army to communicate. For example, the Army notes in public documents, such as the *Diversity, Equity, and Inclusion Annex* to the *Army People Strategy*, that its officers are less diverse than its enlisted corps (Wardynski, 2020). However, the segment of the U.S. population that successfully completes bachelor's degree programs has a different composition from those with only a high-school diploma. Since racial-ethnic minorities, in general, are less likely to obtain college degrees, it should not be surprising that racial-ethnic minority representation in the officer corps is lower than in the enlisted ranks. Similarly, Army senior leaders are less racially and ethnically diverse than junior cohorts (Wardynski, 2020). However, this reflects the fact that today's senior leaders joined the Army decades ago, when the U.S. population was less diverse than it is today. As the U.S. population has become more diverse, so too has the Army. The Army should reinforce these points when discussing the composition of the force.

The empirical findings in Chapter 7 suggest that some of the racial-ethnic retention gaps we observe can be explained by relatively poor labor market opportunities for racial-ethnic minorities in the civilian economy. It would be misleading, however, to assume that racial-ethnic minority retention is higher just because of economic opportunities. There are likely other factors about Army service that appeal to racial-ethnic minorities, such as the opportunity to serve.[4] Furthermore, the fact that the Army provides relatively strong economic opportunities for racial-ethnic minorities should be considered part of the positive narrative.

Continue to Monitor Promotion Rates

Our quantitative analysis provides preliminary evidence that removing race and ethnicity identification data from officer selection boards was associated with improved outcomes for racial-ethnic minority groups. However, relatively little time has passed since the policy change, and our statistically significant findings are where we observe the most promotions. Our findings warrant continued data collection and follow-on analyses as more selection boards convene.

[4] For example, Army surveys of soldiers' intentions to stay in the Army suggest that soldiers from certain racial-ethnic minority groups (e.g., AAPI, Hispanic) have higher endorsement of factors like "opportunities to serve" than White soldiers (Vie, Trivette, and Lathrop, 2021, Figure 12, p. 29).

Examine Differences in Performance and Conduct Issues

In Chapters 3 and 5, we reported on findings that show specific instances where racial-ethnic minority groups were more likely to have negative outcomes associated with performance or conduct in their records than their White counterparts. It is important to emphasize that the administrative data do not reveal *why* this is the case, whether actual performance or conduct is lower, whether substandard performance is more likely to be observed by leadership, or whether they are less likely to be given a second chance. However, our qualitative discussions indicate that unit leadership, particularly commanders, has a fair amount of discretion in these areas.

We recommend that the Army conduct an in-depth investigation of each of the outcomes we identified to assess the drivers of the observed differences by race and ethnicity. For officers, the focus should be on early career stages, where we found racial-ethnic group differences in reasons for separation. A better understanding of why they occur would lead to the appropriate mitigation strategies.

One specific way to approach an in-depth investigation would be to start by monitoring demographic trends of senior rater profiles and flagging at the unit level. Our interviews with Army unit leaders pointed to the importance of senior rater recommendations, particularly the top blocks, for early and below-the-zone promotion. Although the Army tracks the demographic trends from promotion board outcomes, the same might not apply to senior rater profiles. To provide more transparency about promotion eligibility for racial-ethnic minorities, the Army should consider tracking demographic information associated with senior rater profiles (e.g., racial-ethnic breakdown of captains who were given MQs by the rater). In a similar vein, the Army should consider tracking demographic information associated with commander flagging patterns, given the importance of flagging in delaying promotion and other favorable actions for soldiers.[5]

Demographic information associated with rating profiles and flagging should be tracked at a high-enough level (e.g., at the brigade or division level) to ensure there are sufficient numbers of ratings and flags to identify patterns. S-1 staff (or other human resources staff) could collate the information and report to the leadership in the brigade or division. However, the aggregated information should be anonymized to reduce the risk of identifying individual raters and commanders. The goal is to create awareness among brigade or division leaders of any discernible demographic patterns, not to call out individual commanders and senior raters.[6] Specifically, the aggregated information can provide initial benchmarking information as a first step in a *barrier analysis*, which is "a method of assessment aimed at identifying potential obstacles to obtaining resources or participating in a program."[7] Patterns suggesting racial-ethnic group differences in senior rater profiles or flagging data should trigger further investigation to identify the root causes of the patterns. S-1 staff could assist in the next steps of a barrier analysis, should it be needed.

Although we recommend that senior rater profile data and flagging data be anonymized at the division or brigade level, we would suggest that raters and commanders receive individualized, confidential reports so they have awareness of their own patterns. Sharing information with senior raters and commanders about their own patterns (and, if possible, how their patterns compare with norms in the division) could help estab-

[5] A similar recommendation was made to the Coast Guard following a study on Coast Guard underrepresented racial-ethnic minority career outcomes (Lim et al., 2021).

[6] Accountability programs have to balance transparency with leader autonomy. Commanders who believe they are under a microscope may react in ways that are counter to the intended effect for the accountability program (e.g., alter flagging decisions just to reduce racial-ethnic group differences).

[7] Matthies, Keller, and Lim, 2012, p. 1.

lish norms across the brigade or division. However, it will be important that these commanders and raters know that their individualized information is confidential and will not be used against them.[8]

Provide More Training and Education for Junior-Level Leaders on Counseling and Evaluating Soldiers

Several participants from our Army unit leader interviews stressed the challenges of inexperience among junior-level leaders in how to counsel and evaluate soldiers. A few participants further suggested that education on how to counsel and evaluate soldiers be added to professional military education courses, such as the Captains Career Course or Basic Leader Course. Participants noted that such education should provide practical guidance and not be limited to a guidebook that they are expected to read on their own time. For example, the education could involve workshops or other hands-on activities for junior-level leaders to learn how to help soldiers set and achieve specific goals to improve their performance and progress in their careers.[9] Skills involving how to discuss difficult topics with soldiers could also be part of the education.

A less formal route for providing some training to junior-level leaders would be for commands to use existing resources. Some participants specifically mentioned that training on how to write evaluations already exists and is available through U.S. Army HRC. However, participants noted that it is up to individual commands to take advantage of these resources. One option is for U.S. Army G-1 (Personnel) to issue guidance to the field that reminds commands of what training resources are available on performance evaluations and where to find them and that encourages commands to use the resources to train junior-level leaders on how to write evaluations. Although these resources do not address how to counsel soldiers, the fact that such resources already exist would offer a fairly easy way to push support to junior-level leaders in the near term.

This course of action would augment existing command- or unit-level efforts at leader development. That is, senior NCOs and commanders are expected to mentor and guide more-junior leaders.[10] The course of action would provide a foundation on which to build mentoring efforts.

Set Aside Protected Time for Unit Leaders to Counsel Soldiers

Commands should offer more protected time in their training calendars for leaders to counsel soldiers. This is especially important for leaders at lower levels of command, particularly at the company level, who face several demands that compete for their time (Saum-Manning et al., 2019). Several participants noted that the Army has not made enough time for leaders at all levels to spend time with soldiers that is not directly mission or task focused. One participant suggested that higher headquarters, such as at division level, could manage training calendars better to find the protected time for these kinds of administrative and soldier-counseling functions.

[8] We are not advocating that leaders not be held accountable. What we caution against is using descriptive, demographic patterns alone to infer bias. An in-depth investigation of root causes would be needed to determine whether bias is a likely reason for the patterns in the ratings.

[9] Goal-setting interventions in the workplace have been found to be successful in teaching individuals to set their own specific, yet challenging, goals and how to commit to those goals (Latham, Ganegoda, and Locke, 2011). We are suggesting a variant of this approach by educating junior-level leaders on how they can help soldiers do this (i.e., a train-the-trainer model).

[10] For example, in one of the "SMA Talk" episodes, then-SMA Grinston discusses the expectation for first sergeants and command sergeant majors to develop junior leaders (U.S. Army, 2020).

Conclusion

At the beginning of FY 2020, the Army published the *Army People Strategy* to formalize its talent management strategy (Grinston, McConville, and McCarthy, 2019). This strategy cites diversity of talent as a strategic outcome. Our analyses of racial-ethnic trends in retention and other career outcomes within the Regular Army show that the Army has made strides in having a racially and ethnically diverse force. Our findings and recommended courses of action should assist the Army in sharing the narrative on these strides in diversity, while also highlighting opportunities for the Army to promote equitable access to career opportunities and inclusive practices that will allow it to harness the full diversity of talent in the force.

APPENDIX A

Quantitative Methods

This appendix provides additional details on the quantitative methods discussed in Chapters 3, 5, and 7.

Enlisted Personnel

Data

We constructed our data by creating quarterly data draws for each enlisted soldier using TAPDB data from October 2001 through July 2021, the most recent draw available at the time of data cleaning. We thus had several observations for each soldier—one for each quarter-by-year they were still enlisted. Using this, we generated all the outcome variables as described in this section. We then retained one observation per soldier, including the covariates as measured in their first observation (when they enlisted). We also used the American Community Survey to determine the strength of the soldier's local labor market, as described later.

Outcomes

Retention Beyond the End of Their First Contract

Retention takes on a value of **one** if the soldier was observed in the data file at a date after when their initial contract would have ended and a value of **zero** otherwise. This outcome would primarily be due to reenlistment but will contain some cases of individuals extending their initial contract. We pooled these together for the purpose of this analysis.

Failure-to-Adapt Attrition

Failure to adapt is a measure of the reasons that soldiers attrit from the Army. We define *failure to adapt* as taking a value of **one** if their reason for separation is related to measures that indicate their failure to adapt to the Army. This is coded using the variable for separation reason (SPDRSN), and the codes used to indicate failure to adapt are 41, 42, 47, 50, 71, 72, 74, 76, 79, 85, BB, BC, CM, CP, CQ, CR, DA, DB, DF, DG, DK, DL, DN, DS, FB, FC, FF, FG, FH, FS, FT, FV, FW, FX, GA, GB, GC, GH, GJ, HF, HG, HH, HJ, HK, JC, JD, JF, KA, KB, KD, KF, KK, KL, KM, KN, KQ, KR, NB, NC, ND, PC, PD, RA, RB, and RC. This variable takes on a value of **zero** if it has any other value and takes on a value of **missing** if SPDRSN is missing.

Early Promotion

Early promotion is defined as **one** if the soldier is promoted to paygrade E-5 in three years or fewer after accession. The outcome takes on a value of **zero** if the soldier is not promoted to E-5 within three years and is set to missing if the soldier does not stay in the military to at least four years or if they are never promoted to E-5. Thus, soldiers promoted early are contrasted only with soldiers who are eventually promoted.

Reduction in Grade from E-5

We define reduction in grade from E-5 as taking a value of **one** if a soldier at paygrade was at paygrade E-5 and then went down to any lower paygrade within two years of their first being promoted to E-5, and a value of **zero** if they were promoted to E-5 but did not experience a reduction in grade at any point within the subsequent two years.

Suspension of Favorable Personnel Action

This outcome takes on a value of **one** if, during the soldier's first term of service (before the end of their first contract), they have a value for the suspension of favorable personnel action reason, and **zero** otherwise.

Key Predictors and Covariates

Race

The primary predictor of interest is the soldier's race. We separate race into the following mutually exclusive and exhaustive categories: non-Hispanic White (**White**), non-Hispanic Black (**Black**), Hispanic (**Hispanic**), non-Hispanic Asian American and Pacific Islander (**AAPI**), non-Hispanic Native American (**Native American**), and unknown or other (**Other**).

MOS

We also examine the role that MOSs play in the outcomes. We use the first two digits of the MOS code.

Demographic Covariates

In the models described below, when we control for demographic covariates, we mean the following list of variables contained in TAPDB: accession year, educational attainment (less than high school, some college or associate's degree, bachelor's degree, graduate degree, or unknown, with high school graduate or General Education Development equivalent being the omitted reference group), gender, marital status, age, and AFQT score.

Military Covariates

In the models described in the "Approach" subsection, when we control for military covariates, we mean the following list of variables contained in TAPDB: enlistment bonus amount, first contract length, paygrade (as a set of indicator variables), and the two-digit MOS codes at enlistment, as defined above.

Across all covariates, there is a very low rate of missing data. The only variable missing data is age at enlistment, for which we are missing five values across more than 500,000 soldiers. We imputed age as a function of educational attainment, accession cohort, gender, and marital status and replaced the missing five observations with the predicted value.

Approach

We produced two estimates of each predicted outcome by race and ethnicity: *actual* outcomes, which are statistically identical to the average outcome by race and ethnicity, and *adjusted* outcomes, which control for soldier characteristics using a linear probability model.[1] We used linear probability models for the enlisted personnel analyses because they are much faster to estimate and better able to handle high dimensionality from covariates than nonlinear models, such as logistic regression. One potential drawback is that predicted

[1] Soldier characteristics in the adjusted model are measured at the time of the previous decision point, e.g., when we analyzed whether a soldier remained in the Army past 15 YOS, we measured each characteristic at 10 YOS.

probabilities can fall outside the 0 to 1 continuum for rare outcomes. In our analyses, however, we did not experience this. Our sensitivity analyses of both linear probability model and logistic models using these data suggest they generate similar marginal effects.

For each of the outcomes, we estimated the following two equations using a linear probability model (ordinary least squares):

$$\text{Actual: } Y_i = \alpha^A + \sum_{j=2}^{6} \beta_j^A 1\left(Race_i = j\right) + \varepsilon_i^A$$

Adjusted:

$$Y_i = \alpha^C + \sum_{j=2}^{6} \beta_j^C 1\left(Race_i = j\right) + X_{Bi}\gamma + \varepsilon_i^C,$$

where

- Y_i is the outcome for soldier *i*.
- β_j^A and β_j^C are the estimated coefficients for race and ethnicity in the actual and adjusted regressions, respectively.
- X_{Bi} is the vector of additional observed characteristics for soldier *i*.
- γ are the estimated coefficients for these additional observed characteristics.

First, we regressed outcome Y_i for soldier *i* on a constant and a set of indicator variables for race and ethnicity. We refer to these estimates as *actual* outcomes because the predicted outcomes for each racial-ethnic category are statistically identical to the actual outcomes. Second, we reestimated the association between outcome Y_i and race and ethnicity, but now including additional control variables. We refer to these predicted outcomes by race and ethnicity as *adjusted* outcomes. These predicted outcomes reflect differences by race and ethnicity that we would see if individuals in each racial-ethnic group had identical values of the other variables for which we control.

Most control variables were measured at the beginning of each decision window. For example, when examining whether a soldier remains in the Army for the duration of their initial service obligation, we measured each variable at the time of accession. Similarly, when we analyzed whether a soldier remained in the Army past 15 YOS, we measured each characteristic at 10 YOS. This approach recognizes that some characteristics (e.g., marital status, paygrade, MOS) can and do change over the career life cycle.

After estimating the retention models, we simulated how the racial-ethnic composition of a hypothetical accession cohort would be expected to change at the different mileposts of service. Specifically, we chained together the estimated predicted probabilities, as follows:

$$\Pr\left(Ret_j^t = 1\right) = \Pr\left(Ret_j^t = 1 \middle| Ret_j^{t-1} = 1\right)\Pr\left(Ret_j^{t-1} = 1\right) = \prod_{s=0}^{t} \Pr\left(Ret_j^{4-s} = 1 \middle| Ret_j^{4-s-1} = 1\right),$$

where $\Pr\left(Ret_j^t = 1\right)$ is the probability that a soldier of race and ethnicity *j* remains in service to career milestone *t*.

Commissioned Officers

Data

To construct our analytic file, we used monthly TAPDB data on all commissioned officers from October 2001 through January 2022. These data provided information on officer demographic characteristics (e.g., gender, race and ethnicity, age) and on characteristics associated with their military service (e.g., accession

source, branch, retention and promotion histories). We then constructed a record for each officer using the first month that they are observed in a grade; the longitudinal nature of these data means that officers are observed for multiple decision points while they remain in service.[2]

Outcomes

We analyzed officer career progression as a series of sequential decision points. Conceptually, these can be disaggregated into two types:

- **retention:** whether an officer remains in the Army until the point at which they are eligible for promotion to the next grade
- **promotion:** whether an officer is promoted to the next grade.

Our definitions of both *retention* and *promotion* rely on the point at which an officer is eligible for promotion to the next grade. Unfortunately, the TAPDB data do not indicate when someone is eligible for promotion, and we must impute it. Within each competitive category,[3] we defined the *eligibility month* for officers in the following way:

1. We began with officers who are first observed in that grade in a quarter of the FY.
2. We then excluded those promoted to the next grade within 12 months after first being observed.
3. For O-3 and higher, we then excluded those promoted below the zone to the next grade.[4]
4. The *eligibility month* was then determined by finding the point at which 90 percent of promotions for the remaining officers occur at that month or later.

For all officers first observed in that grade in that quarter of the FY, an officer was indicated as *retained* if they were still in the Army as of the eligibility month or if they were promoted earlier than the eligibility month. Officers who are *retained* were indicated as *promoted* to the next grade if we observed them in the next grade.

Given the importance of these definitions, it is worth discussing our decisions.[5] The first choice was to allow eligibility for promotion to vary over time by defining it separately for each quarter of each FY. Second, when calculating eligibility month, we excluded those promoted to the next grade within 12 months because time-in-grade requirements mean that these are likely not conventional promotions but corrections to administrative records.[6] Third, removing below-the-zone promotions from calculations was necessary because, by definition, these occur before the eligibility month. Finally, the choice of 90 percent as a threshold

[2] For officers we observed starting at the grade of O-1, we can have up to five observations for the individual (if they are promoted to the grade of O-5). For officers who started in the Army prior to October 2001, the first observation we used is from the month in which they are observed at the next grade.

[3] For example, see Army Directive 2017-08 (2017).

[4] These typically cannot exceed 10 percent of promotions in each competitive category, although the Secretary of Defense can authorize a higher percentage. See U.S. Code, Title 10, Armed Forces; Subtitle A, General Military Law; Part II, Personnel; Chapter 36, Promotion, Separation, and Involuntary Retirement of Officers on the Active-Duty List; Subchapter I, Selection Boards; Section 616, Recommendations for Promotion by Selection Boards.

[5] Our approach is conceptually similar to Hosek et al. (2001) and Asch, Miller, and Malchiodi (2012).

[6] Officers are required to serve for a minimum amount of time in a grade before being promoted to the next grade; these amounts vary by grade but are not shorter than 12 months. See U.S. Code, Title 10, Armed Forces; Subtitle A, General Military Law; Part II, Personnel, Chapter 36, Promotion, Separation, and Involuntary Retirement of Officers on the Active-Duty List; Subchapter II, Promotions; Section 619, Eligibility for Consideration for Promotion: Time-in-Grade and Other Requirements.

reflects that our approach is imprecise and that selection boards might occur earlier for some officers than for others.[7]

Estimation Approach

For each decision point, we estimated logistic regressions; each takes the form of

$$\Pr[Y_i = 1] = \frac{e^{\beta X_i}}{1+e^{\beta X_i}},$$

where

- Y_i is the outcome for officer *i*.
- X_i is the vector of observed characteristics for officer *i*.
- β is the vector of coefficients that we estimate.

We first estimated these regressions where X_i includes only the indicators for race and ethnicity; we refer to these estimates as *actual* retention or promotion rates because the predicted outcomes for each racial-ethnic category are statistically identical to the actual outcomes. Next, we estimated these regressions where X_i also includes additional observed characteristics.[8] We refer to these as *adjusted* retention or promotion rates because we compared the predicted outcomes for each racial-ethnic category with the actual outcomes. These predicted outcomes are what differences by race and ethnicity would be if individuals in each racial-ethnic group had the same observed characteristics.

[7] We also conducted sensitivity analyses using 80 percent as a threshold; our results are qualitatively similar.

[8] These characteristics are gender, age, marital status, whether the officer has children, accession source, branch, FY, and (where relevant) whether the officer was promoted below the zone to their current grade.

APPENDIX B

Interview Materials

This appendix provides the language used in the consent form and the protocols for interviews with Army unit leaders. We used separate (but overlapping) protocols for officers and senior enlisted participants.

Informed Consent

INFORMATION SHEET FOR PARTICIPANTS

RAND Arroyo Center Project on Retention of Racial-Ethnic Minorities in the Army

This project is being conducted by RAND Arroyo Center, the U.S. Army's federally funded research and development center (FFRDC) for studies and analysis. The research is sponsored by the Director, Military Personnel Management, Office of the Deputy Chief of Staff, G-1, U.S. Army.

As part of the project, we are conducting interviews with current and former leaders and commanders across different types of Army units to better understand key factors and dynamics that affect officer and soldier careers, including how those factors and dynamics relate to retention of racial-ethnic minorities.

Voluntary Participation

Your participation in this discussion is entirely voluntary. You can choose not to participate or skip any points you would rather not discuss. Additionally, if at any time you no longer want to participate, just let us know, and we can stop the conversation.

Confidentiality

RAND Arroyo Center will treat the information you provide as confidential. We will not disclose the individual responses you provide to anyone outside of the research team, except as required by law. Information from the discussion will be summarized in aggregate form across all participants for any reports or presentations we make and will not be attributed to specific individuals. We will be taking notes on the discussion today, but to protect confidentiality, we will not include names or any other information that might identify you in our notes.

Do NOT discuss or comment on classified or operationally sensitive information.

For More Information

For questions about the project, please contact [the project leaders].

If you have questions about your rights as a research participant or need to report a research-related injury or concern, you can contact RAND's Human Subjects Protection Committee [at this phone number and email address]. If possible, when you contact the Committee, please reference Study [insert number].

Discussion Protocol for Officer Participants

Participant Background

1. Could you start by giving us a brief description of your current and prior command or staff positions?
    a. How long have you been in your current position?
    b. [Prompt:] Are there other types of units you commanded or had leadership positions in?

Officer Promotion

Given your experience, we would like to hear about the types of command-level decisions made about both officer and enlisted careers. We'll start with officers.

2. What information do commanders use to recommend an officer for below-the-zone promotion?
    a. How do commanders learn about and use this information to make these recommendations?
    b. Are there key challenges or constraints for commanders in making these recommendations?
3. Conversely, what information do commanders use to recommend an officer for above-the-zone promotion?
    a. How do commanders learn about and use this information to make these recommendations?
    b. Are there key challenges or constraints for commanders in making these recommendations?
4. Are there ways the Army could support commanders in making recommendations that affect officer promotions?
5. In what ways might race and ethnicity relate to any of the factors that you mentioned affect command recommendations about officer promotion?

Enlisted Promotion and Career Impacts

Now, we'd like to ask about soldiers' careers. We'll focus on promotion and other outcomes that could affect soldier retention.

Promotion

6. What information do commanders use to recommend a soldier for early promotion?
    a. How do commanders learn about and use this information to make these recommendations?
    b. Are there key challenges or constraints for commanders in making these recommendations?
7. Conversely, what information do commanders use to recommend a soldier for a late or delayed promotion?
    a. How do commanders learn about and use this information to make these recommendations?
    b. Are there key challenges or constraints for commanders in making these recommendations?
8. Are there ways the Army could support commanders in making recommendations that affect enlisted promotions?
9. In what ways might race and ethnicity relate to any of the factors that you mentioned affect command recommendations about enlisted promotion?

Suspension of Favorable Personnel Action and Reduction in Grade

10. What types of soldier actions would recommend them for **suspension of favorable personnel action**?
    a. How do commanders learn about these actions, and how is the information used to make recommendations about suspensions of favorable person status?
    b. Are there key challenges or constraints for commanders in making these recommendations?
11. What types of soldier actions would recommend them for a **reduction in grade**?

   a. How do commanders learn about these actions, and how is the information used to make recommendations about reductions in grade?
   b. Are there key challenges or constraints for commanders in making these recommendations?
12. For what types of misconduct would the command be able to use discretion in offering a second chance to a soldier?
   a. What factors influence whether commanders give a second chance? For example, would a soldier's rank be taken into consideration?
   b. Are there key challenges or constraints for commanders in making these decisions?
13. [OPTIONAL:] Under what conditions would a soldier face a reduction in grade for "inefficiency"?
14. In what ways might race and ethnicity relate to decisions that result in suspension of favorable personnel action (flagging), second chances, or reductions in grade?

Retention

Now, I'd like to ask some questions about officer and soldier retention. I'll start with voluntary separation and then follow with involuntary separation.

15. What factors tend to influence officers and soldiers choosing to leave the Army once eligible to do so? [*Exemplar prompts: work-life balance; compensation—salary, benefits; promotion opportunities; unit climate/leadership*]
   a. How might race and ethnicity be associated with any of these factors? Have you noted or been made aware of factors varying for different racial-ethnic groups?
   b. Probes: Are there other characteristics, such as branch or MOS, that contribute to **voluntary** separation decisions? Any differences by type of unit or geography?
16. What factors tend to influence command recommendations to involuntarily separate officers and soldiers? [*Exemplar prompts: conduct/performance*]
   a. How might race/ethnicity be associated with any of these factors? Have you noted or been made aware of different factors being related to race and ethnicity?
   b. Probe: Are there other characteristics, such as branch or MOS, that contribute to **involuntary** separation decisions? Any differences by type of unit or geography?
17. How might the Army better assist with any of the retention issues that you mentioned?
   a. Probe: What changes to or additional benefits, programs, or policies might mitigate separations?
   b. Probe: Are there existing benefits, programs, and policies available? If so, are there constraints in using them (e.g., resources)?

Closing Questions

Thank you for your time today.

18. Is there anything else we did not discuss that you think we should consider regarding race and ethnicity and career outcomes, particularly those related to retention?

Discussion Protocol for Senior Enlisted Participants

Participant Background

1. Could you start by giving us a brief description of your current and prior senior enlisted leadership positions?
    a. How long have you been in your current position?
    b. [Prompt:] Are there other types of units where you held senior enlisted leadership positions?

Enlisted Promotion and Career Impacts

Given your experience, we would like to hear from you about the types of unit-level decisions made about soldiers and their careers. We'll focus on promotion and other outcomes that could affect soldier retention.

Promotion

2. What information would command leadership use to recommend a soldier for early promotion?
    a. How do leaders in the command learn about and use this information to make these recommendations?
    b. Are there key challenges or constraints in making these recommendations at the command?
3. Conversely, what information would command leadership use to recommend a soldier for a late or delayed promotion?
    a. How do leaders in the command learn about and use this information to make these recommendations?
    b. Are there key challenges or constraints in making these recommendations at the command?
4. Are there ways the Army could support commands in making recommendations that affect enlisted promotion?
5. In what ways might race and ethnicity relate to any of the factors that you mentioned affect command recommendations about enlisted promotions?

Suspension of Favorable Personnel Action and Reduction in Grade

6. What types of soldier actions would recommend them for **suspension of favorable personnel action**?
    a. How do leaders in the command learn about these actions, and how is the information used to make recommendations about suspensions of favorable personnel action?
    b. Are there key challenges or constraints in making these recommendations at the command?
7. What types of soldier actions would recommend them for a **reduction in grade**?
    a. How do leaders in the command learn about these actions, and how is the information used to make recommendations about suspensions of favorable person status?
    b. Are there key challenges or constraints in making these recommendations at the command?
8. For what types of misconduct would the command be able to use discretion in offering a second chance to a soldier?
    a. What factors influence whether commanders give a second chance? For example, would a soldier's rank be taken into consideration?
    b. Are there key challenges or constraints for commanders in making these decisions?
9. [OPTIONAL:] Under what conditions would a soldier face a reduction in grade for "inefficiency"?
10. In what ways might race and ethnicity relate to decisions that result in suspension of favorable personnel action, second chances, or reductions in grade?

Retention

Now, I'd like to ask some questions about soldier retention. I'll start with voluntary separation and then follow with involuntary separation.

11. What factors tend to influence soldiers choosing to leave the Army once eligible to do so? [*Exemplar prompts: work-life balance; compensation—salary, benefits; promotion opportunities; unit climate/leadership*]
    a. How might race/ethnicity be associated with any of these factors? Have you noted or been made aware of factors varying for different racial-ethnic groups?
    b. Probes: Are there other characteristics, such as branch or MOS, that contribute to **voluntary** separation decisions? Any differences by type of unit or geography?
12. What factors tend to influence command recommendations to involuntarily separate soldiers? [*Exemplar prompts: conduct/performance*]
    a. How might race and ethnicity be associated with any of these factors? Have you noted or been made aware of different factors being related to race and ethnicity?
    b. Probe: Are there other characteristics, such as branch or MOS, that contribute to **involuntary** separation decisions? Any differences by type of unit or geography?
13. How might the Army better assist with any of the retention issues that you mentioned?
    a. Probe: What changes to or additional benefits, programs, or policies might mitigate separations?
    b. Probe: Are there existing benefits, programs, and policies available? If so, are there constraints in using them (e.g., resources)?

Closing Questions

Thank you for your time today.

14. Is there anything else we did not discuss that you think we should consider regarding race and ethnicity and career outcomes, particularly those related to retention?

APPENDIX C

Qualitative Coding Methodology

In this appendix, we provide an overview of the coding methodology used for our interviews with Army unit leaders. Specifically, we coded the transcript-style notes from each interview using Dedoose, a qualitative coding software platform. The coding team consisted of three members. Two coding team members (*junior coders*) took notes during the interviews and have prior experience with qualitative coding. The third team member (*senior coder*) facilitated most of the interviews and has extensive coding experience and subject-matter expertise on military-diversity topics. The senior coder developed the initial coding structure that generally aligns with the interview questions (in Appendix B), although codes were refined during the coding process to allow further delineation of themes. The coding team then discussed the initial coding structure to ensure each member had similar interpretations of codes. To ensure coding consistency, the two junior coders independently coded the same four transcripts (two enlisted, two officer). The senior coder reviewed their coding results and discussed any discrepancies with the junior coders.[1]

After discrepancies were discussed and resolved with the initial test coding, the two junior coders split the remaining note files and coded them separately. The coding structure is in Tables C.1 through C.6, each representing a Level-1 category. After initial coding was completed, the three team members engaged in secondary coding, each taking at least one Level-1 category (e.g., officer promotion) and analyzing the excerpts across the codes within that category. For the officer promotion Level-1 code, the secondary coding focused on officer participants only. For all other Level-1 codes, secondary coding combined responses from enlisted and officer participants.

Officer Promotion

The discussion centered on how commanders recommend officers for early (below-the-zone) or late (above-the-zone) promotion and included discussion of whether race and ethnicity are related to factors that affect command recommendations for officer promotion. Table C.1 presents the interview coding structure within Level 1. The corresponding protocol questions were as follows:

- What information do commanders use to recommend an officer for below-the-zone promotion? Conversely, what information do commanders use to recommend an officer for above-the-zone promotion?
- How do commanders learn about and use this information to make these recommendations?
- Are there key challenges or constraints for commanders in making these recommendations?
- Are there ways the Army could support commanders in making recommendations that affect officer promotions?

[1] We initially used Dedoose's testing function, which can generate a quantified index of agreement (as a measure of interrater reliability). However, while using this function, the coding team discovered that there was not enough context in the selected text passages for the test taker to make distinctions among codes to apply (e.g., difficult to distinguish between a participant's comment about enlisted promotion factors and officer promotion factors).

- In what ways might race and ethnicity relate to any of the factors that you mentioned affect command recommendations about officer promotion?

TABLE C.1
Content Codes for Army Unit Leader Interviews: Officer Promotion

Level 2	Level 3	Description
Below-the-zone factors		Discussed factors commanders use to recommend officers for below-the-zone promotion
	Top performer and high potential	Specifically mentioned that officers need to have a very high level of performance and show high potential for next grade to be recommended for below-the-zone promotion
	Key developmental assignments	Specifically mentioned the need to perform very well in key developmental positions to be considered for below-the-zone promotion
	Senior rater	Specifically mentioned that the senior rater's recommendation is what the promotion boards care about
	Other below-the-zone factors	Cited other factors besides general statements about high levels of performance that influence commanders' recommendations for below-the-zone promotion
Below-the-zone information		Discussed how commanders get information about officers to recommend them for below-the-zone promotion
	Direct	Mentioned directly observing officer behavior and performance or having interactions with the officers to make evaluations of below-the-zone promotability
	Indirect	Mentioned reviewing others' evaluations or getting reports on the officer being evaluated for below-the-zone promotion
Above-the-zone factors		Discussed factors used by commanders to recommend officers for above-the-zone promotion
	Below-average performance	Specifically raised that officers would have below-average (or substandard) performance to be previously passed over for promotion, thus necessitating above-the-zone promotion
	Personality conflict	Specifically mentioned that prior evaluations may reflect conflicts between the officer and prior leadership
	Other above-the-zone factors	Cited other factors besides general statements about high levels of performance that influence commanders' recommendations for above-the-zone promotion
Above-the-zone information		Discussed how commanders get information about officers to recommend them for above-the-zone promotion
	Direct	Mentioned directly observing officer behavior or performance or having interactions with the officers to make evaluations of above-the-zone promotability
	Indirect	Mentioned reviewing others' evaluations or getting reports on the officer being evaluated for above-the-zone promotion
Officer promotion constraints		Discussed any constraints or challenges for commands in making recommendations regarding officer promotions
	No constraints (officer promotion)	Indicated that there are no constraints on commands to make recommendations for officer promotion

Table C.1—Continued

Level 2	Level 3	Description
	Constraints—limited top slots, profile	Specifically mentioned constraints on how many officers can be given top-box ratings or MQ ratings that would help them with below-the-zone promotion
	Constraints—evaluating potential	Specifically mentioned the challenge of evaluating an officer's potential versus performance (may have discussed rater versus senior rater roles)
	Constraints—other	Mentioned other constraints on commands making recommendations for officer promotion
Army support (officer promotions)		Discussed whether there are ways the Army could help commanders making recommendations about officer promotions
	Yes—other	Indicated that there are ways that the Army can help commands with recommendations about officer promotions
	Yes—accountability for counseling	Specifically mentioned need of leaders and commanders to ensure officers are getting proper counseling
	No	Indicated that there are no additional ways that the Army can help commands make recommendations about officer promotions
	Unsure	Expressed uncertainty about whether there is anything else the Army can do to help commands make recommendations about officer promotions
	Existing support	Mentioned policies or programs already in place that they think help with officer promotions
Race and ethnicity (officer promotions)		Discussed whether racial-ethnic group differences are related to factors that affect command recommendations about officer promotions
	No race and ethnicity factors	Indicated not being aware of or not thinking there are factors related to officer promotion decisions at command level that relate to race and ethnicity
	No, but could be race and ethnicity factors	Indicated not having witnessed or experiencing any race and ethnicity factors but thought there could be ways that race and ethnicity would be related to officer promotion
	Potential for (perceived) bias in career opportunities	Specifically mentioned the potential for bias among leaders in offering opportunities to officers from racial-ethnic minority groups, which could help those officers gain recognition that would help with promotion, or that officers in racial-ethnic minority groups may perceive such bias to exist and act accordingly
	Other racial-ethnic factors	Mentioned other racial-ethnic factors associated with officer promotion recommendations
Other (officer promotions)		Described other factors affecting command recommendations for officer promotions

Enlisted Promotion

The discussion centered on how commanders recommend enlisted soldiers for early (below-the-zone) or late (above-the-zone) promotion and included discussion of whether race and ethnicity are related to factors that affect command recommendations for enlisted promotion. Table C.2 presents the interview coding structure within Level 1. The corresponding protocol questions were as follows:

- What information do commanders use to recommend a soldier for early promotion? Conversely, what information do commanders use to recommend a soldier for a late or delayed promotion?
- How do leaders in the command learn about and use this information to make these recommendations?
- Are there key challenges or constraints in making these recommendations at the command?
- Are there ways the Army could support commands in making recommendations that affect enlisted promotions?
- In what ways might race and ethnicity relate to any of the factors that you mentioned affect command recommendations about enlisted promotion?

TABLE C.2
Content Codes for Army Unit Leader Interviews: Enlisted Promotion

Level 2	Level 3	Description
Early promotion factors		Discussed factors used by unit leaders and commanders to recommend enlisted personnel for early promotion
	Top performer and high potential	Specifically mentioned that soldiers need to have a very high level of performance and high potential to do well at the next grade to be recommended for early promotion. Examples may include taking on special projects, volunteering in community, etc.
	Other early-promotion factors	Cited other factors besides general statements about high levels of performance that influence commanders' recommendations for soldiers to receive early promotion
Early promotion information		Discussed how commanders or leaders get information about soldiers to make recommendations for early promotion
	Direct	Mentioned directly observing soldier behavior or performance or having interactions with the soldiers to make recommendations for early promotion
	Indirect	Mentioned indirect means of getting information about soldiers for recommendations on early promotion (e.g., reviewed evaluations of subordinate leaders, conversations with senior enlisted leaders about soldiers)
Late or delayed promotion factors		Discussed factors that unit leaders and commanders use to recommend enlisted personnel for late or delayed promotion
	Lacks potential	Specifically mentioned that a soldier is not "ready" or lacks "potential" to lead at next level
	Substandard performance	Specifically mentioned that soldiers with below-average (or substandard) performance would be those who may have late or delayed promotion
	Misconduct/disciplinary issues	Specifically mentioned soldiers being previously flagged for misconduct or disciplinary issues as the main reason for late or delayed promotion
	Time-related limitations	Mentioned soldiers who have hit time-related constraints (e.g., retention control points) as a reason for delayed promotions
	Missing education or readiness requirements	Mentioned soldiers who have not met certain requirements (e.g., medical readiness, weapon qualifications) or military educational requirements for promotion to next grade as a reason for late or delayed promotion
	Other delayed-promotion factors	Cited other factors that influence commanders' recommendations for soldiers to receive late/delayed promotion

Table C.2—Continued

Level 2	Level 3	Description
Late or delayed promotion information		Discussed how commanders or leaders get information about soldiers to make recommendations for delayed/late promotion
	Direct	Mentioned directly observing soldier behavior or performance or having interactions with the soldiers to make recommendations for delayed or late promotion
	Indirect	Mentioned indirect means of getting information about soldiers for recommendations on delayed or late promotion (e.g., reviewed evaluations of subordinate leaders, conversations with senior enlisted leaders about soldiers)
Enlisted promotion constraints		Discussed any constraints or challenges for commands in making recommendations for enlisted promotion
	No constraints (enlisted promotion)	Indicated there are no constraints on commands to make recommendations for enlisted promotion
	Constraints—limited top slots	Specifically mentioned Army constraints on the number of soldiers who can get a waiver or top box for early promotion
	Constraints—other	Mentioned constraints on commands making recommendations for enlisted promotion
Army support (enlisted promotions)		Discussed whether there are ways the Army could help commanders make recommendations about enlisted promotions
	Yes—educate raters or supervisors	Specifically mentioned more or better education of junior officers and NCOs on how to perform evaluations of soldier performance and counsel soldiers
	Yes—accountability for counseling	Specifically mentioned that leaders and commanders need to ensure soldiers are getting proper counseling
	Yes—other	Mentioned other specific ways the Army can help commands make recommendations about enlisted promotion
	No	Indicated that there are no additional ways that the Army can help commands make recommendations about enlisted promotions
	Unsure	Expressed uncertainty about whether there is anything else the Army can do to help commands make recommendations about enlisted promotions
	Existing support	Mentioned policies or programs already in place that they think help with enlisted promotions (may be coded with no and yes categories)
Race and ethnicity (enlisted promotions)		Discussed whether racial-ethnic group differences related to factors that affect command recommendations about enlisted promotions
	No race and ethnicity factors	Indicated not being aware of or not thinking there were factors related to enlisted promotion decisions at command level that relate to race and ethnicity
	No, but could be race and ethnicity factors	Indicated not having witnessed or experiencing any race and ethnicity factors but thought there could be ways that race and ethnicity would be related to enlisted promotion
	Potential (perceived) bias in career opportunities	Specifically mentioned the potential for bias among leaders in offering opportunities to soldiers from racial-ethnic minority groups, which could help those soldiers gain recognition that would help with promotion, or that soldiers from racial-ethnic minority groups may perceive such bias to exist and act accordingly

Table C.2—Continued

Level 2	Level 3	Description
	MOS/career differences	Specifically discussed racial-ethnic differences by MOS or career field as potential reason for differences in promotion outcomes
	Other racial-ethnic factors	Mentioned other racial-ethnic factors associated with enlisted promotion recommendations
Other (enlisted promotion)		Described other factors affecting command recommendations for enlisted promotions

Suspension of Favorable Personnel Action and Reductions in Grade

The discussion centered on factors commanders use to flag someone to suspend favorable person status and/or recommend reductions in grade. How information is gathered to make these recommendations, any decisionmaking constraints, and whether race and ethnicity are related to factors that affect these outcomes were also discussed. Table C.3 presents the interview coding structure within Level 1. The corresponding protocol questions were as follows:

- What types of soldier actions would recommend them for suspension of favorable personnel action?
- How do leaders in the command learn about these actions, and how is the information used to make recommendations about suspensions of favorable person status?
- Are there key challenges or constraints in making these recommendations at the command?
- What types of soldier behaviors and experiences would recommend them for a reduction in grade?
- How do leaders in the command learn about these actions, and how is the information used to make recommendations about reductions in grade?
- Are there key challenges or constraints in making these recommendations at the command?
- For what types of misconduct would the command be able to use discretion in offering a second chance to a soldier?
- What factors influence whether commanders give a second chance? For example, would a soldier's rank be taken into consideration?
- Are there key challenges or constraints for commanders in making these decisions?
- Under what conditions would a soldier face a reduction in grade for "inefficiency?
- In what ways might race and ethnicity relate to decisions that result in suspension of favorable personnel action or reductions in grade?

TABLE C.3

Content Codes for Army Unit Leader Interviews: Suspension of Favorable Personnel Action and Reductions in Grade

Level 2	Level 3	Description
Reasons for suspension, flag, or reduction in grade		Discussed the types of reasons that soldiers (or officers) may get flagged or suspended or, ultimately, face a reduction in grade
	Assault, domestic violence	Specifically mentioned physical (or sexual) assault or domestic violence as reasons for flagging or punishments
	Body composition or fitness	Specifically mentioned physical fitness and weight issues (e.g., Army Body Composition Program, ACFT, PT)
	Disciplinary (general)	Specifically mentioned disciplinary problems but may not indicate the type of problem
	Drugs and alcohol	Specifically mentioned cases involving drugs and alcohol (e.g., DUI)
	Inefficiency	Discussed inefficiency as a reason for a suspension or reduction in grade
	Insubordination/ disrespect	Specifically mentioned cases where soldiers (or officers) show disrespect toward superiors as a reason for a suspension
	Legal/regulatory (general)	Cited UCMJ or Article 15 actions as reasons for suspensions
	Personality conflict	Specifically mentioned cases where there is a personality conflict between a leader and subordinate. Might have also mentioned that the command mitigates the situation (i.e., does not suspend the soldier because of this)
	Not behaving at expected level for rank	Made general comments about a soldier not behaving at the level expected for their rank as a reason for a reduction in grade
	Tardiness/absenteeism	Specifically mentioned a pattern of tardiness (lateness) and/or absenteeism as a reason for suspension
	Other flagging reasons	Mentioned other types of reasons that soldiers may get suspension of favorable personnel action
How commands learn about incidents		Discussed the ways that commands learn about incidents that may get soldiers flagged
	Civilian or military law enforcement	Stated that commands learn of incidents through law enforcement channels (e.g., soldier got a DUI)
	Medical or other formal systems	Stated that commands learn of situations in which soldiers or officers require medical attention or otherwise use formal support programs that report to the command
	Others report the behavior to commands	Stated that commands learn about incidents from soldiers or officers who report what another soldier or officer had done (e.g., posted negative comments about the command leadership on social media)
	Leader observation	Stated that leadership in the command observed behavior that signaled a problem (e.g., soldier did not show up for formation)
	Commander investigation/inquiry	Stated that the commander directed an investigation of allegations
	Other	Mentioned other means by which commands learn about incidents
Second chances		Discussed factors that commanders consider when determining whether to give soldiers who engage in misconduct a second chance
	Rank of offender	Indicated that more-junior ranks were given lesser punishments for same offense as more senior ranks

Table C.3—Continued

Level 2	Level 3	Description
	First-time offense	Indicated lesser punishments for first-time offenses ("having a bad day")
	Family or personal life stressors	Indicated command taking the soldier's personal or family life context into consideration, with lesser punishment for extenuating circumstances (e.g., stress from death in family)
	Performance	Indicated that soldiers who are top performers may be given second chances before those who are not (all else being equal)
	Severity of offense	Indicated lesser punishment for less-severe misconduct (e.g., lesser punishment for disrespecting a superior than for a drug offense)
	Sincerity/integrity of soldier	Indicated more leniency if a soldier admits to committing offense and is proactive in wanting to improve or address the problem
	Other second-chance factors	Described other factors that could affect command decisions about whether to give soldiers a second chance
Type of punishment (or rehabilitation)		Discussed options commanders have to punish (e.g., reduction in grade) or help a soldier or officer
	Suspend punishment	Specifically mentioned commanders suspending an adverse action (e.g., reduction in grade) for a probationary period (e.g., 180 days)
	Bar to continued service	Specifically mentioned use of bar to continued service
	Chapter	Specifically mentioned commands initiating a chapter out of service
	Extra duty	Specifically mentioned giving soldiers or officers extra duty for a certain amount of time
	Reduce pay	Specifically mentioned reducing pay or taking money as punishment
	Reduction in grade	Specifically mentioned a reduction in grade (demotion)
	Rehabilitation programs	Mentioned helping soldiers access programs to help with their problems (e.g., substance abuse program)
	Documentation for reprimand	Specifically mentioned documentation of reprimand (e.g., General Officer Memorandum of Reprimand) and/or whether incident is documented in restricted rather than permanent files
	Other punishment or rehabilitation	Discussed other types of punishment or rehabilitation factors
Constraints (flagging or reductions)		Discussed constraints on commands in making suspension or reduction in grade decisions and recommendations or, conversely, in offering second chances
	No constraints	Indicated there are no constraints on commands in making suspension or reduction in grade decisions/recommendations
	Constraints—rank of offender	Indicated that the rank of the soldier or officer being flagged or demoted affects the level of punishment a commander of a given level can take (e.g., a battalion commander cannot cut pay for officers or senior enlisted personnel)
	Constraints—severity of offense	Indicated that severe offenses limit what commanders can do, given the legal requirements involved
	Constraints—other	Cited other factors that constrain commands in making suspension or reduction in grade recommendations

Table C.3—Continued

Level 2	Level 3	Description
Race and ethnicity (flagging or reductions)		Discussed whether racial-ethnic group differences relate to factors that affect command recommendations regarding suspending favorable person status or reductions in grade
	No race and ethnicity factors	Indicated not being aware of or not thinking there were factors related to suspension of favorable personnel action or reductions in grade that relate to race and ethnicity
	No, but could be race and ethnicity factors	Indicated not having witnessed or experienced any race and ethnicity factors but thought there could be ways that race and ethnicity would be related to flagging or reductions in grade
	Socioeconomics of home community	Mentioned soldiers coming from lower-income communities with crime may have a harder time transitioning to Army life (may or may not specifically mention race and ethnicity)
	Patterns of incidents by race and ethnicity	Specifically mentioned one or more racial-ethnic groups as being more or less likely to have certain types of incidents (e.g., younger White males more likely to have alcohol-related incidents on post)
	Potential bias	Specifically mentioned situations where a leader may have exhibited biased behavior based on race and ethnicity that could influence decisions on discipline
	Other racial-ethnic factors	Mentioned other racial-ethnic factors associated with flagging or reductions in grade
Other (flagging or reductions)		Discussed other factors associated with suspension of favorable personnel action or reductions in grade

Factors Related to Voluntary Separation

The discussion centered on factors related to voluntary separation from the Army. Table C.4 presents the interview coding structure within Level 1. The corresponding protocol questions were as follows:

- What factors tend to influence officers and soldiers choosing to leave the Army once eligible to do so?
- How might race and ethnicity be associated with any of these factors? Have you noted or been made aware of factors varying for different racial-ethnic groups?
- Probes: Are there other characteristics, such as branch or MOS, that contribute to voluntary separation decisions? Any differences by type of unit or geography?

TABLE C.4
Content Codes for Army Unit Leader Interviews: Factors Related to Voluntary Separation

Level 2	Level 3	Description
Promotion and career advancement		Discussed a lack of advancement or slow promotion potential as reasons for soldiers to leave
Assignments		Discussed type of next assignment, lack of assignment choice as a reason that soldiers might leave
Quality of life		Discussed factors related to Army quality of life (e.g., deployments, working long hours, living conditions in barracks) as reasons to leave
Career-field specific		Mentioned factors for specific career fields that contribute to reasons soldiers leave (will often include this code with other reasons)
Family considerations		Discussed family considerations, such as spousal lack of support for continued service, as a factor in reasons to leave
External job opportunities		Discussed job opportunities being better outside the Army (may relate to career-field specific reasons to leave)
Relationship with leaders		Discussed factors related to the soldier's relationship to leaders (e.g., toxic leadership) as why soldiers choose to leave
Race and ethnicity factors		Described factors that may be more common among certain racial-ethnic groups or may otherwise relate to race and ethnicity in terms of voluntary separation reasons
	No race and ethnicity factors	Specifically mentioned not thinking race and ethnicity are in any way associated with voluntary separation
	No, but could be race and ethnicity factors	Indicated not having witnessed or experienced any race and ethnicity factors but thought there could be ways that race and ethnicity would be related to voluntary separation factors
	Career field choice	Specifically mentioned that racial-ethnic minorities may choose Army career fields that provide greater career opportunities outside the Army
	Giving back to community	Discussed soldiers or officers from racial-ethnic minority groups leaving Army to go back to their communities to give back
	Lack of role models at senior leadership levels	Discussed racial-ethnic minorities leaving Army because of a lack of racial-ethnic minority senior leaders who can serve as role models
	(Perceived) unfair treatment	Discussed racial-ethnic minorities receiving or perceiving unfair treatment as a reason for leaving
	Other racial-ethnic factors	Mentioned other racial-ethnic factors associated with voluntary separation
Other (voluntary separation)		Other reasons cited for why soldiers/officers choose to leave the Army

Factors Related to Involuntary Separation

The discussion centered on factors related to involuntary separation from the Army. Table C.5 presents the interview coding structure within Level 1. The corresponding protocol questions were as follows:

- What factors tend to influence command recommendations to involuntarily separate officers and soldiers?
- How might race and ethnicity be associated with any of these factors? Have you noted or been made aware of different factors being related to race and ethnicity?

- Probe: Are there other characteristics, such as branch or MOS, that contribute to involuntary separation decisions? Any differences by type of unit or geography?

TABLE C.5
Content Codes for Army Unit Leader Interviews: Factors Related to Involuntary Separation

Level 2	Level 3	Description
Failure to adapt		Discussed attrition due to failure to adapt to Army life; typically related to early attrition for soldiers
Misconduct or violate UCMJ		Discussed legal and regulatory actions taken against soldiers involving misconduct or other offenses that violate UCMJ
Medical		Discussed medical reasons for separation (med board)
Soldier not wanting to promote		Discussed soldiers not wanting to promote because they do not want to lead; results in flag on record, bar for continued service
Career-field specific		Discussed factors specific to certain career fields that contribute to reasons for involuntary separation
Race and ethnicity factors		Described factors that may be more common among certain racial-ethnic groups or may otherwise relate to race and ethnicity in terms of involuntary separation reasons
	No race and ethnicity factors	Specifically mentioned not thinking race and ethnicity are in any way associated with involuntary separation
	No, but could be race and ethnicity factors	Indicated not having witnessed or experiencing any race and ethnicity factors but thought there could be ways that race and ethnicity would be related to involuntary separation factors
	Yes, race and ethnicity factors	Specifically mentioned ways in which race and ethnicity could be associated with involuntary separation
Other (involuntary separation)		Cited other reasons for why soldiers/officers are involuntarily separated from the Army

Factors Related to Retention Improvements

The discussion centered on recommendations for ways the Army can better address retention factors. Table C.6 presents the interview coding structure within Level 1. The corresponding protocol questions were as follows:

- How might the Army better assist with any of the retention issues that you mentioned?
- Probe: What changes to or additional benefits, programs, or policies might mitigate separations?
- Probe: Are existing benefits, programs, and policies available? If so, are there constraints in using them (e.g., resources)?

TABLE C.6
Content Codes for Army Unit Leader Interviews: Retention Improvements

Level 2	Level 3	Description
Assignment or location priority		Suggested improvements that give more choice, priority in assignments and locations to retain soldiers
Commissioning		Suggested increasing opportunities for enlisted to become commissioned officers (Green to Gold)
Educational opportunities		Suggested improvements to opportunities to pursue education as a way to retain soldiers
Monetary incentives		Suggested increasing monetary incentives to retain soldiers
Stability and predictability		Suggested improving geographic stability or reducing permanent changes of station (or give more warning of moves) to retain Army personnel
Support to families		Suggested improvements to support to Army families to retain soldiers
Technical career tracks		Suggested technical career tracks for soldiers who do not wish to promote into leadership positions
Other (retention improvements)		Suggested other ways that the Army could better assist units with retention issues
No policy fix		Specifically indicated that there is no policy fix or easy way to address retention issues beyond what Army already does

Final Notes

The final three Level 1 codes were more general.

Other Considerations

This code flagged suggestions for ways the Army could address race and ethnicity and promotion, retention, or other career topics. The following was the corresponding protocol question: "Is there anything else we did not discuss that you think we should consider regarding race and ethnicity and career outcomes, particularly those related to retention?"

For Discussion

This code was used if a passage needed to be discussed with other coders.

Of Note

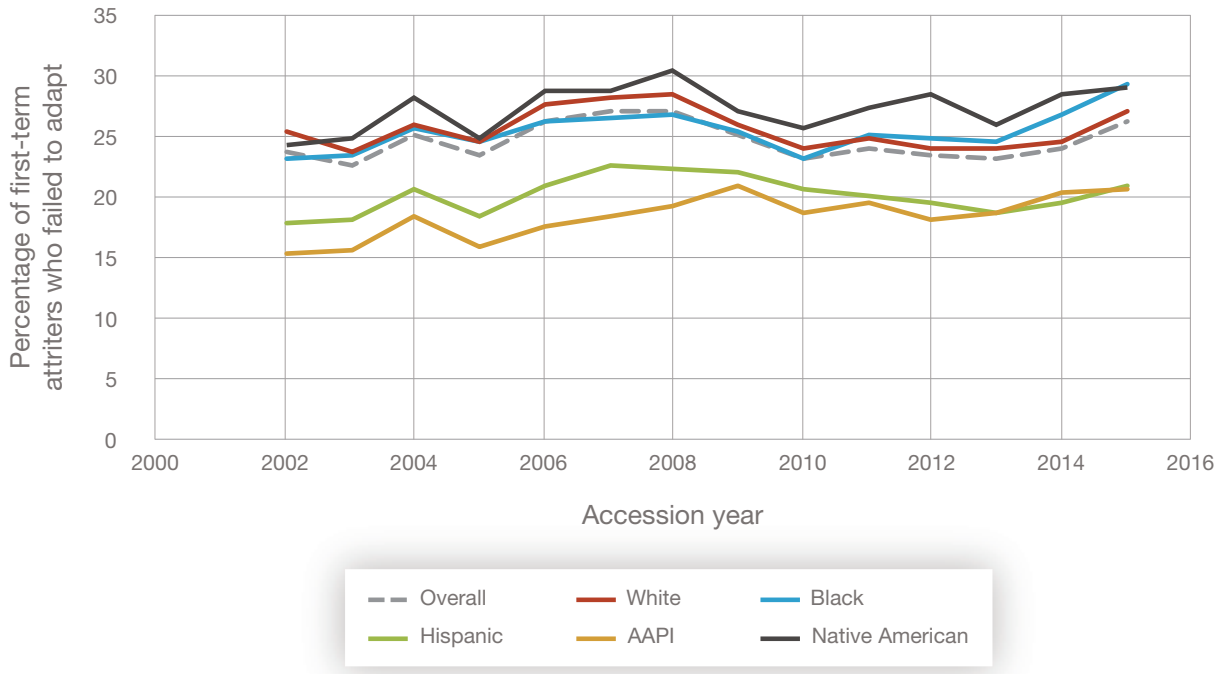
This code was used for particularly relevant quotes or clear evidence of a theme.

APPENDIX D

Supplemental Tables and Figures

In this appendix, we present the full regression results summarized in Chapter 3. We also provide the full regression results for the local labor market analysis for enlisted personnel in Chapter 7.

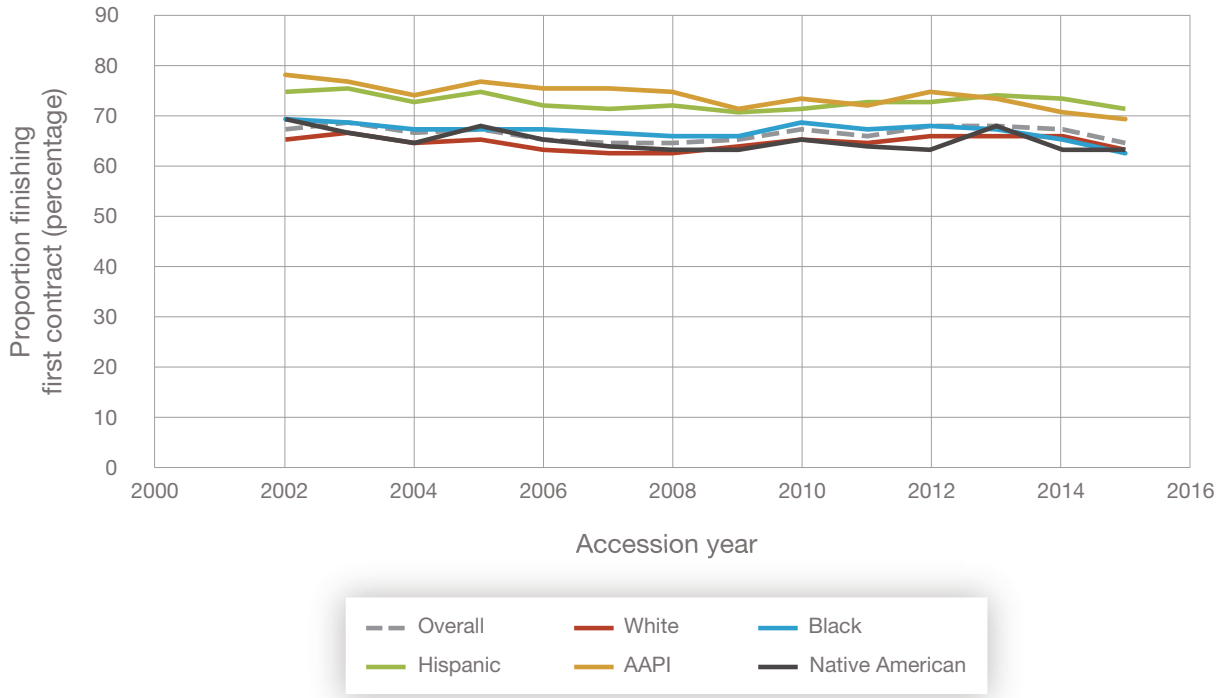
FIGURE D.1
Rate of Failure-to-Adapt Attrition by Accession Cohort



SOURCE: Mean failure-to-adapt attrition rates by accession year in TAPDB/RA Analyst linked data.

FIGURE D.2

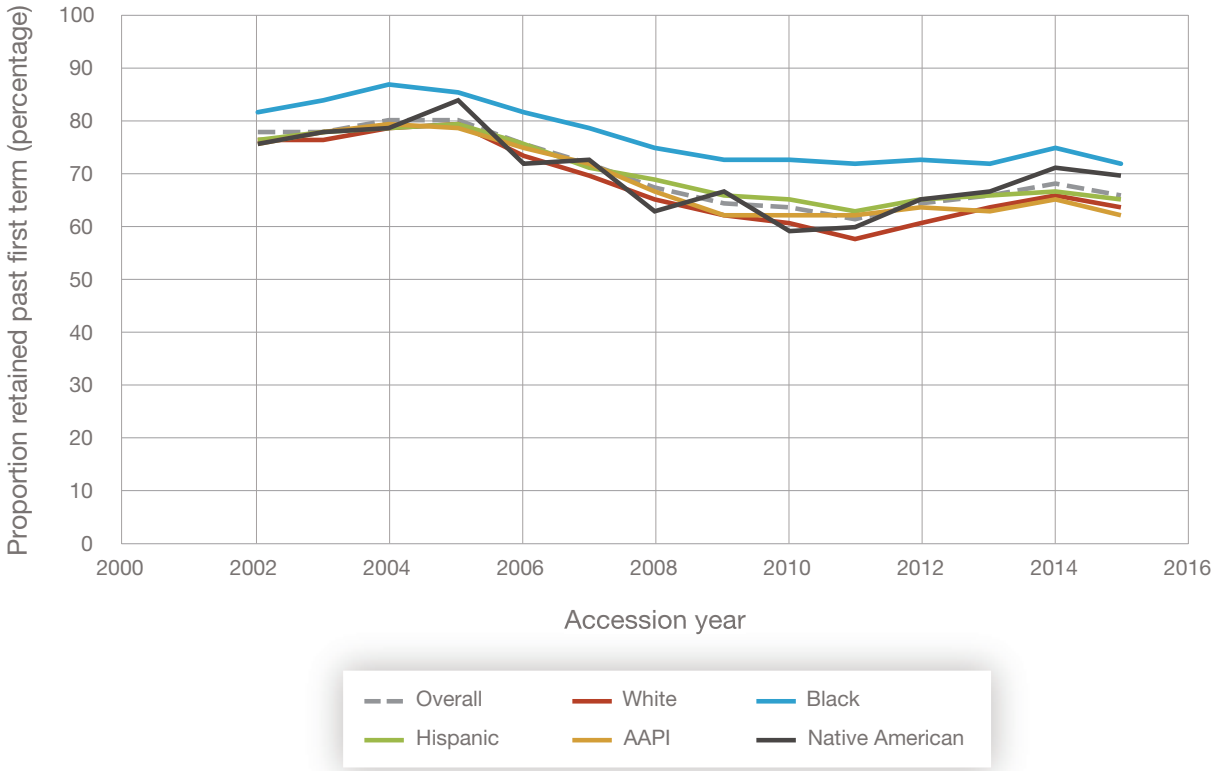
Retention to End of First Contract by Accession Cohort



SOURCE: Mean first-term completion rates by accession year in TAPDB/RA Analyst linked data.

FIGURE D.3

Retention After End of First Contract by Accession Cohort



SOURCE: Mean rate of retention after first term by accession year in TAPDB/RA Analyst linked data.

TABLE D.1

Regression Results for First-Term Retention Outcomes

	Failure-to-Adapt Attrition		Completion of Initial Service Obligation		Retention After End of First Contract	
	Actual	Adjusted	Actual	Adjusted	Actual	Adjusted
Race or ethnicity						
Black	0.0233***	−0.00381***	0.0104***	0.0245***	0.118***	0.0920***
	(0.00124)	(0.00132)	(0.00136)	(0.00144)	(0.00161)	(0.00173)
Hispanic	−0.0398***	−0.0542***	0.0791***	0.0845***	0.0405***	0.0217***
	(0.00143)	(0.00143)	(0.00157)	(0.00156)	(0.00179)	(0.00180)
AAPI	−0.0835***	−0.0712***	0.0959***	0.0961***	0.0156***	0.00646**
	(0.00222)	(0.00221)	(0.00244)	(0.00241)	(0.00274)	(0.00273)
Native American	0.0462***	0.0164***	−0.00962*	0.00606	0.0354***	0.0154**
	(0.00464)	(0.00455)	(0.00510)	(0.00495)	(0.00614)	(0.00601)
Other/ unknown	−0.0354***	0.00671	0.0583***	0.0152	0.174***	0.0724***
	(0.0110)	(0.0114)	(0.0121)	(0.0124)	(0.0139)	(0.0143)
Education						
Less than high school diploma		0.0912***		−0.0757***		0.0333***
		(0.00446)		(0.00485)		(0.00618)
Some college		−0.0185***		0.0146***		−0.0294***
		(0.00324)		(0.00353)		(0.00402)
Bachelor's		−0.0105***		−0.0571***		−0.0812***
		(0.00355)		(0.00387)		(0.00450)
Graduate degree		0.0292***		−0.115***		−0.131***
		(0.00729)		(0.00794)		(0.0101)
Unknown		−0.0315***		0.0392***		0.0122
		(0.00589)		(0.00642)		(0.00743)
Male		−0.131***		0.165***		−0.0200***
		(0.00135)		(0.00147)		(0.00190)
Married		−0.00344***		−0.00590***		0.0982***
		(0.00132)		(0.00144)		(0.00172)
Age		−0.00488***		0.00146***		0.00262***
		(0.000136)		(0.000148)		(0.000176)

Table D.1—Continued

	Failure-to-Adapt Attrition		Completion of Initial Service Obligation		Retention After End of First Contract	
	Actual	Adjusted	Actual	Adjusted	Actual	Adjusted
AFQT Category						
I		−0.0659***		0.0507***		−0.0880***
		(0.00226)		(0.00246)		(0.00289)
II		−0.0362***		0.0243***		−0.0518***
		(0.00128)		(0.00139)		(0.00164)
IIIA		−0.00369***		−0.00281**		−0.0255***
		(0.00125)		(0.00136)		(0.00162)
Enlistment bonus		−2.36-07***		3.59-07***		−2.05-07**
		(7.56-08)		(8.24-08)		(9.99-08)
Contract length of initial enlistment (in months)		0.00292***		−0.00520***		0.000537***
		(5.40-05)		(5.88-05)		(7.21-05)
Paygrade						
E-1		0.171***		−0.145***		−0.102***
		(0.0163)		(0.0178)		(0.0219)
E-2		0.104***		−0.0829***		−0.0864***
		(0.0163)		(0.0178)		(0.0219)
E-3		0.0661***		−0.0494***		−0.0765***
		(0.0163)		(0.0178)		(0.0219)
E-4		0.0382**		−0.00453		−0.0641***
		(0.0164)		(0.0178)		(0.0220)
E-5		0.00673		−0.00925		0.00557
		(0.0170)		(0.0185)		(0.0228)
Infantry		0.0390***		0.605***		−0.0424***
		(0.00416)		(0.00453)		(0.0105)
Construction & engineering		0.0204***		0.640***		−0.00735
		(0.00449)		(0.00489)		(0.0107)
Field artillery		0.0275***		0.634***		0.00253
		(0.00445)		(0.00484)		(0.0107)
Air & missile defense		0.0448***		0.627***		0.00961
		(0.00512)		(0.00557)		(0.0112)
Transportation & aviation		−0.0330***		0.707***		−0.00534
		(0.00481)		(0.00524)		(0.0110)
Special operations		−0.0116**		0.671***		0.0512***

Table D.1—Continued

	Failure-to-Adapt Attrition		Completion of Initial Service Obligation		Retention After End of First Contract	
	Actual	Adjusted	Actual	Adjusted	Actual	Adjusted
		(0.00534)		(0.00582)		(0.0114)
Armor		0.0287***		0.621***		−0.0156
		(0.00449)		(0.00489)		(0.0107)
Signal Corps		0.0192***		0.658***		0.0156
		(0.00440)		(0.00479)		(0.0107)
Judge Advocate General (JAG) corps		0.0163*		0.658***		0.0706***
		(0.00935)		(0.0102)		(0.0151)
Military Police		−0.00425		0.664***		−0.0401***
		(0.00476)		(0.00518)		(0.0110)
Intelligence		0.000479		0.676***		0.0108
		(0.00439)		(0.00478)		(0.0107)
Financial management		−0.00839		0.685***		−0.000579
		(0.00858)		(0.00935)		(0.0142)
Psychological operations		−0.0444***		0.723***		−0.106***
		(0.0150)		(0.0163)		(0.0205)
Adjutant General's Corps		0.00839*		0.674***		0.0838***
		(0.00497)		(0.00542)		(0.0111)
Public Affairs		0.0352**		0.646***		−0.0155
		(0.0155)		(0.0169)		(0.0230)
Chaplain		−0.00354		0.686***		0.0426***
		(0.00950)		(0.0103)		(0.0152)
Medical career management field		0.00710*		0.659***		0.0180*
		(0.00427)		(0.00465)		(0.0106)
Chemical, biological, radiological, and nuclear (CBRN)		0.0290***		0.636***		0.0276**
		(0.00551)		(0.00600)		(0.0115)
Transportation		0.0376***		0.620***		0.0314***
		(0.00459)		(0.00499)		(0.0108)
Ammunition		0.0309***		0.650***		0.0694***
		(0.00537)		(0.00585)		(0.0114)
Mechanical maintenance		0.0126***		0.654***		0.0240**
		(0.00433)		(0.00471)		(0.0106)

Table D.1—Continued

	Failure-to-Adapt Attrition		Completion of Initial Service Obligation		Retention After End of First Contract	
	Actual	Adjusted	Actual	Adjusted	Actual	Adjusted
Quartermaster corps		0.0325***		0.636***		0.0205*
		(0.00427)		(0.00465)		(0.0106)
Electronic & missile maintenance		0.0237***		0.652***		−0.0213*
		(0.00555)		(0.00604)		(0.0115)
MOS (deleted)		0.0129		0.659***		0.00685
		(0.0112)		(0.0122)		(0.0168)
MOS group 67		−0.105***		0.784***		0.0216
		(0.0309)		(0.0337)		(0.0399)
MOS missing		−0.0544***		0.688***		0.0703***
		(0.00657)		(0.00715)		(0.0124)
MOS small clusters		0.240***		0.446***		0.00129
		(0.0512)		(0.0557)		(0.0749)
Constant	0.250***	0.202***	0.646***	0.180***	0.678***	0.800***
	(0.000579)	(0.0172)	(0.000636)	(0.0188)	(0.000760)	(0.0250)
Accession year fixed effects included?	No	Yes	No	Yes	No	Yes
Observations	863,346	863,346	863,346	863,346	571,978	571,978
R-squared	0.003	0.047	0.004	0.062	0.010	0.052

SOURCE: Authors' calculations using TAPDB/RA Analyst linked data.

NOTE: All regressions include accession years 2002–2015. Deleted MOSs are MOS codes that no longer exist in the Army occupational system but had at some point within the window of years we analyzed (2002–2015).

TABLE D.2

Regression Results for Suspension of Favorable Personnel Action and Early Promotion to E-5

	Suspension of Favorable Personnel Action		Early Promotion to E-5	
	Actual	Adjusted	Actual	Adjusted
Race or ethnicity				
Black	0.0815***	0.0493***	−0.0668***	−0.0149***
	(0.00143)	(0.00151)	(0.00202)	(0.00205)
Hispanic	0.0253***	0.0107***	−0.0529***	−0.00697***
	(0.00165)	(0.00164)	(0.00228)	(0.00215)
AAPI	−0.0516***	−0.0326***	−0.0425***	−0.0252***
	(0.00257)	(0.00253)	(0.00342)	(0.00317)

Table D.2—Continued

	Suspension of Favorable Personnel Action		Early Promotion to E-5	
	Actual	Adjusted	Actual	Adjusted
Native American	0.0920***	0.0699***	−0.0654***	−0.0316***
	(0.00534)	(0.00520)	(0.00842)	(0.00765)
Other/unknown	−0.0490***	0.0257**	0.160***	−0.0112
	(0.0125)	(0.0128)	(0.0191)	(0.0181)
Education				
Less than high school diploma		0.0702***		−0.0477***
		(0.00509)		(0.00832)
Some college		−0.0337***		0.0116***
		(0.00372)		(0.00436)
Bachelor's		−0.107***		−0.111***
		(0.00408)		(0.00469)
Graduate degree		−0.115***		−0.0671***
		(0.00838)		(0.0110)
Unknown		−0.00971		0.000142
		(0.00669)		(0.00929)
Male		0.0403***		−0.00295
		(0.00155)		(0.00224)
Married		−0.0222***		0.0267***
		(0.00152)		(0.00194)
Age		−0.00723***		0.00804***
		(0.000155)		(0.000204)
AFQT Category				
I		−0.0671***		0.0648***
		(0.00259)		(0.00332)
II		−0.0348***		0.0571***
		(0.00146)		(0.00201)
IIIA		−0.00710***		0.0320***
		(0.00143)		(0.00199)
Enlistment bonus		1.09-08		−2.25-07*
		(8.67-08)		(1.18-07)
Contract length of initial enlistment (months)		0.00371***		−0.00215***
		(6.18-05)		(8.11-05)

Table D.2—Continued

	Suspension of Favorable Personnel Action		Early Promotion to E-5	
	Actual	Adjusted	Actual	Adjusted
Paygrade				
E-1		0.194***		−0.659***
		(0.0187)		(0.0193)
E-2		0.126***		−0.623***
		(0.0187)		(0.0193)
E-3		0.0965***		−0.577***
		(0.0187)		(0.0193)
E-4		0.0998***		−0.257***
		(0.0187)		(0.0194)
E-5		0.0568***		0.0532***
		(0.0195)		(0.0201)
Infantry		0.118***		0.0467***
		(0.00479)		(0.0127)
Construction & engineering		0.199***		0.0308**
		(0.00516)		(0.0130)
Field artillery		0.209***		0.0968***
		(0.00511)		(0.0129)
Air & missile defense		0.228***		0.0545***
		(0.00587)		(0.0135)
Transportation & aviation		0.183***		−0.00700
		(0.00553)		(0.0130)
Special operations		0.0141**		0.176***
		(0.00613)		(0.0132)
Armor		0.158***		0.0868***
		(0.00516)		(0.0130)
Signal Corps		0.232***		0.0144
		(0.00505)		(0.0128)
JAG corps		0.149***		0.149***
		(0.0107)		(0.0172)
Military Police		0.196***		0.0618***
		(0.00547)		(0.0131)
Intelligence		0.193***		0.0268**
		(0.00505)		(0.0128)

Table D.2—Continued

	Suspension of Favorable Personnel Action		Early Promotion to E-5	
	Actual	Adjusted	Actual	Adjusted
Financial management		0.194***		−0.149***
		(0.00986)		(0.0172)
Psychological operations		0.0521***		0.128***
		(0.0173)		(0.0236)
Adjutant General's Corps		0.223***		0.0168
		(0.00572)		(0.0132)
Public Affairs		0.231***		0.107***
		(0.0179)		(0.0222)
Chaplain		0.216***		0.0434**
		(0.0109)		(0.0176)
Medical CMF		0.215***		−0.0430***
		(0.00491)		(0.0128)
CBRN		0.224***		0.0821***
		(0.00633)		(0.0138)
Transportation		0.266***		0.0462***
		(0.00527)		(0.0130)
Ammunition		0.227***		0.0211
		(0.00617)		(0.0137)
Mechanical maintenance		0.240***		−0.0290**
		(0.00498)		(0.0128)
Quartermaster corps		0.259***		−0.0212*
		(0.00491)		(0.0128)
Electronic & missile maintenance		0.231***		−0.0627***
		(0.00638)		(0.0142)
MOS (deleted)		0.207***		0.00214
		(0.0128)		(0.0202)
MOS group 67		0.166***		−0.0374
		(0.0352)		(0.0417)
MOS missing		0.0481***		−0.0537***
		(0.00752)		(0.0162)
MOS small clusters		0.0825		0.0588
		(0.0590)		(0.0773)

Table D.2—Continued

	Suspension of Favorable Personnel Action		Early Promotion to E-5	
	Actual	Adjusted	Actual	Adjusted
Constant	0.460***	0.0485**	0.238***	0.762***
	(0.000668)	(0.0197)	(0.000988)	(0.0242)
Accession year fixed effects included?	No	Yes	No	Yes
Observations	871,367	871,367	284,645	284,645
R-squared	0.005	0.060	0.005	0.181

SOURCE: Authors' calculations using TAPDB/RA Analyst linked data.

NOTE: All regressions include accession years 2002–2015. Early promotion includes only soldiers who remained in the Army for at least four years and were observed at grade E-5, and early promotion is defined as having reached E-5 in three years or fewer. Deleted MOSs are MOS codes that no longer exist in the Army occupational system but had at some point within the window of years we analyzed (2002–2015).

TABLE D.3

Regression Results, Reduction in Grade from E-5 and Reenlistment Eligibility

	Reduction in Grade from E-5		Reenlistment Eligibility	
	Actual	Adjusted	Actual	Adjusted
Race or ethnicity				
Black	0.0164***	0.0173***	–0.00485***	0.00155
	(0.000883)	(0.000978)	(0.00126)	(0.00137)
Hispanic	0.00166*	0.000556	0.00231*	0.00685***
	(0.000987)	(0.00102)	(0.00139)	(0.00142)
AAPI	–0.00750***	–0.00331**	0.0294***	0.0249***
	(0.00147)	(0.00150)	(0.00213)	(0.00215)
Native American	0.0176***	0.0161***	–0.0388***	–0.0336***
	(0.00367)	(0.00366)	(0.00478)	(0.00475)
Other/unknown	0.0118	0.0136	0.0302***	0.00246
	(0.00808)	(0.00839)	(0.0108)	(0.0113)
Education				
Less than high school diploma		0.0151***		–0.0215***
		(0.00404)		(0.00488)
Some college		–0.00349*		0.00429
		(0.00206)		(0.00317)
Bachelor's		–0.00416**		0.0313***
		(0.00211)		(0.00355)
Graduate degree		0.00176		0.0363***
		(0.00470)		(0.00799)

Table D.3—Continued

	Reduction in Grade from E-5		Reenlistment Eligibility	
	Actual	Adjusted	Actual	Adjusted
Unknown		0.00166		0.0356***
		(0.00430)		(0.00587)
Male		0.0140***		−0.00790***
		(0.00106)		(0.00150)
Married		−0.00156*		0.0163***
		(0.000915)		(0.00136)
Age		−0.00116***		0.000272*
		(9.59-05)		(0.000139)
AFQT Category				
I		−0.0139***		0.0192***
		(0.00153)		(0.00228)
II		−0.00895***		0.0111***
		(0.000953)		(0.00130)
IIIA		−0.00397***		0.00421***
		(0.000950)		(0.00128)
Enlistment bonus		9.30-08*		−1.91-07**
		(5.62-08)		(7.90-08)
Contract length of initial enlistment (months)		−1.55-05		−0.000199***
		(3.88-05)		(5.70-05)
Paygrade				
E-1		−0.972***		−0.0488***
		(0.0306)		(0.0173)
E-2		−0.978***		−0.0172
		(0.0306)		(0.0173)
E-3		−0.982***		−0.00922
		(0.0306)		(0.0173)
E-4		−0.982***		−0.0166
		(0.0307)		(0.0174)
E-5		−0.965***		−0.00709
		(0.0307)		(0.0180)
Infantry		−0.0293***		−0.0352***
		(0.00347)		(0.00831)

Table D.3—Continued

	Reduction in Grade from E-5		Reenlistment Eligibility	
	Actual	Adjusted	Actual	Adjusted
Construction & engineering		−0.0222***		−0.0456***
		(0.00369)		(0.00848)
Field artillery		−0.0242***		−0.0486***
		(0.00365)		(0.00845)
Air & missile defense		−0.0233***		−0.0497***
		(0.00411)		(0.00885)
Transportation & aviation		−0.0360***		−0.0293***
		(0.00381)		(0.00867)
Special operations		−0.0337***		0.0204**
		(0.00391)		(0.00899)
Armor		−0.0281***		−0.0358***
		(0.00368)		(0.00848)
Signal Corps		−0.0329***		−0.0299***
		(0.00360)		(0.00843)
JAG corps		−0.0406***		−0.0111
		(0.00627)		(0.0119)
Military Police		−0.0280***		−0.0251***
		(0.00383)		(0.00866)
Intelligence		−0.0349***		−0.0164*
		(0.00355)		(0.00846)
Financial management		−0.0318***		−0.00511
		(0.00638)		(0.0112)
Psychological operations		−0.0538***		0.0248
		(0.00891)		(0.0162)
Adjutant General's Corps		−0.0336***		−0.00650
		(0.00392)		(0.00877)
Public Affairs		−0.0258***		−0.0240
		(0.00920)		(0.0182)
Chaplain		−0.0378***		−0.0102
		(0.00670)		(0.0120)
Medical CMF		−0.0338***		−0.0299***
		(0.00354)		(0.00838)
CBRN		−0.0224***		−0.0174*

Table D.3—Continued

	Reduction in Grade from E-5		Reenlistment Eligibility	
	Actual	Adjusted	Actual	Adjusted
		(0.00430)		(0.00909)
Transportation		−0.0238***		−0.0403***
		(0.00377)		(0.00853)
Ammunition		−0.0287***		−0.0386***
		(0.00425)		(0.00902)
Mechanical maintenance		−0.0315***		−0.0460***
		(0.00361)		(0.00839)
Quartermaster corps		−0.0285***		−0.0537***
		(0.00356)		(0.00835)
Electronic & missile maintenance		−0.0353***		−0.0467***
		(0.00461)		(0.00912)
MOS (deleted)		−0.0296***		−0.0376***
		(0.00815)		(0.0132)
MOS group 67		−0.00316		0.0615*
		(0.0197)		(0.0316)
MOS missing		−0.0352***		0.0138
		(0.00593)		(0.00979)
MOS small clusters		−0.0662*		−0.158***
		(0.0349)		(0.0592)
Constant	0.0323***	1.062***	0.853***	0.883***
	(0.000424)	(0.0310)	(0.000592)	(0.0198)
Accession year fixed effects included?	No	Yes	No	Yes
Observations	309,027	309,027	571,978	571,978
R-squared	0.001	0.011	0.001	0.014

SOURCE: Authors' calculations using TAPDB/RA Analyst linked data.

NOTE: All regressions include accession years 2002–2015. Reduction in grade includes only soldiers who were ever promoted to E-5, and is calculated within two years of reaching the rank of E-5. Deleted MOSs are MOS codes that no longer exist in the Army occupational system but had at some point within the window of years we analyzed (2002–2015).

TABLE D.4

Regression Results for Retention Past 10, 15, and 20 Years of Service

	Past 10 Years		Past 15 Years		Past 20 Years	
	Actual	Adjusted	Actual	Adjusted	Actual	Adjusted
Race or ethnicity						
Black	0.0817***	0.0903***	0.0765***	0.0319***	0.0485***	0.0424***
	(0.00241)	(0.00254)	(0.00232)	(0.00234)	(0.00291)	(0.00299)
Hispanic	0.0611***	0.0570***	0.00500	0.0381***	0.0107**	0.0531***
	(0.00272)	(0.00269)	(0.00335)	(0.00314)	(0.00465)	(0.00444)
AAPI	0.0954***	0.101***	0.0279***	0.0640***	0.00789	0.0506***
	(0.00426)	(0.00417)	(0.00532)	(0.00490)	(0.00740)	(0.00696)
Native American	−0.00228	0.0107	0.0947***	0.0115**	0.0520***	0.0332***
	(0.00769)	(0.00744)	(0.00561)	(0.00517)	(0.00650)	(0.00610)
Education						
Less than high school diploma		−0.00652		−0.00790		0.0225***
		(0.00848)		(0.00579)		(0.00739)
Some college		0.0235***		0.0304***		0.00797
		(0.00334)		(0.00448)		(0.00516)
Bachelor's		−0.0737***		0.00149		0.0363***
		(0.00484)		(0.00599)		(0.00760)
Graduate degree		−0.0521***		0.0497***		0.0934***
		(0.0147)		(0.0182)		(0.0217)
Unknown		−0.00136		0.00155		−0.00104
		(0.00768)		(0.00872)		(0.0118)
Male		0.0559***		0.0344***		0.00392
		(0.00278)		(0.00295)		(0.00397)
Married		0.0610***		−0.00469**		−0.0147***
		(0.00183)		(0.00228)		(0.00305)
Age		−0.000188		−0.000360		−0.00596***
		(0.000214)		(0.000259)		(0.000353)
AFQT Category						
I		−0.0455***		−0.0286***		0.00693
		(0.00433)		(0.00518)		(0.00731)
II		−0.0151***		−0.0146***		0.00105
		(0.00235)		(0.00242)		(0.00318)
IIIA		−0.00388*		−0.00590**		5.57E05

Table D.4—Continued

	Past 10 Years		Past 15 Years		Past 20 Years	
	Actual	Adjusted	Actual	Adjusted	Actual	Adjusted
		(0.00234)		(0.00236)		(0.00309)
Paygrade						
E-1		−0.534***		−0.211***		−0.221***
		(0.0124)		(0.00681)		(0.0301)
E-2		−0.493***		−0.173***		−0.130***
		(0.0123)		(0.00676)		(0.0204)
E-3		−0.460***		−0.164***		−0.117***
		(0.00749)		(0.00641)		(0.0117)
E-4		−0.318***		−0.148***		−0.108***
		(0.00485)		(0.00537)		(0.00752)
E-5		−0.139***		−0.0792***		−0.154***
		(0.00447)		(0.00361)		(0.00434)
Suspension of favorable personnel action		0.0238***		−0.0182***		−0.0488***
		(0.00188)		(0.00199)		(0.00265)
Promoted early		0.00289				
		(0.00286)				
MOS group = 2, 02		0.122*				
		(0.0678)				
MOS group = 3, 09		−0.0129				
		(0.0640)				
MOS group = 4, 11		−0.102		0.0122		−0.0965**
		(0.0625)		(0.0216)		(0.0391)
MOS group = 5, 12		−0.0918		0.00791		−0.0954**
		(0.0627)		(0.0226)		(0.0445)
MOS group = 6, 13		−0.0880		−0.0126		−0.0984**
		(0.0626)		(0.0221)		(0.0412)
MOS group = 7, 14		−0.0539		−0.0334		−0.128***
		(0.0628)		(0.0236)		(0.0498)
MOS group = 8, 15		0.0238		0.0194		−0.0427
		(0.0627)		(0.0223)		(0.0429)
MOS group = 10, 18		−0.0384		0.0172		−0.596***
		(0.0629)		(0.0243)		(0.205)

Table D.4—Continued

	Past 10 Years		Past 15 Years		Past 20 Years	
	Actual	Adjusted	Actual	Adjusted	Actual	Adjusted
MOS group = 11, 19		−0.103		−0.0101		−0.0547
		(0.0626)		(0.0223)		(0.0433)
MOS group = 12, 21		−0.0869				
		(0.0628)				
MOS group = 13, 25		−0.0465		−0.0364*		−0.0399
		(0.0626)		(0.0219)		(0.0406)
MOS group = 14, 27		−0.0844		0.118***		0.278
		(0.0641)		(0.0411)		(0.404)
MOS group = 16, 31		−0.0575		−0.0151		−0.129***
		(0.0626)		(0.0227)		(0.0447)
MOS group = 17, 33		−0.0442				
		(0.0667)				
MOS group = 18, 35		−0.0928		−0.0422*		−0.113**
		(0.0627)		(0.0226)		(0.0444)
MOS group = 19, 36		−0.0187		0.0703**		−0.0133
		(0.0675)		(0.0300)		(0.0630)
MOS group = 20, 37		−0.0138		0.0763		0.206
		(0.0674)		(0.0464)		(0.147)
MOS group = 22, 42		0.0460		0.0189		−0.0600
		(0.0628)		(0.0225)		(0.0425)
MOS group = 23, 44		−0.0398				
		(0.0646)				
MOS group = 24, 45		−0.0995				
		(0.0653)				
MOS group = 25, 46		−0.121*		−0.00169		0.0382
		(0.0680)		(0.0453)		(0.0996)
MOS group = 26, 51		−0.167**				
		(0.0692)				
MOS group = 27, 52		−0.109*				
		(0.0639)				
MOS group = 28, 54		−0.0827				
		(0.0641)				
MOS group = 29, 55		−0.0679				

Table D.4—Continued

	Past 10 Years		Past 15 Years		Past 20 Years	
	Actual	Adjusted	Actual	Adjusted	Actual	Adjusted
		(0.0652)				
MOS group = 30, 56		0.00334		0.0686**		
		(0.0644)		(0.0349)		
				−0.266***		
				(0.0756)		
MOS group = 31, 62		−0.0995				
		(0.0649)				
MOS group = 32, 63		−0.0714				
		(0.0627)				
MOS group = 33, 67		0.0257		−0.0351		−0.301***
		(0.0641)		(0.0521)		(0.105)
MOS group = 34, 68		−0.0133		−0.0328		−0.0970**
		(0.0626)		(0.0218)		(0.0411)
MOS group = 35, 71		0.0664		0.0140		−0.0927
		(0.0649)		(0.0378)		(0.0570)
MOS group = 36, 73		0.0251				
		(0.0666)				
MOS group = 37, 74		−0.0379		−0.0144		−0.0667
		(0.0629)		(0.0242)		(0.0521)
MOS group = 38, 75		0.0361		−0.0997		
		(0.0643)		(0.0697)		
MOS group = 40, 77		−0.0661		−0.114		
		(0.0635)		(0.0706)		
MOS group = 42, 81		−0.127*				
		(0.0769)				
MOS group = 43, 82		−0.0967				
		(0.0759)				
MOS group = 44, 88		−0.0800		−0.0259		−0.135***
		(0.0626)		(0.0226)		(0.0432)
MOS group = 45, 89		−0.0537		−0.0368		−0.174***
		(0.0630)		(0.0254)		(0.0563)
MOS group = 46, 91		−0.0468		−0.0742***		−0.126***
		(0.0626)		(0.0219)		(0.0398)

Table D.4—Continued

	Past 10 Years		Past 15 Years		Past 20 Years	
	Actual	Adjusted	Actual	Adjusted	Actual	Adjusted
MOS group = 47, 92		−0.0635		−0.0660***		−0.0858**
		(0.0626)		(0.0216)		(0.0393)
MOS group = 48, 93		−0.0126				
		(0.0679)				
MOS group = 49, 94		−0.0272		−0.0714***		−0.134***
		(0.0632)		(0.0245)		(0.0517)
MOS group = 50, 95		−0.0558				
		(0.0633)				
MOS group = 51, 96		−0.126**				
		(0.0632)				
MOS group = 52, 97		−0.170***				
		(0.0637)				
MOS group = 53, 98		−0.122*				
		(0.0633)				
MOS (deleted)		−0.0762		−0.0348		−0.293***
		(0.0659)		(0.0313)		(0.0717)
MOS missing		−0.0657		0.00768		−0.0380
		(0.0633)		(0.0222)		(0.0380)
MOS small clusters		−0.0677		−0.169***		−0.228***
		(0.0999)		(0.0371)		(0.0523)
Constant	0.311***	0.583***	0.711***	0.937***	0.729***	1.312***
	(0.00114)	(0.0629)	(0.00140)	(0.282)	(0.00188)	(0.288)
Accession year fixed effects included?	No	Yes	No	Yes	No	Yes
Observations	273,765	273,765	188,250	188,250	109,777	109,777
R-squared	0.006	0.078	0.007	0.180	0.003	0.140

SOURCE: Authors' calculations using TAPDB/RA Analyst linked data.

NOTE: Regression for retention past 10 years includes 2002–2011 accession cohorts. Regression for retention past 15 years includes 1969–2006 accession cohorts. Regression for retention past 20 years includes 1969–2001 accession cohorts. MOS refers to MOS at accession, and available MOSs shift over time, so not all fixed effects are included in all regression as codes come into and out of use. Deleted MOSs are MOS codes that no longer exist in the Army occupational system but had at some point within the window of years we analyzed (2002–2015).

TABLE D.5

Labor Conditions Regression Results on Retained Past First Term, Conditional on Eligibility

	Retain Past 1st
Average wage	
In commuting zone, accession location	−0.000526
	(0.000616)
In commuting zone, unit location	0.00727***
	(0.000675)
In state, accession location	−0.00578***
	(0.00109)
In state, unit location	−0.00263**
	(0.00111)
Race or ethnicity	
Black	0.0792***
	(0.00188)
Hispanic	0.0210***
	(0.00213)
AAPI	−0.00924***
	(0.00323)
Native American	0.0182***
	(0.00670)
Unknown race	0.0186
	(0.0213)
Accession year	−0.00841***
	(0.000906)
Education	
Less than high school	0.0319***
	(0.00639)
Some college	−0.0266***
	(0.00418)
Bachelor's	−0.0763***
	(0.00475)
Graduate degree	−0.129***
	(0.0114)
Unknown	−0.0393**
	(0.0192)

Table D.5—Continued

	Retain Past 1st
Male	−0.0190***
	(0.00192)
Married	0.0927***
	(0.00169)
Age	0.00262***
	(0.000180)
AFQT Category	
I	−0.0741***
	(0.00310)
II	−0.0432***
	(0.00168)
IIIA	−0.0190***
	(0.00164)
Paygrade	
E-1	−0.0909***
	(0.0156)
E-2	−0.0758***
	(0.0156)
E-3	−0.0678***
	(0.0156)
E-4	−0.0607***
	(0.0156)
E-5	−0.00735
	(0.0162)
MOS group = 11	−0.0158
	(0.0132)
MOS group = 12	0.0143
	(0.0134)
MOS group = 13	0.0114
	(0.0134)
MOS group = 14	0.0235*
	(0.0140)
MOS group = 15	0.0128
	(0.0136)

Table D.5—Continued

	Retain Past 1st
MOS group = 18	0.0791***
	(0.0140)
MOS group = 19	0.0114
	(0.0135)
MOS group = 25	0.0263**
	(0.0134)
MOS group = 27	0.0749***
	(0.0169)
MOS group = 31	−0.0161
	(0.0137)
MOS group = 35	0.0253*
	(0.0134)
MOS group = 36	0.0150
	(0.0162)
MOS group = 37	−0.124***
	(0.0252)
MOS group = 42	0.0891***
	(0.0135)
MOS group = 46	−0.0141
	(0.0263)
MOS group = 56	0.0486***
	(0.0167)
MOS group = 68	0.0323**
	(0.0132)
MOS group = 74	0.0482***
	(0.0140)
MOS group = 88	0.0447***
	(0.0133)
MOS group = 89	0.0733***
	(0.0140)
MOS group = 91	0.0368***
	(0.0132)
MOS group = 92	0.0282**
	(0.0132)

Table D.5—Continued

	Retain Past 1st
MOS group = 94	–0.0127
	(0.0141)
MOS group = Deleted	0.0150
	(0.0184)
MOS group = 67	0.0350
	(0.0386)
MOS group = Missing	0.0461
	(0.0369)
MOS group = Small	0.0395
	(0.0836)
Constant	17.59***
	(1.819)
Accession year fixed effects included?	Yes
Observations	539,090
R-squared	0.065

SOURCE: Authors' calculations using TAPDB and American Community Survey data.

APPENDIX E

Commissioned Officer Regression Results

In this appendix, we present the full regression results summarized in Chapter 5. We also provide the full regression results for the local labor market analysis for officers in Chapter 7.

TABLE E.1

O-1 Logistic Regression Results

	O-1 Retention				Promotion to O-2			
	Actual		Adjusted		Actual		Adjusted	
Variable	Coefficient	P-value	Coefficient	P-value	Coefficient	P-value	Coefficient	P-value
Black	−0.436	0.000	−0.305	0.001	−0.938	0.000	−0.866	0.000
Hispanic	−0.179	0.108	−0.140	0.214	−0.542	0.000	−0.512	0.000
AAPI	−0.016	0.902	0.036	0.777	−0.228	0.145	−0.176	0.266
Native American	0.176	0.622	0.296	0.408	−0.572	0.092	−0.553	0.104
Other/unknown	−0.082	0.699	0.055	0.799	−0.980	0.000	−0.790	0.000
Female			−0.059	0.494			−0.317	0.002
Age			−0.045	0.000			0.003	0.825
Married			0.550	0.000			0.123	0.351
Divorced			−0.198	0.337			−0.205	0.446
Other nonsingle			−0.277	0.545				
Children			0.307	0.068			−0.026	0.886
USMA			−0.412	0.000			0.351	0.021
ROTC scholarship			0.421	0.000			0.253	0.053
ROTC nonscholarship			0.128	0.219			0.138	0.285
Direct Accession Program			−0.601	0.013			−0.632	0.028
Other non-OCS			0.017	0.949			–1.181	0.000
Engineer			0.210	0.128			0.348	0.079
Field Artillery			−0.106	0.335			−0.141	0.332
Air Defense Artillery			0.071	0.680			−0.212	0.317
Aviation			0.852	0.000			0.679	0.012
Cyber			0.881	0.218			0.782	0.438

Table E.1—Continued

	O-1 Retention				Promotion to O-2			
	Actual		Adjusted		Actual		Adjusted	
Variable	Coefficient	P-value	Coefficient	P-value	Coefficient	P-value	Coefficient	P-value
Armor			0.161	0.221			−0.149	0.363
Signal			0.201	0.220			0.117	0.561
Military Police			0.060	0.751			−0.223	0.289
Military Intelligence			0.186	0.251			0.475	0.043
Adjutant General			−0.329	0.064			0.062	0.800
Chemical			−0.166	0.326			−0.032	0.880
Transportation			−0.108	0.487			0.277	0.211
EOD			0.213	0.187			−0.075	0.671
Quartermaster			0.196	0.254			0.203	0.328
Nurse			0.260	0.233			0.281	0.238
Medical Service			0.113	0.512			0.353	0.104
Constant	4.600	0.000	5.135	0.000	5.210	0.000	4.669	0.000

SOURCE: Authors' calculations using TAPDB.

NOTE: OCS = Officer Candidate School; ROTC = Reserve Officers' Training Corps; USMA = U.S. Military Academy. All independent variables are measured at the time an officer is first observed as an O-1. Adjusted regressions also include fixed effects for FY. Excluded categories for categorical variables (i.e., dummy categories) are as follows: White, Male, Single, No children, OCS, Infantry. Choice of excluded categories of the categorical variables should not affect model results because the effects are identical relative to each other, regardless of which category is excluded. EOD = explosive ordinance disposal.

TABLE E.2

O-2 Logistic Regression Results

	O-2 Retention				Promotion to O-3			
	Actual		Adjusted		Actual		Adjusted	
Variable	Coefficient	P-value	Coefficient	P-value	Coefficient	P-value	Coefficient	P-value
Black	0.208	0.000	0.448	0.000	−0.337	0.000	−0.305	0.000
Hispanic	0.100	0.047	0.231	0.000	−0.332	0.000	−0.372	0.000
AAPI	0.151	0.006	0.242	0.000	−0.155	0.028	−0.093	0.214
Native American	0.273	0.086	0.115	0.480	0.343	0.165	0.238	0.367
Other/unknown	0.132	0.164	0.167	0.086	−0.135	0.266	−0.086	0.497
Female			−0.283	0.000			−0.079	0.131
Age			0.060	0.000			−0.015	0.021
Married			0.189	0.000			0.270	0.000
Divorced			0.102	0.228			0.032	0.780
Other nonsingle			−0.211	0.407			−0.178	0.597
Children			0.337	0.000			0.186	0.012
USMA			2.145	0.000			0.847	0.000
ROTC scholarship			2.016	0.000			0.063	0.318
ROTC nonscholarship			0.677	0.000			0.098	0.138
Direct Accession Program			0.855	0.000			0.162	0.143
Other non-OCS			0.840	0.000			0.048	0.728
Engineer			0.122	0.047			−0.014	0.879
Field Artillery			−0.144	0.004			−0.083	0.286
Air Defense Artillery			0.039	0.629			−0.046	0.710
Aviation			1.143	0.000			0.941	0.000
Cyber			0.828	0.049			−0.214	0.644

Table E.2—Continued

	O-2 Retention				Promotion to O-3			
	Actual		Adjusted		Actual		Adjusted	
Variable	Coefficient	P-value	Coefficient	P-value	Coefficient	P-value	Coefficient	P-value
Armor			0.033	0.574			−0.006	0.941
Signal			0.134	0.036			0.050	0.594
Military Police			0.055	0.472			−0.083	0.471
Military Intelligence			−0.084	0.168			0.200	0.055
Adjutant General			0.069	0.421			0.230	0.078
Chemical			−0.196	0.007			−0.055	0.631
Transportation			−0.038	0.563			−0.041	0.681
EOD			0.017	0.787			−0.066	0.469
Quartermaster			−0.238	0.000			−0.028	0.775
Nurse			−0.207	0.013			−0.913	0.000
Medical Service			0.052	0.508			−0.250	0.010
Constant	2.596	0.000	0.129	0.410	3.304	0.000	3.914	0.000

SOURCE: Authors' calculations using TAPDB.

NOTE: All independent variables are measured at the time an officer is first observed as an O-2. Adjusted regressions also include fixed effects for FY. Excluded categories for categorical variables (i.e., dummy categories) are as follows: White, Male, Single, No children, OCS, Infantry. Choice of excluded categories of the categorical variables should not affect model results because the effects are identical relative to each other, regardless of which category is excluded.

TABLE E.3

O-3 Logistic Regression Results

	O-3 Retention				Promotion to O-4			
	Actual		Adjusted		Actual		Adjusted	
Variable	Coefficient	P-value	Coefficient	P-value	Coefficient	P-value	Coefficient	P-value
Black	0.611	0.000	0.486	0.000	−0.500	0.000	−0.363	0.000
Hispanic	0.379	0.000	0.266	0.000	−0.343	0.000	−0.288	0.000
AAPI	0.134	0.000	0.206	0.000	−0.262	0.001	−0.197	0.012
Native American	0.080	0.424	0.077	0.461	−0.369	0.094	−0.398	0.078
Other/unknown	0.319	0.000	0.173	0.002	−0.300	0.007	−0.119	0.299
Female			−0.383	0.000			−0.035	0.526
Age			0.045	0.000			−0.061	0.000
Married			0.327	0.000			0.296	0.000
Divorced			0.157	0.001			−0.021	0.817
Other nonsingle			0.407	0.018			0.577	0.152
Children			0.239	0.000			−0.119	0.025
USMA			−0.403	0.000			0.126	0.128
ROTC scholarship			−0.150	0.000			−0.072	0.257
ROTC nonscholarship			0.257	0.000			−0.123	0.046
Direct Accession Program			0.072	0.211			−0.174	0.104
Other non-OCS			0.257	0.000			0.161	0.195
Engineer			−0.177	0.000			−0.273	0.003
Field Artillery			−0.217	0.000			−0.067	0.441
Air Defense Artillery			−0.083	0.096			−0.228	0.046
Aviation			0.355	0.000			−0.023	0.820
Armor			0.021	0.569			−0.005	0.956

Table E.3—Continued

	O-3 Retention				Promotion to O-4			
	Actual		Adjusted		Actual		Adjusted	
Variable	Coefficient	P-value	Coefficient	P-value	Coefficient	P-value	Coefficient	P-value
Signal			–0.054	0.148			–0.062	0.483
Military Police			0.175	0.001			0.089	0.465
Military Intelligence			–0.221	0.000			0.003	0.976
Adjutant General			0.113	0.030			0.447	0.001
Chemical			–0.055	0.322			–0.474	0.000
Transportation			–0.237	0.000			0.021	0.839
EOD			–0.096	0.025			–0.148	0.132
Quartermaster			–0.115	0.009			0.044	0.667
Nurse			–0.200	0.000			0.238	0.046
Medical Service			0.339	0.000			–0.190	0.040
Constant	–0.050	0.000	–1.251	0.000	2.296	0.000	4.835	0.000

SOURCE: Authors' calculations using TAPDB.

NOTE: All independent variables are measured at the time an officer is first observed as an O-3. Adjusted regressions also include fixed effects for FY. Excluded categories for categorical variables (i.e., dummy categories) are as follows: White, Male, Single, No children, OCS, Infantry. Choice of excluded categories of the categorical variables should not affect model results because the effects are identical relative to each other, regardless of which category is excluded.

TABLE E.4

Logistic Regression Results, Below-the-Zone Promotion to O-4

	Actual		Adjusted	
Variable	Coefficient	P-value	Coefficient	P-value
Black	−0.539	0.000	−0.530	0.000
Hispanic	−0.631	0.000	−0.622	0.000
AAPI	−0.456	0.000	−0.404	0.000
Native American	−1.014	0.015	−1.096	0.009
Other/unknown	−0.299	0.043	−0.108	0.476
Female			0.108	0.120
Age			−0.073	0.000
Married			0.296	0.000
Divorced			−0.028	0.853
Other nonsingle			−0.067	0.887
Children			0.095	0.174
USMA			0.169	0.055
ROTC scholarship			−0.319	0.000
ROTC nonscholarship			−0.382	0.000
Direct Accession Program			−1.528	0.000
Other non-OCS			−1.126	0.000
Engineer			−0.751	0.000
Field Artillery			−0.603	0.000
Air Defense Artillery			−0.101	0.421
Aviation			−0.617	0.000
Armor			−0.293	0.002
Signal			−0.073	0.441
Military Police			−0.014	0.904
Military Intelligence			−0.083	0.404
Adjutant General			0.271	0.024
Chemical			−0.703	0.000
Transportation			−0.198	0.101
EOD			−0.359	0.002
Quartermaster			0.262	0.013
Nurse			−0.327	0.043
Medical Service			−0.490	0.000
Constant	−2.477	0.000	−0.091	0.765

SOURCE: Authors' calculations using TAPDB.

NOTE: All independent variables are measured at the time an officer is first observed as an O-3. Adjusted regression also includes fixed effects for FY. Excluded categories for categorical variables (i.e., dummy categories) are as follows: White, Male, Single, No children, OCS, Infantry. Choice of excluded categories of the categorical variables should not affect model results because the effects are identical relative to each other, regardless of which category is excluded.

TABLE E.5

O-4 Logistic Regression Results

	O-4 Retention				Promotion to O-5			
	Actual		Adjusted		Actual		Adjusted	
Variable	Coefficient	P-value	Coefficient	P-value	Coefficient	P-value	Coefficient	P-value
Black	−0.031	0.524	0.261	0.000	−0.678	0.000	−0.522	0.000
Hispanic	0.042	0.555	0.259	0.001	−0.503	0.000	−0.243	0.019
AAPI	0.242	0.004	0.335	0.000	−0.288	0.011	−0.265	0.030
Native American	−0.327	0.094	−0.079	0.703	−0.080	0.813	0.315	0.380
Other/unknown	−0.189	0.092	0.185	0.127	−0.295	0.093	−0.173	0.361
Female			−0.147	0.005			0.211	0.015
Age			−0.129	0.000			−0.155	0.000
Married			0.067	0.234			0.282	0.001
Divorced			−0.034	0.695			−0.158	0.219
Other nonsingle			−0.331	0.299			0.508	0.399
Children			0.048	0.212			−0.004	0.943
USMA			0.558	0.000			0.120	0.354
ROTC scholarship			0.630	0.000			−0.100	0.308
ROTC nonscholarship			0.739	0.000			−0.376	0.000
Direct Accession Program			0.517	0.000			0.369	0.074
Other non-OCS			0.471	0.000			0.355	0.032
Engineer			0.064	0.488			−0.278	0.045
Field Artillery			0.301	0.001			−0.206	0.114
Air Defense Artillery			0.314	0.009			−0.322	0.047
Aviation			−0.249	0.003			0.025	0.855
Armor			0.517	0.000			0.220	0.160

Table E.5—Continued

	O-4 Retention				Promotion to O-5			
	Actual		Adjusted		Actual		Adjusted	
Variable	Coefficient	P-value	Coefficient	P-value	Coefficient	P-value	Coefficient	P-value
Signal			−0.105	0.245			−0.239	0.080
Military Police			−0.008	0.943			−0.175	0.276
Military Intelligence			−0.383	0.000			−0.416	0.001
Adjutant General			−0.125	0.199			0.024	0.874
Chemical			0.064	0.632			−0.142	0.459
Transportation			0.015	0.913			−0.270	0.145
EOD			−0.092	0.420			−0.426	0.008
Quartermaster			−0.248	0.058			−0.470	0.010
Nurse			0.001	0.991			1.000	0.000
Medical Service			0.217	0.015			0.256	0.069
Below-the-zone promotion to O-4			0.137	0.093			1.604	0.000
Constant	1.155	0.000	5.492	0.000	2.108	0.000	9.263	0.000

SOURCE: Authors' calculations using TAPDB.

NOTE: All independent variables are measured at the time an officer is first observed as an O-4. Adjusted regressions also include fixed effects for FY. Excluded categories for categorical variables (i.e., dummy categories) are as follows: White, Male, Single, No children, OCS, Infantry. Choice of excluded categories of the categorical variables should not affect model results because the effects are identical relative to each other, regardless of which category is excluded.

TABLE E.6

Logistic Regression Results, Below-the-Zone Promotion to O-5

	Actual		Adjusted	
Variable	Coefficient	P-value	Coefficient	P-value
Black	−0.595	0.000	−0.438	0.000
Hispanic	−0.535	0.001	−0.317	0.062
Asian/Pacific Islander	−0.452	0.010	−0.307	0.086
Other/unknown	−0.252	0.318	0.005	0.984
Female			0.196	0.083
Age			−0.148	0.000
Married			0.255	0.024
Divorced			−0.304	0.209
Other nonsingle			−0.234	0.821
Children			0.067	0.360
USMA			−0.286	0.077
ROTC scholarship			−0.288	0.047
ROTC nonscholarship			−0.513	0.001
Direct Accession Program			−0.598	0.088
Other non-OCS			−0.259	0.343
Engineer			−0.566	0.001
Field Artillery			−0.526	0.001
Air Defense Artillery			−0.023	0.904
Aviation			−0.216	0.133
Cyber			2.765	0.055
Armor			0.017	0.909
Signal			−0.236	0.169
Military Police			−0.260	0.192
Military Intelligence			0.024	0.864
Adjutant General			0.280	0.113
Chemical			−0.576	0.050
Transportation			−0.185	0.397
EOD			−0.052	0.782
Quartermaster			0.202	0.344
Nurse			−0.253	0.229
Medical Service			−0.340	0.037
Below-the-zone promotion to O-4			1.276	0.000
Constant	−2.549	0.000	2.786	0.000

SOURCE: Authors' calculations using TAPDB.

NOTE: All independent variables are measured at the time an officer is first observed as an O-4. Adjusted regression also includes fixed effects for FY. Excluded categories for categorical variables (i.e., dummy categories) are as follows: White, Male, Single, No children, OCS, Infantry. Choice of excluded categories of the categorical variables should not affect model results because the effects are identical relative to each other, regardless of which category is excluded.

TABLE E.7

O-5 Logistic Regression Results

	O-5 Retention				Promotion to O-6			
	Actual		Adjusted		Actual		Adjusted	
Variable	Coefficient	P-value	Coefficient	P-value	Coefficient	P-value	Coefficient	P-value
Black	0.141	0.009	0.290	0.000	−0.428	0.000	−0.254	0.001
Hispanic	0.104	0.229	0.184	0.040	−0.573	0.000	−0.446	0.000
AAPI	0.180	0.061	0.189	0.058	−0.373	0.002	−0.327	0.014
Native American	−0.055	0.810	0.156	0.517	−0.293	0.326	0.045	0.890
Other/unknown	0.303	0.050	0.397	0.014	−0.293	0.123	−0.087	0.669
Female			−0.180	0.003			0.063	0.475
Age			−0.104	0.000			−0.148	0.000
Married			−0.079	0.309			0.110	0.301
Divorced			−0.240	0.028			−0.420	0.007
Other nonsingle			−0.667	0.059			−0.975	0.117
Children			0.013	0.759			0.009	0.872
USMA			0.268	0.002			−0.050	0.703
ROTC scholarship			0.155	0.033			−0.284	0.013
ROTC nonscholarship			0.160	0.032			−0.450	0.000
Direct Accession Program			0.743	0.000			−0.464	0.008
Other non-OCS			0.589	0.000			−0.396	0.038
Engineer			−0.339	0.000			−0.591	0.000
Field Artillery			−0.198	0.020			−0.507	0.000
Air Defense Artillery			−0.423	0.000			−0.272	0.080
Aviation			−0.389	0.000			−0.472	0.000
Cyber			−0.869	0.069			0.002	0.998

Table E.7—Continued

	O-5 Retention				Promotion to O-6			
	Actual		Adjusted		Actual		Adjusted	
Variable	Coefficient	P-value	Coefficient	P-value	Coefficient	P-value	Coefficient	P-value
Armor			−0.014	0.880			−0.384	0.001
Signal			−0.299	0.002			−0.290	0.026
Military Police			−0.337	0.002			−0.298	0.046
Military Intelligence			−0.578	0.000			−0.524	0.000
Adjutant General			−0.258	0.008			−0.436	0.001
Chemical			−0.271	0.035			−0.503	0.003
Transportation			−0.508	0.000			0.085	0.657
EOD			−0.436	0.000			−0.052	0.737
Quartermaster			−0.458	0.000			−0.080	0.643
Nurse			−0.563	0.000			0.218	0.157
Medical Service			0.027	0.754			−0.194	0.080
Below-the-zone promotion to O-5			1.024	0.000			2.269	0.000
Constant	0.513	0.000	4.713	0.000	0.555	0.000	7.304	0.000

SOURCE: Authors' calculations using TAPDB.

NOTE: All independent variables are measured at the time an officer is first observed as an O-5. Adjusted regressions also include fixed effects for FY. Excluded variables for each set of dummy categories: White, Male, Single, No children, OCS, Infantry, No below-the-zone promotion to O-5. Choice of excluded variables should not affect model results because the effects are identical relative to each other, regardless of which variables are excluded.

TABLE E.8

Logistic Regression Results, Below-the-Zone Promotion to O-6

	Actual		Adjusted	
Variable	Coefficient	P-value	Coefficient	P-value
Black	–0.210	0.245	0.093	0.632
Hispanic	–0.551	0.108	–0.168	0.635
AAPI	–0.631	0.103	–0.469	0.241
Other/unknown	–0.576	0.327	–0.313	0.604
Female			0.498	0.018
Age			–0.252	0.000
Married			0.298	0.316
Divorced			–0.226	0.653
Children			0.096	0.490
USMA			–0.084	0.815
ROTC scholarship			–0.004	0.991
ROTC nonscholarship			–0.500	0.153
Direct Accession Program			–1.850	0.086
Other non-OCS			–0.371	0.639
Engineer			–0.749	0.004
Field Artillery			–1.189	0.000
Air Defense Artillery			–1.606	0.002
Aviation			–1.285	0.000
Cyber			1.052	0.352
Armor			–0.456	0.052
Signal			–0.553	0.069
Military Police			–1.778	0.001
Military Intelligence			–0.092	0.674
Adjutant General			–0.565	0.052
Chemical			–1.459	0.016
Transportation			0.063	0.854
EOD			0.025	0.930
Quartermaster			–0.111	0.744
Nurse			–1.136	0.011
Medical Service			–0.568	0.030
Below-the-zone promotion to O-5			1.792	0.000
Constant	–3.231	0.000	7.313	0.000

SOURCE: Authors' calculations using TAPDB.

NOTE: All independent variables are measured at the time an officer is first observed as an O-5. Adjusted regression also includes fixed effects for FY. Excluded categories for categorical variables (i.e., dummy categories) are as follows: White, Male, Single, No children, OCS, Infantry. Choice of excluded categories of the categorical variables should not affect model results because the effects are identical relative to each other, regardless of which category is excluded.

TABLE E.9

Policy Change Logistic Regression Results

	Promotion to O-4		Promotion to O-5		Promotion to O-6	
Variable	Coefficient	P-value	Coefficient	P-value	Coefficient	P-value
Before August 1, 2020, non-White	−0.300	0.000	−0.422	0.000	−0.295	0.000
After August 1, 2020, White	0.774	0.000	1.199	0.000	1.294	0.000
After August 1, 2020, non-White	0.784	0.000	1.045	0.000	1.135	0.000
Female	−0.058	0.279	0.174	0.037	0.085	0.330
Age	−0.058	0.000	−0.123	0.000	−0.158	0.000
Married	0.291	0.000	0.315	0.000	0.122	0.246
Divorced	−0.046	0.609	−0.159	0.192	−0.456	0.003
Other nonsingle	0.630	0.113	0.569	0.327	−0.771	0.223
Children	−0.103	0.049	0.005	0.935	−0.007	0.897
USMA	0.253	0.002	0.398	0.001	−0.145	0.256
ROTC scholarship	0.031	0.619	0.132	0.152	−0.359	0.001
ROTC nonscholarship	−0.017	0.779	−0.207	0.019	−0.513	0.000
Direct Accession Program	−0.217	0.040	0.454	0.021	−0.402	0.020
Other non-OCS	0.469	0.000	0.198	0.208	−0.442	0.020
Engineer	−0.229	0.012	−0.324	0.016	−0.603	0.000
Field Artillery	−0.039	0.654	−0.264	0.037	−0.515	0.000
Air Defense Artillery	−0.142	0.207	−0.360	0.022	−0.295	0.054
Aviation	0.018	0.852	−0.005	0.972	−0.481	0.000
Armor	−0.001	0.991	0.151	0.323	−0.417	0.000
Signal	−0.015	0.865	−0.395	0.003	−0.418	0.001
Military Police	0.125	0.296	−0.269	0.084	−0.300	0.042
Military Intelligence	0.085	0.381	−0.466	0.000	−0.528	0.000
Adjutant General	0.533	0.000	−0.162	0.273	−0.445	0.001
Chemical	−0.450	0.000	−0.174	0.346	−0.538	0.001
Transportation	0.029	0.777	−0.053	0.764	0.187	0.320
EOD	−0.067	0.491	−0.287	0.059	0.004	0.977
Quartermaster	0.038	0.705	−0.377	0.028	−0.074	0.659
Nurse	0.204	0.083	0.861	0.000	0.192	0.207
Medical Service	−0.134	0.144	0.149	0.269	−0.197	0.070
Below-the-zone promotion to current grade			1.203	0.000	2.033	0.000
Constant	3.738	0.000	6.066	0.000	7.319	0.000

SOURCE: Authors' calculations using TAPDB.

NOTE: All independent variables are measured at the time an officer is first observed in the grade. Excluded categories for categorical variables (i.e., dummy categories) are as follows: Before August 1, 2020, and White, Male, Single, No children, OCS, Infantry, No below-the-zone promotion to current grade. Choice of excluded categories of the categorical variables should not affect model results because the effects are identical relative to each other, regardless of which category is excluded.

TABLE E.10
O-3 Logistic Regression Results

Variable	Coefficient	P-value
Labor market conditions of unit's commuting zone	–0.005	0.149
Black	0.468	0.000
Hispanic	0.258	0.000
AAPI	0.223	0.000
Native American	0.197	0.140
Other/unknown	0.169	0.015
Female	–0.348	0.000
Age	0.030	0.000
Married	0.328	0.000
Divorced	0.139	0.016
Other nonsingle	0.165	0.522
Children	0.192	0.000
USMA	–0.369	0.000
ROTC scholarship	–0.088	0.013
ROTC nonscholarship	0.356	0.000
Direct Accession Program	0.173	0.012
Other non-OCS	0.303	0.000
Engineer	–0.148	0.002
Field Artillery	–0.219	0.000
Air Defense Artillery	–0.104	0.122
Aviation	0.278	0.000
Armor	0.059	0.212
Signal	0.003	0.947
Military Police	0.152	0.021
Military Intelligence	–0.187	0.000
Adjutant General	0.030	0.655
Chemical	–0.008	0.910
Transportation	–0.214	0.000
EOD	–0.063	0.240
Quartermaster	–0.072	0.194
Nurse	–0.206	0.002
Medical Service	0.330	0.000
Constant	–0.804	0.006

SOURCE: Authors' calculations using TAPDB and American Community Survey data.

NOTE: All independent variables are measured at the time an officer is first observed as an O-3. Adjusted regressions also include fixed effects for FY and for commuting zone. Excluded categories for categorical variables (i.e., dummy categories) are as follows: White, Male, Single, No children, OCS, Infantry. Choice of excluded categories of the categorical variables should not affect model results because the effects are identical relative to each other, regardless of which category is excluded.

Abbreviations

AAPI	Asian American and Pacific Islander
ACFT	Army Combat Fitness Test
AFQT	Armed Forces Qualification Test
APA	American Psychological Association
AR	Army Regulation
CBRN	chemical, biological, radiological, and nuclear
DUI	driving under the influence
EOD	explosive ordinance disposal
FORSCOM	U.S. Army Forces Command
FY	fiscal year
HRC	Human Resources Command
JAG	Judge Advocate General
MLDC	Military Leadership Diversity Commission
MOS	military occupational specialty
MQ	most qualified
NCO	noncommissioned officer
NCOER	noncommissioned officer evaluation report
OCS	Officer Candidate School
OER	officer evaluation report
PT score	physical fitness test score
ROTC	Reserve Officers' Training Corps
TAPDB	Total Army Personnel Database
UCMJ	Uniform Code of Military Justice
USMA	U.S. Military Academy
YOS	years of service

References

AR—*See* Army Regulation.

Army Directive 2017-08, *Competitive Categories for Commissioned Officers and Warrant Officers Serving on the Active-Duty List and the Reserve Active Status List*, Office of the Secretary of the Army, February 15, 2017.

American Psychological Association, "APA Style: Racial and Ethnic Identity," webpage, undated. As of January 25, 2022:
https://apastyle.apa.org/style-grammar-guidelines/bias-free-language/racial-ethnic-minorities

Army Regulation 15-6, *Procedures for Administrative Investigations and Boards of Officers*, U.S. Department of the Army, April 1, 2016.

Army Regulation 600-8-2, *Suspension of Favorable Personnel Actions (Flag)*, U.S. Department of the Army, April 5, 2021.

Army Regulation 600-8-19, *Enlisted Promotions and Reductions*, U.S. Department of the Army, May 16, 2019.

Army Regulation 600-8-29, *Officer Promotions*, U.S. Department of the Army, September 9, 2020.

Army Regulation 600-37, *Unfavorable Information*, U.S. Department of the Army, October 2, 2020.

Army Regulation 601-280, *Army Retention Program*, U.S. Department of the Army, April 14, 2023.

Army Regulation 623-3, *Evaluation Reporting System*, U.S. Department of the Army, June 14, 2019.

Army Regulation 635-200, *Active Duty Enlisted Administrative Separations*, U.S. Department of the Army, June 28, 2021.

Asch, Beth J., Michael L. Hansen, Rosanna Smart, David Knapp, and Daniel Schwam, *An Empirical Assessment of the U.S. Army's Enlistment Waiver Policies: An Examination in Light of Emerging Social Trends in Behavioral Health and the Legalization of Marijuana*, RAND Corporation, RR-4431-A, 2021. As of December 28, 2021:
https://www.rand.org/pubs/research_reports/RR4431.html

Asch, Beth J., James R. Hosek, and John T. Warner, "New Economics of Manpower in the Post-Cold War Era," in Todd Sandler and Keith Hartley, eds., *Handbook of Defense Economics*, Vol. 2, 1st ed., 2007. As of April 28, 2022:
https://www.sciencedirect.com/science/article/pii/S1574001306020321

Asch, Beth J., Michael G. Mattock, and James Hosek, *The Blended Retirement System: Retention Effects and Continuation Pay Cost Estimates for the Armed Services*, RAND Corporation, RR-1887-OSD/USCG, 2017. As of December 28, 2021:
https://www.rand.org/pubs/research_reports/RR1887.html

Asch, Beth J., Trey Miller, and Alessandro Malchiodi, *A New Look at Gender and Minority Differences in Officer Career Progression in the Military*, RAND Corporation, TR-1159-OSD, 2012. As of December 28, 2021:
https://www.rand.org/pubs/technical_reports/TR1159.html

De Houwer, Jan, "Implicit Bias Is Behavior: A Functional-Cognitive Perspective on Implicit Bias," *Perspectives on Psychological Science*, Vol. 14, No. 5, September 2019.

Department of the Army Pamphlet 601-280, *Army Retention Program Procedures*, U.S. Department of the Army, October 16, 2019.

Desrosiers, Shannon, Tom Woo, Lauren Malone, and Kyle Neering, "Enlistment Waivers and Entry-Level Separation: Documenting the Services' Policies and Practices," CNA, DRM2020-U-024781-Final, June 2020.

de Wit, Frank R. C., Karen A. Jehn, and Daan Scheepers, "Task Conflict, Information Processing, and Decision-Making: The Damaging Effect of Relationship Conflict," *Organizational Behavior and Human Decision Processes*, Vol. 122, No. 2, 2013.

Economic Research Service, "Commuting Zones and Labor Market Areas," U.S. Department of Agriculture, March 26, 2019. As of July 24, 2023:
https://www.ers.usda.gov/data-products/commuting-zones-and-labor-market-areas/

Elvira, Marta, and Robert Town, "The Effects of Race and Worker Productivity on Performance Evaluations," *Industrial Relations*, Vol. 40, No. 4, October 2001.

Grinston, Michael A., James C. McConville, and Ryan D. McCarthy, *The Army People Strategy*, Headquarters, Department of the Army, October 2019.

Hansen, Michael L., and Shanthi Nataraj, *Expectations About Civilian Labor Markets and Army Officer Retention*, RAND Corporation, MG-1123-A, 2011. As of August 22, 2022: https://www.rand.org/pubs/monographs/MG1123.html

Hansen, Michael L., and Jennie W. Wenger, "Is the Pay Responsiveness of Enlisted Personnel Decreasing?" *Defence and Peace Economics*, Vol. 16, No. 1, 2005.

Harrison, David A., Kenneth H. Price, Joanne H. Gavin, and Anna T. Florey, "Time, Teams, and Task Performance: Changing Effects of Surface-and Deep-Level Diversity on Group Functioning," *Academy of Management Journal*, Vol. 45, No. 5, 2002.

Hosek, Susan D., Peter Tiemeyer, M. Rebecca Kilburn, Debra A. Strong, Selika Ducksworth, and Reginald Ray, *Minority and Gender Differences in Officer Career Progression*, RAND Corporation, MR-1184-OSD, 2001. As of December 28, 2021: https://www.rand.org/pubs/monograph_reports/MR1184.html

Jordan, Bryant, "Hagel Budgets for Smallest Army Since World War II," webpage, Military.com, February 24, 2014. As of June 30, 2023: https://www.military.com/daily-news/2014/02/24/hagel-budgets-for-smallest-army-since-world-war-ii.html

Joyner, James, "Army Officer Promotion Rates Returning to Normal," webpage, Outside the Beltway, January 23, 2012. As of March 21, 2022: https://www.outsidethebeltway.com/army-officer-promotion-rates-returning-to-normal/

Koch, Amanda J., Susan D. D'Mello, and Paul R. Sackett, "A Meta-Analysis of Gender Stereotypes and Bias in Experimental Simulations of Employment Decision Making," *Journal of Applied Psychology*, Vol. 100, No. 1, January 2015.

Kruzel, John J., "Gates Calls for Increase of 22,000 Soldiers," press release, U.S. Army, July 21, 2009. As of March 21, 2022: https://www.army.mil/article/24678/gates-calls-for-increase-of-22000-Soldiers/

Landy, Frank J., "Stereotypes, Bias, and Personnel Decisions: Strange and Stranger," *Industrial and Organizational Psychology*, Vol. 1, No. 4, 2008.

Latham, Gary P., Deshani B. Ganegoda, and Edwin A. Locke, "Goal-Setting: A State Theory, but Related to Traits," in Tomas Chamorro-Premuzic, Sophie von Stumm, and Adrian Furnham, eds., *The Wiley-Blackwell Handbook of Individual Differences*, Wiley-Blackwell, 2011.

Leonhardt, David, "The Black-White Wage Gap Is as Big as It Was in 1950," *New York Times*, June 25, 2020.

Lim, Nelson, Kimberly Curry Hall, Kirsten M. Keller, David Schulker, Louis T. Mariano, Miriam Matthews, Lisa Saum-Manning, Devon Hill, Brandon Crosby, Leslie Adrienne Payne, Linda Cottrell, and Clara A. Aranibar, *Improving the Representation of Women and Racial/Ethnic Minorities Among U.S. Coast Guard Active-Duty Members*, Homeland Security Operational Analysis Center operated by the RAND Corporation, RR-A362-2, 2021. As of May 24, 2022: https://www.rand.org/pubs/research_reports/RRA362-2.html

Lyle, David S., and John Z. Smith, "The Effect of High-Performing Mentors on Junior Officer Promotion in the U.S. Army," *Journal of Labor Economics*, Vol. 32, No. 2, 2014.

Marrone, James V., *Predicting 36-Month Attrition in the U.S. Military: A Comparison Across Service Branches*, RAND Corporation, RR-4258-OSD, 2020. As of April 23, 2022: https://www.rand.org/pubs/research_reports/RR4258.html

Marrone, James V., S. Rebecca Zimmerman, Louay Constant, Marek N. Posard, Katherine L. Kidder, Christina Panis, and Rebecca Jensen, *Organizational and Cultural Causes of Army First-Term Attrition*, RAND Corporation, RR-A666-1, 2021. As of April 23, 2022: https://www.rand.org/pubs/research_reports/RRA666-1.html

Matthies, Carl F., Kirsten M. Keller, and Nelson Lim, *Identifying Barriers to Diversity in Law Enforcement Agencies*, RAND Corporation, OP-370, 2012. As of September 19, 2022: https://www.rand.org/pubs/occasional_papers/OP370.html

Mattock, Michael G., and Jeremy Arkes, *The Dynamic Retention Model for Air Force Officers: New Estimates and Policy Simulations of the Aviator Continuation Pay Program*, RAND Corporation, TR-470-AF, 2007. As of August 22, 2022:
https://www.rand.org/pubs/technical_reports/TR470.html

Mattock, Michael G., Beth J. Asch, James Hosek, and Michael Boito, *The Relative Cost-Effectiveness of Retaining Versus Accessing Air Force Pilots*, RAND Corporation, RR-2415-AF, 2019. As of August 22, 2022:
https://www.rand.org/pubs/research_reports/RR2415.html

McConville, James C., and Ryan D. McCarthy, "Elimination of Department of Army (DA) Photos, and Race, Ethnicity, and Gender Identification Data for Officer, Warrant Officer, and Enlisted Selection Boards (Updated)," Department of the Army Memorandum, June 26, 2020. As of March 30, 2022:
https://api.army.mil/e2/c/downloads/2020/06/27/a425b0bd/elimination-of-da-photo-and-race-ethinicity-gender-data-from-selection-board-20200626.pdf

McIntosh, Molly F., Seema Sayala, and David Gregory, "Non-Citizens in the Enlisted U.S. Military," CNA, 2011.

Miles, Frank, "Army Stepping Up Recruitment in 22 Left-Leaning Cities," Fox News, January 2, 2019.

Military Leadership Diversity Commission, *From Representation to Inclusion: Diversity Leadership for the 21st-Century Military*, final report, March 15, 2011.

MLDC—*See* Military Leadership Diversity Commission.

Odierno, Raymond T., "Jan. 27, 2012—CSA Remarks on Budget Impact to Army Briefing at Pentagon," U.S. Army, January 30, 2012.

Office of the Assistant Secretary of Defense for Personnel and Readiness, *Population Representation in the Military Services Fiscal Year 2019,* U.S. Department of Defense, 2019.

Philipps, Dave, "The Army, in Need of Recruits, Turns Focus to Liberal-Leaning Cities," *New York Times*, January 2, 2019.

Podsakoff, Nathan P., Steven W. Whiting, Philip M. Podsakoff, and Brian D. Blume, "Individual- and Organizational-Level Consequences of Organizational Citizenship Behaviors: A Meta-Analysis," *Journal of Applied Psychology*, Vol. 94, No. 1, January 2009.

Public Law 114-328, National Defense Authorization Act for Fiscal Year 2017, December 23, 2016.

Public Law 115-91, National Defense Authorization Act for Fiscal Year 2018, December 12, 2017.

Public Law 115-232, John S. McCain National Defense Authorization Act for Fiscal Year 2019, August 13, 2018.

Rempfer, Kyle, "Army Ditches Officer Promotion Photos as Part of an Effort to Eliminate Unconscious Bias," *Army Times*, June 25, 2020.

Rostker, Bernard, Harry J. Thie, James Lacy, Jennifer Kawata, and Susanna Purnell, *The Defense Officer Personnel Management Act of 1980: A Retrospective Assessment,* RAND Corporation, R-4246-FMP, 1993. As of March 21, 2022:
http://www.rand.org/pubs/reports/R4246.html

Sabat, Isaac E., Caren Goldberg, Eden B. King, Jeremy Dawson, and Lu Zhang, "Pygmalion in the Pipeline: How Managers' Perceptions Influence Racial Differences in Turnover," *Human Resource Management*, Vol. 60, No. 4, July/August 2021.

Saum-Manning, Lisa, Tracy C. Krueger, Matthew W. Lewis, Erin N. Leidy, Tetsuhiro Yamada, Rick Eden, Andrew Lewis, Ada L. Cotto, Ryan Haberman, Robert Dion, Jr., Stacy L. Moore, Michael Shurkin, and Michael Lerario, *Reducing the Time Burdens of Army Company Leaders*, RAND Corporation, RR-2979-A, 2019. As of September 19, 2022:
https://www.rand.org/pubs/research_reports/RR2979.html

Tepper, Bennett J., Sherry E. Moss, and Michelle K. Duffy, "Predictors of Abusive Supervision: Supervisor Perceptions of Deep-Level Dissimilarity, Relationship Conflict, and Subordinate Performance," *Academy of Management Journal*, Vol. 54, No. 2, 2011.

U.S. Army, "SMA Talks: Junior Leader Development (Episode 1)," video, YouTube, October 13, 2020. As of September 30, 2022:
https://www.youtube.com/watch?v=KIDlAv3xdM8

U.S. Army, "SMA Talks: This Is My Squad (Episode 6)," video, YouTube, June 16, 2021. As of September 30, 2022: https://www.youtube.com/watch?v=bjSOG5m71dw

U.S. Census Bureau, "About the American Community Survey," webpage, undated. As of August 22, 2022: https://www.census.gov/programs-surveys/acs/about.html

U.S. Census Bureau, *Current Population Survey, 2005 Annual Social and Economic Supplement*, 2005.

U.S. Census Bureau, *Current Population Survey, 2020 Annual Social and Economic Supplement*, 2020.

U.S. Census Bureau, "About the Hispanic Population and Its Origin," webpage, December 3, 2021a. As of January 25, 2022:
https://www.census.gov/topics/population/hispanic-origin/about.html

U.S. Census Bureau, "About the Topic of Race," webpage, December 3, 2021b. As of January 25, 2022: https://www.census.gov/topics/population/race/about.html

U.S. Census Bureau, "Census Bureau Releases New Educational Attainment Data," press release, February 24, 2022.

U.S. Code, Title 10, Armed Forces; Subtitle A, General Military Law; Part II, Personnel; Chapter 36, Promotion, Separation, and Involuntary Retirement of Officers on the Active-Duty List; Subchapter I, Selection Boards; Section 616, Recommendations for Promotion by Selection Boards.

U.S. Code, Title 10, Armed Forces; Subtitle A, General Military Law; Part II, Personnel, Chapter 36, Promotion, Separation, and Involuntary Retirement of Officers on the Active-Duty List; Subchapter II, Promotions; Section 619, Eligibility for Consideration for Promotion: Time-in-Grade and Other Requirements.

U.S. Department of Agriculture, "Commuting Zones and Labor Market Areas," webpage, undated. As of August 22, 2022:
https://www.ers.usda.gov/data-products/commuting-zones-and-labor-market-areas/

U.S. Government Accountability Office, "DOD and the Coast Guard Need to Improve Their Capabilities to Assess Racial and Gender Disparities," May 30, 2019.

U.S. Office of Management and Budget, "Revisions to the Standards for the Classification of Federal Data on Race and Ethnicity," notice, *Federal Register*, October 30, 1997. As of January 25, 2022:
https://obamawhitehouse.archives.gov/omb/fedreg_1997standards

Vie, Loryana L., Eric V. Trivette, and Adam D. Lathrop, *Department of the Army Career Engagement Survey: First Annual Report*, U.S. Department of the Army, June 2021.

Wardynski, E. Casey, *Army People Strategy Diversity, Equity, and Inclusion Annex*, Headquarters, Department of the Army, September 1, 2020.

Warner, John T., "The Economics of Military Manpower," in Keith Hartley and Todd Sandler, eds., *Handbook of Defense Economics*, Vol. 1, 1st ed., Elsevier, 1995. As of April 28, 2022:
https://www.sciencedirect.com/science/article/pii/S1574001305800158

Wenger, Jeffrey B., Ellen M. Pint, Tepring Piquado, Michael G. Shanley, Trinidad Beleche, Melissa A. Bradley, Jonathan Welch, Laura Werber, Cate Yoon, Eric J. Duckworth, and Nicole H. Curtis, *Helping Soldiers Leverage Army Knowledge, Skills, and Abilities in Civilian Jobs*, RAND Corporation, RR-1719-A, 2017. As of August 22, 2022:
https://www.rand.org/pubs/research_reports/RR1719.html

Wenger, Jennie W., Caolionn O'Connell, Louay Constant, and Andrew J. Lohn, *The Value of Experience in the Enlisted Force*, RAND Corporation, RR-2211-A, 2018. As of March 30, 2022:
https://www.rand.org/pubs/research_reports/RR2211.html

Windmueller, Sarah, "Army's New Talent Based Branching Places the Right Leaders in the Right Career," U.S. Army, webpage, October 7, 2021.

Zhou, Xiang, and Guanghui Pan, "Higher Education and the Black-White Earnings Gap," *American Sociological Review*, Vol. 88, No. 1, February 2023.

ARROYO CENTER

The 2019 *Army People Strategy* lists diversity among its strategic outcomes. This includes diversity in leadership, which is achieved by recruiting and retaining a diverse force. To help the Army accomplish these goals, RAND Arroyo Center examined retention of racial-ethnic minorities in the Regular Army's enlisted and officer ranks and how racial-ethnic composition changes as cohorts progress in rank over time, from accession through paygrades O-6 and E-5. Statistical models quantified the effects of observable factors on racial-ethnic differences in retention and career outcomes. Interviews with Army unit leaders provided insight into the reasons individuals stay in the Army or leave at given points, how unit leader decisionmaking affects such decisions, and what influences promotion decisions.

$49.95

ISBN-10 1-9774-1228-9
ISBN-13 978-1-9774-1228-7

www.rand.org

RR-A2011-1