Research Report

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What Happened to Military Recruiting and Retention of Enlisted Personnel in 2020 During the COVID-19 Pandemic?

The emergence of coronavirus disease 2019 (COVID-19) brought dramatic social and economic changes. Beginning in March 2020, state and local governments closed public schools and limited in-person business and social activities in an effort to curb the spread of the disease. All but seven states enacted emergency stay-at-home orders limiting in-person social and business interactions, and all states except South Dakota closed nonessential businesses for at least several weeks during March and April 2020. In May and June 2020, these policies ended in many states, often on a county-by-county basis. However, some states, particularly California, kept some level of stay-at-home order or business closure order in place during the second half of 2020 and the first half of 2021. In addition, many states reinstated stay-at-home orders or business

KEY FINDINGS

- Relative to fiscal year (FY) 2019, the Army increased end strength, decreased accessions, and increased retention. Although the number of enlistment contracts decreased, the quality of contracts increased (i.e., a greater proportion of enlistment contracts were signed by individuals who had a Tier 1 education credential and Armed Forces Qualification Test [AFQT] scores in Categories I–IIIA). The Army also relied more heavily on recruits with prior military service than it did in FY 2019.
- Relative to FY 2019, the Marine Corps decreased end strength, accessions, retention, and the number of enlistment contracts, but the quality of those contracts increased. These changes may reflect a force restructuring plan unveiled by the Marine Corps in March 2020 in addition to pandemic-related difficulties.
- Relative to FY 2019, the Navy increased end strength, saw only a small change in accessions, and increased retention. It decreased the number of enlistment contracts, and the quality of contracts did not change.
- Relative to FY 2019, the Air Force increased end strength, decreased accessions, increased retention, decreased the number of enlistment contracts, and increased the quality of those contracts.

closures later in 2020 as local conditions worsened (Chetty et al., 2020).

The early months of the pandemic were marked by a dramatic rise in youth unemployment. As shown in Figure 1, youth unemployment rates rose dramatically from March 2020 to April 2020—from 16 percent to 33 percent for individuals ages 16 to 19 and from 10 percent to 25 percent for individuals ages 20 to 24. Youth unemployment remained elevated at the end of FY 2020.

High unemployment rates often drive military recruiting and retention (Asch, 2019; Warner and Asch, 1995). Therefore, under normal circumstances, the supply of personnel to the military, both in the form of accessions and retention, would have been expected to increase during FY 2020 relative to previous years. However, military operations, including recruiting and retention activities, are typically conducted in person, and COVID-19–related stay-at-home orders and social distancing requirements dramatically changed how the armed services typically managed personnel. Young adults contemplating enlistment and personnel already in service might have been less willing to participate in in-person interactions, especially in the early months of the pandemic, and might have chosen not to join the military—or to stay in the military—when they would have made a different choice in the absence of the pandemic. Changes in spouse employment, loss of child care, school closures, and other pandemic-related changes might have also affected potential recruits and already-serving members. In the face of these potential obstacles, the armed services were required to quickly adapt their policies and procedures or risk missing their end strength objectives with too few accessions, too few personnel retained, or both.

This report provides an exploratory, descriptive analysis of the changes in recruiting and retention in the military during the COVID-19 pandemic. We examine how active-duty recruiting and retention changed in each service between early and later FY 2020 and how recruiting and retention changed in FY 2020 relative to the previous five years. We also examine changes in end strength, enlistment contracts and accessions, recruit quality, and retention. This report is a first look at the resiliency of the services to the pandemic and sets the stage for further analysis of the effectiveness of specific recruiting and retention policies and procedures—especially those related to virtual recruiting—taken by the services during the pandemic.

Table 1 summarizes the following results:

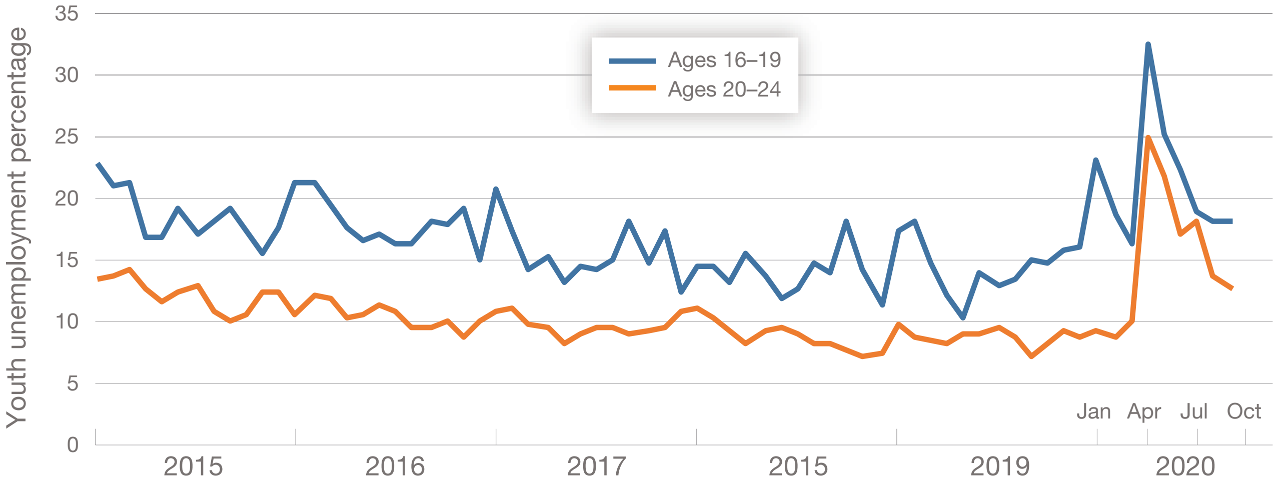
- Relative to FY 2019, the Army increased end strength, decreased accessions, and increased retention. Enlistment contracts decreased, but the quality of contracts increased (i.e., a greater proportion of enlistment contracts were signed by individuals who had a Tier 1 education credential and AFQT scores in Categories I–IIIA). The Army also relied more heavily on recruits with prior military service than it did in FY 2019.
- Relative to FY 2019, the Marine Corps decreased end strength, accessions, retention, and enlistment contracts, but the quality of contracts increased. These changes may reflect a force restructuring plan unveiled by the Marine Corps in March 2020 in addition to pandemic-related difficulties.
- Relative to FY 2019, the Navy increased end strength, saw only a small change in accessions, and increased retention. The number of enlistment contracts decreased, and the quality of contracts did not change.
- Relative to FY 2019, the Air Force increased end strength, decreased accessions, and increased retention. The number of enlistment

Abbreviations

AFQT	Armed Forces Qualification Test
COVID-19	coronavirus disease 2019
DMDC	Defense Manpower Data Center
DoD	Department of Defense
FY	fiscal year
MEPCOM	Military Entrance Processing Command
NPS	non-prior-service
OSD	Office of the Secretary of Defense
PS	prior service
USAREC	U.S. Army Recruiting Command
YOS	years of service

FIGURE 1

Monthly Youth Unemployment Rates



SOURCE: Authors' calculations using Integrated Public Use Microdata Series, Current Population Survey (Flood et al., 2020). This figure depicts unemployment rates for youth ages 16 to 19 and 20 to 24 who have at least a high school diploma and are not enrolled in school.

TABLE 1

Summary of End Strength, Recruiting, and Retention Changes

Service	End Strength	Enlisted Accessions	Retention	Enlistment Contracts	Quality of Contracts
Army	Increased	Decreased	Increased	Decreased	Increased
Marine Corps[a]	Decreased	Decreased	Decreased	Decreased	Increased
Navy	Increased	Broadly the same	Increased	Decreased	Broadly the same
Air Force	Increased	Decreased[b]	Increased	Decreased	Increased

NOTE: Changes are relative to FY 2019.

[a] The Marine Corps enacted a new force restructuring plan in March 2020 that called for decreasing end strength. Changes in Marine Corps end strength, accessions, and retention likely reflect the new plan in addition to the effects of the COVID-19 pandemic.

[b] The Air Force lowered its accession goal in recognition of the difficulties that recruiters were facing during the pandemic (Losey, 2020).

contracts decreased, but the quality of contracts increased.

Notably, the initial drop in enlisted accessions and enlistment contracts in each service occurred during March and April 2020, a period when each of the services placed restrictions on in-person recruiting activities to curb the spread of COVID-19. However, during that same period, each service maintained or improved the quality of its contracts. Each of the services also extended options for separating personnel to voluntarily extend contracts; news articles as early as the second week of April 2020 noted that the services were hoping to persuade personnel to voluntarily continue their service (e.g., Correll, 2020). Retention increased in each service except for the Marine Corps; there were larger increases in retention among retirement-eligible personnel (except in the Marine Corps, in which a smaller decrease occurred). Our results suggest that the services primarily focused on retention in order to meet their end strength goals during the COVID-19 pandemic. Given the timing of the changes in accessions and contracts and the increase in the quality of contracts in most services, we believe that restrictions on in-person recruiting were more likely to be responsible for the decrease in contracts and accessions during FY 2020 than a change in young people's willingness to serve in the military.

Table 2 provides a closer look at each of the services' recruiting outcomes in FY 2020 relative to FY 2019. Specifically, it shows accession goals and accessions achieved of recruits without prior military

TABLE 2

Non-Prior-Service Accessions and Goals

Service	Fiscal Year 2019 Accession Goal	Fiscal Year 2019 Accession Achieved	Fiscal Year 2019 Percentage of Goal Achieved	Fiscal Year 2020 Accession Goal	Fiscal Year 2020 Accession Achieved	Fiscal Year 2020 Percentage of Goal Achieved	Percentage Change in Goal, Fiscal Year 2019–Fiscal Year 2020
Army	68,000	68,185	100.3%	61,200	61,249	100.1%	–10.0%
Navy	39,000	39,027	100.1%	39,600	39,678	100.2%	1.5%
Marine Corps	31,767	31,777	100.0%	28,208	28,048	99.4%	–11.2%
Air Force	32,300	32,421	100.4%	26,373	26,373	100%	–18.3%

SOURCE: Kapp, 2021.

service. Each service essentially reached 100 percent of its accession goal in FY 2020, suggesting successful recruiting despite the disruption of the pandemic. It is possible that the services dropped their accession goals midyear and met 100 percent of the new, lower goal, rather than meeting their original accession goals. The table also indicates that while the Navy, by and large, kept its accession goal constant relative to FY 2019, the Army, Air Force, and Marine Corps substantially reduced their goals in FY 2020 relative to FY 2019. For the Air Force, the goal dropped by nearly 20 percent (from 32,421 to 26,373); the Marine Corps' goal dropped by 12 percent, and the Army's goal dropped by 10 percent.

In the following sections, we discuss how each service's policies changed as a result of COVID-19 and take a closer look at the accession outcomes and enlistment contract outcomes. We also examine each service's planned end strength for FY 2020 and how retention changed to ensure that each service met its end strength goals.

Approach

The following military personnel files from the Defense Manpower Data Center (DMDC) were merged to conduct this analysis:

- **Military Entrance Processing Command (MEPCOM) records on all personnel processed at and examined at Military Entrance Processing Stations from FY 2015 to FY 2020.** This file is a monthly snapshot, from all four services, of individuals who signed enlistment contracts and accessions for active duty. It also includes demographics, aptitude test scores, and other key characteristics necessary for examining changes in the quality of enlistment contracts during the COVID-19 pandemic.
- **Defense Enrollment Eligibility Reporting System (FY 2015 to FY 2020).** These records provide demographic information on active-duty personnel.
- **Active Duty Master File (FY 2015 to FY 2020).** This file is a monthly snapshot of the inventory of all active-duty personnel in each service (with individual records on each service member).

Measuring Recruiting and Retention Outcomes

End Strength

Each service sets a yearly goal for *end strength*—the number of individuals who will be in each service at the end of the FY. End strength goals are approved by Congress as part of the Department of Defense (DoD) budget process each year. End strength achievement is determined by the flow of individuals into the military (*accessions*) and the number of already-serving personnel who remain in the military (*retention*); an examination of changes in end strength must take both of those factors into account. Our information on the services' end strength goals for FY 2020 and their actual end strengths in FY 2019 and FY 2020 is sourced from the FY 2020, FY 2021, and FY 2022 DoD budget requests (Office of the Undersecretary of Defense [Comptroller]/Chief Financial Officer, 2019, 2020, 2021).

Recruiting Outcomes

Accessions and Contracts

Every FY, each service sets a goal for accessions—the number of individuals who will be shipped to basic training, and later to initial entry training, during the year. The goal reflects the services' end strength target for the year and the degree to which that target will be met by retaining currently serving personnel.

The number of accessions in a given month is affected by the number of training seats available, and the services seek to level-load accessions over the year so that no training program is oversubscribed in a given month. Therefore, both the total number of accessions in an FY and in a given month are driven by service goals and policy.

Beginning in March and April 2020, each of the services set COVID-19–related limits on shipping to basic training for a short period. This directly affected the number of accessions. In addition, some recruits who had contracted to enter the military might have changed their mind because of a desire to minimize in-person interactions. Therefore, we used MEPCOM data to compute the number of accessions achieved by each service by FY and by month.

Another key outcome is the number of enlistment contracts produced nationally in each service, calculated using MEPCOM data. An enlistment contract is a promise by a qualified recruit to enlist in the military. The recruit signs a contract to enlist in the military at a future date. This date could be months from signing, although some recruits sign a contract and ship to basic training in the same month.

Although each service sets an annual contract goal, the accession mission is the critical outcome for each service; the number of contracts must be sufficient to ensure that the service meets its accession mission for the current and future FYs. Because the flow of accessions is carefully controlled throughout the year—unlike contracts—researchers typically use contracts as a metric of the supply of qualified recruits willing to join the military and use accessions as a metric of the interaction of both the supply of qualified recruits and the services' demand for new enlistees (e.g., Dale and Gilroy, 1985; Knapp et al., 2018).[1]

Signing an enlistment contract traditionally requires interacting with a recruiter in person, but many recruiting activities can be performed online; however, online recruiting activities may be less effective than in-person activities. The Army, Marine Corps, and Navy all engaged in some virtual recruiting activities prior to the pandemic, with the Army and Marine Corps making efforts to engage with potential recruits and with military families via social media and the Navy already partway through the implementation of a plan that allowed recruiters to work remotely and conduct prospecting via social media (Mondal, 2020; Wenger et al., 2019). The COVID-19 pandemic directly affected the production of contracts through limits on in-person interactions and potentially through changing youths' desire to join the military.

Recruit Quality

Research shows that higher-aptitude recruits perform better at hands-on military tasks, and recruits with at least a high school diploma are more likely to complete their enlistment contract term of service (Buddin, 2005). Because of the importance of recruit quality, the Office of the Secretary of Defense (OSD) sets benchmarks based on each of these metrics. Specifically, OSD requires that at least 60 percent of recruits without prior military service score above average (in Categories I to IIIA) on the AFQT. OSD also requires that at least 90 percent be high school diploma graduates (Tier 1 education). A *high-quality recruit* is a high school diploma graduate who scores in AFQT Categories I–IIIA.

In addition to considering changes in accessions and contracts that occurred during the COVID-19 pandemic, we also considered changes in the quality of enlistment contracts. High-quality recruits have better civilian opportunities and consequently require more recruiter effort to enlist. If recruiting became more difficult as a result of the pandemic, recruit quality might have decreased even if the raw number of accessions and contracts remained the same. On the other hand, because the services prefer high-quality contracts, they might have reallocated their efforts toward enlisting those individuals, resulting in no change or even an increase in the percentage of recruits that are high-quality. Furthermore, increases in the civilian unemployment rate likely increased youth interest in military service—

and the move toward virtual classroom teaching might have affected how high-quality individuals weighed military service versus college.

Prior Service Recruits

Finally, one metric that is specific to the Army is the number of recruits with prior military service.[2] The number of prior-service (PS) recruits is generally kept relatively low by the Army because such recruits require higher pay (Orvis et al., 2018), but the Army might increase the percentage of PS recruits when necessary to meet its recruiting goal. A larger percentage of PS recruits is an indicator of a more difficult recruiting environment.

Retention Outcomes

The other input toward meeting end strength is retention. We summarize annual retention outcomes using one-year continuation rates at each year of service (YOS).[3] Continuation rates are calculated as follows:

$$\frac{\text{(Number of personnel in service in both October year } t \text{ and October year } t+1\text{)}}{\text{(Number of personnel in service in October year } t\text{)}}$$

For example, the continuation rate for FY 2020 is the percentage of personnel who were in service in October 2020 who remained in service in October 2021. Those remaining in service in October 2021 either were not at the end of their service term and did not leave early or were at the end of their service term and chose to remain in the military. Continuation therefore reflects retention in that it is influenced both by reenlistments among personnel freely able to make such decisions and by attrition among personnel still serving their obligated service term.[4]

Military operations are typically conducted in person, and pandemic-related restrictions on in-person interactions might have directly affected military operations in a way that changed service members' desire to remain in the military. The increased unemployment rate might also have led members to choose to stay in the military.[5] Retention also may have increased because of fewer injuries during in-person training exercises. Finally, if the services were concerned about failing to meet their accession mission during the pandemic, they may have allowed more members to stay, thereby increasing retention.

Results for the U.S. Army

Policies During the Pandemic

Army recruiting activities moved entirely online during March 2020, when the Army closed all of its recruiting stations and temporarily allowed recruiters to work from home. News articles from spring 2020 noted recruiting difficulties related to these restrictions on in-person recruiting, although some interviews highlighted the benefits of new online methods of recruiting, such as social media engagement with prospective recruits (Burns and Baldor et al., 2020). A phased return to in-person applicant processing began in late April 2020 (U.S. Army Recruiting Command [USAREC] Public Affairs, 2020b).

The Army also modified policies regarding shipping recruits to basic training. These modifications decreased accessions. In March, the Army reduced the size of training classes to allow recruits to practice social distancing; in April, the Army suspended all shipping to basic training for two weeks. The Army also required new recruits to quarantine for two weeks at the beginning of basic training (USAREC Public Affairs, 2020a).

Based on these changes to in-person recruiting, we would expect the number (and the quality) of enlistment contracts and accessions to fall. The changes in shipping to basic training likely affected accessions more than contracts, and the requirements for in-person learning at basic training also might have led some potential recruits to delay accession. However, the dramatic rise in youth unemployment likely increased the incentive to enlist, which means that the expected direction of changes in contracts and accessions is ambiguous.

For already enlisted soldiers, in late March 2020, the Army issued a press release noting the availability of short-term contract extensions (from three to 23 months) with approval from soldiers' immediate commanders (Army Public Affairs, 2020). In contrast to the longer-term contracts associated with reenlistment, short-term contract extension options likely made it easier for personnel to remain in the military when they would otherwise have separated. They also provided a short-term solution for COVID-19–related challenges. Short-term options should have a less lasting effect on the shape of the force, including promotion rates or seniority, than longer-term options. This benefits the Army in terms of managing the force.

Changes in Army End Strength, Accessions, and Retention

End Strength

As shown in Table 3, the Army planned to increase end strength by 0.2 percent in FY 2020 (2,000 personnel over the FY 2019 projection as of the time that the FY 2020 budget was submitted in March 2019). The implication is that either recruiting or retention (or both) would be required to increase relative to their levels in FY 2019. The Army exceeded its end strength goal in FY 2019, and the Army end strength goal for FY 2020 was later updated from 480,000 to 485,000. The Army slightly exceeded this goal, raising end strength by a total of 1,442 from FY 2019.

End strength is reached through a combination of accessions and retention. We examine this combination to understand how the Army reached its end strength goal in FY 2020 despite the challenges presented by the COVID-19 pandemic.

Accessions

As shown in Panel A of Figure 2, Army accessions fell by 10 percent from FY 2019 to FY 2020, to their lowest level since FY 2015. Panel B of Figure 2 plots the number of Army accessions in each month of FY 2019 and FY 2020. Army accessions were lowest (relative to FY 2019) during April, May, and September 2020.

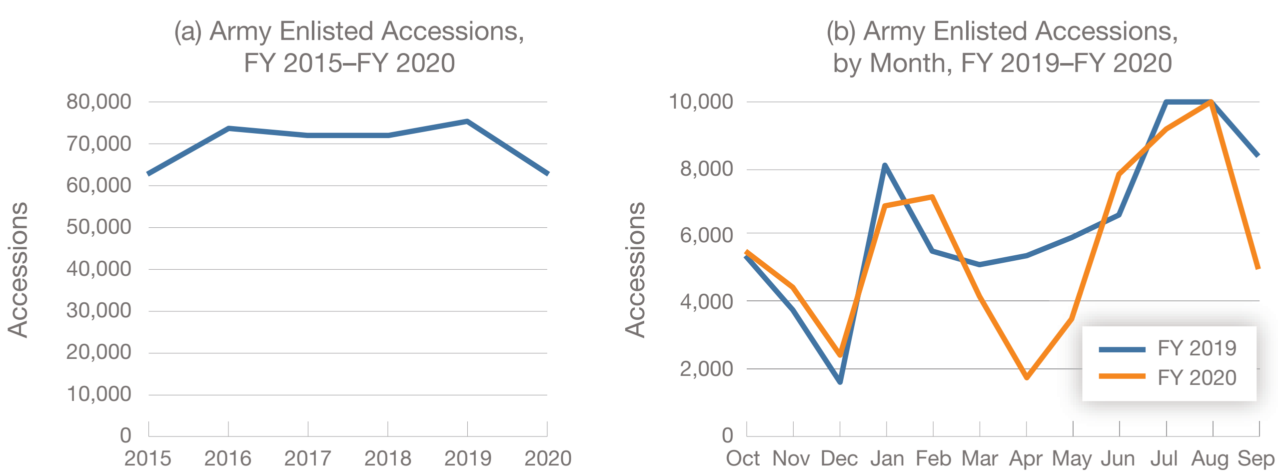
The drop in accessions in April and May is to be expected because of the pause in shipping to basic training and the restrictions on other in-person recruiting activities. The reason for the drop in accessions in September is unknown. It might have occurred because the Army knew that by the end of August, retention had risen to meet its end strength goal despite a short-term decrease in accessions or because the Army knew it had met its accession goal for the year.

TABLE 3
Army End Strength Goals

Fiscal Year 2019 Actual	Fiscal Year 2020 Goal	Fiscal Year 2020 Actual
483,941	480,000 requested/enacted (+2,000 more than FY 2019 projection); updated to 485,000 after FY 2019 realized	485,383

SOURCE: Office of the Undersecretary of Defense (Comptroller)/Chief Financial Officer, 2019, 2020, 2021.

FIGURE 2
Army Enlisted Accessions



SOURCE: Authors' calculations using DMDC data.

Retention

The drop in accessions and slight rise in planned end strength imply that retention of enlisted personnel must have risen during FY 2020 relative to FY 2019. As shown in Figure 3, retention increased most among retirement-eligible personnel—that is, personnel with over 20 YOS. In total, expected Army enlisted years served per recruit increased from 6.0 years in FY 2019 to 6.1 years in FY 2020. Among those with at least 20 YOS, expected years served increased by 9 percent, and among those with fewer than 20 YOS, expected years served increased by only 1 percent.

Changes in Contracts and Recruit Quality

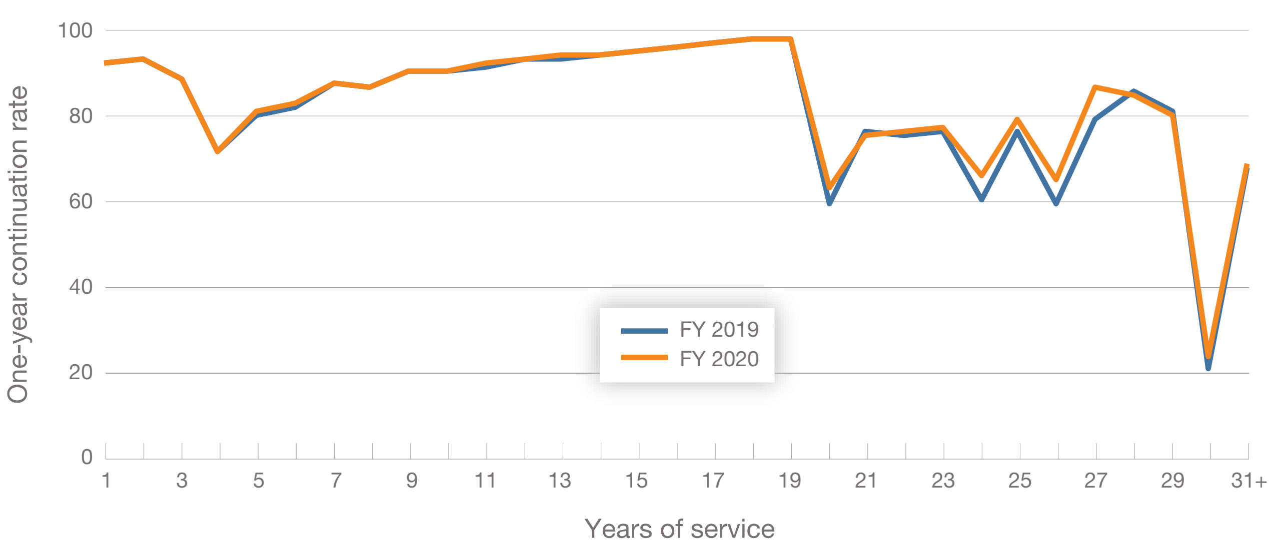
Figure 4 shows Army enlistment contracts over time. As shown in Panel A, Army enlistment contracts fell by 16 percent from FY 2019 to FY 2020, to their lowest level since FY 2015. Panel B shows the number of Army enlistment contracts produced in each month of FY 2019 and FY 2020. Relative to FY 2019, contract numbers were lowest in March, April, and May 2020—when recruiting stations were fully closed. The number of enlistment contracts produced in September 2020 was not significantly smaller than the number of contracts produced in FY 2019, unlike the Army's accession numbers. This supports the notion that the drop in accessions in September was a deliberate move on the part of the Army which was based on the likelihood of meeting the Army's end strength goal through retention alone.

Difficult recruiting environments can also lead to decreases in the average quality of contracts. However, the huge increase in the youth unemployment rate (beginning in April 2020) could have increased the pool of qualified prospects. We therefore examine how the quality of contracts changed in FY 2020 relative to previous years.

Figure 5 displays the percentage of Army non-prior-service (NPS) contracts that were high-quality. As shown in Panel A, the percentage of high-quality contracts rose in FY 2020 to the level seen in FY 2018, which was the highest level since FY 2015. Panel B shows the percentage of high-quality NPS contracts signed per month in FY 2019 and FY 2020. The quality of contracts rose sharply in April 2020 relative to April 2019. This was during the most serious period of youth unemployment and during the period when all recruiting activities were being done virtually.

Figure 6 further breaks down quality metrics to better understand how the Army responded to the pandemic in terms of maintaining recruit quality. DoD requires that 90 percent of accessions hold

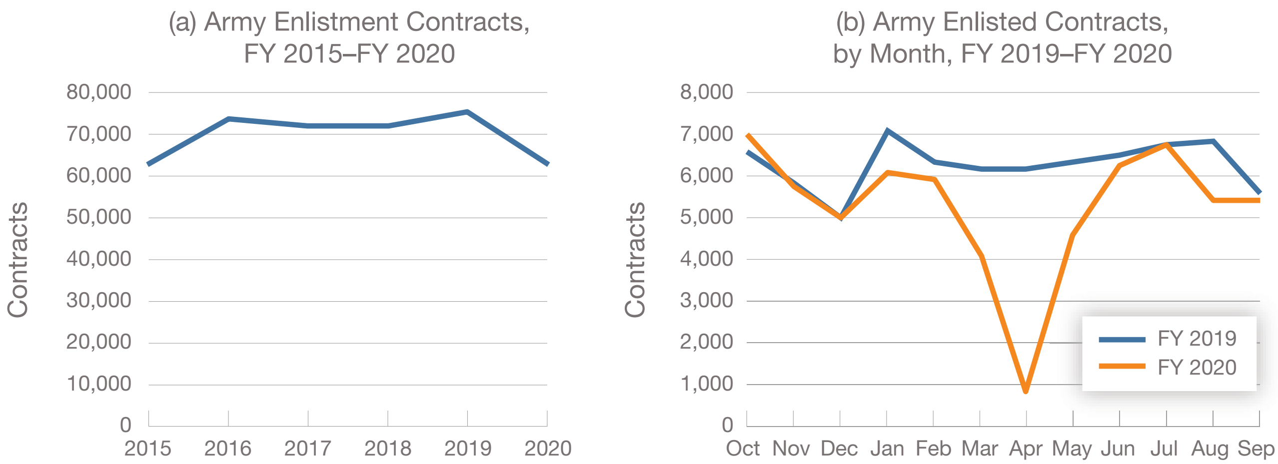
FIGURE 3
Army Retention in Fiscal Years 2019 and 2020



SOURCE: Authors' calculations using DMDC data.

FIGURE 4

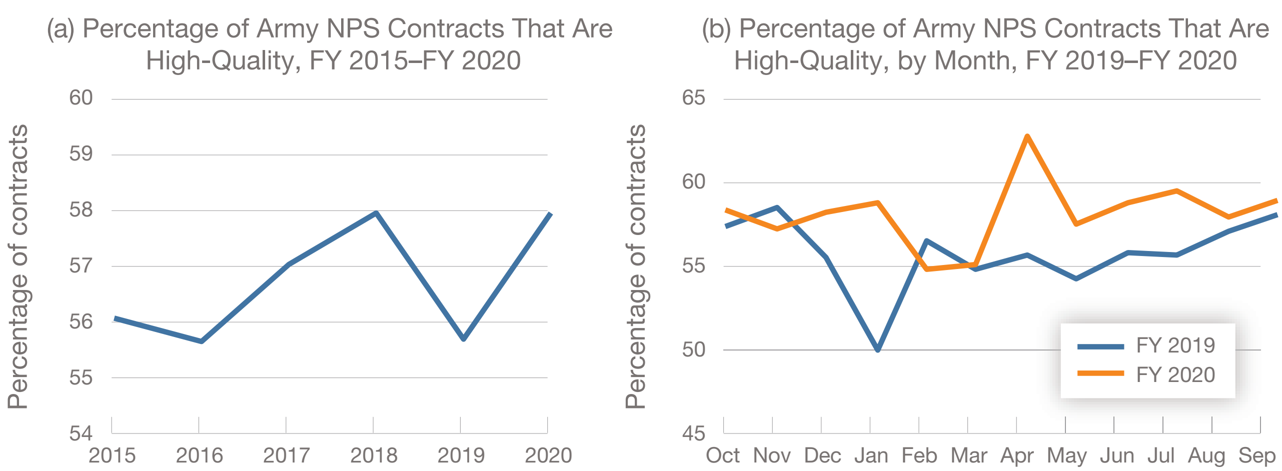
Army Enlistment Contracts



SOURCE: Authors' calculations using DMDC data.

FIGURE 5

Percentage of Army Non-Prior-Service Enlistment Contracts That Are High-Quality



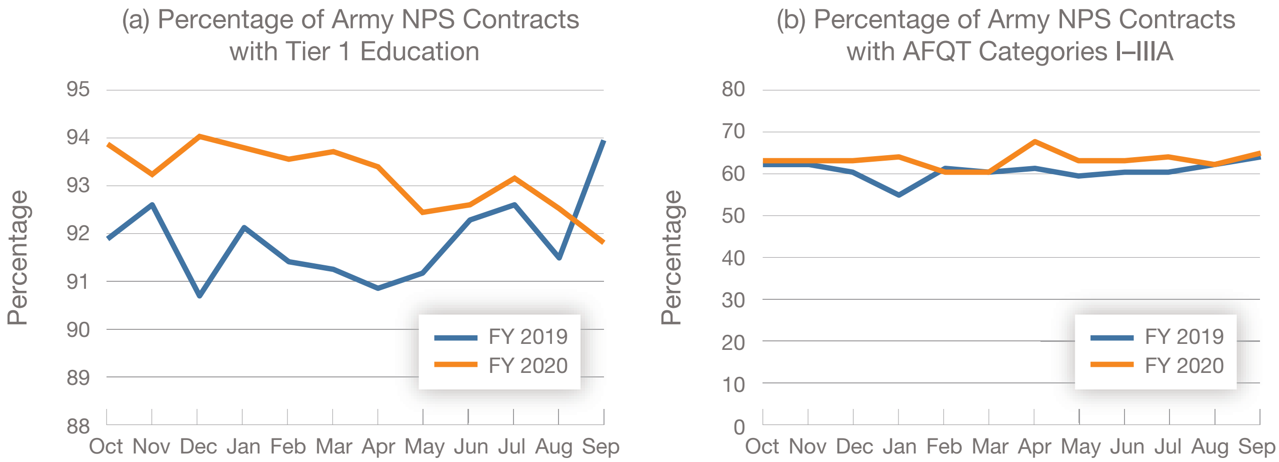
SOURCE: Authors' calculations from DMDC data. *High-quality* refers to recruits with Tier 1 education and Categories I–IIIA AFQT scores.

a Tier 1 education credential and that 60 percent have AFQT scores in Categories I–IIIA. The Army exceeded both of these benchmarks in every month of FY 2020. Panel A reports the percentage of Tier 1 contracts in each month of FY 2019 and FY 2020. Contracts in FY 2020 were more likely to be Tier 1 during the first half of FY 2020 than their counterparts in the first half of FY 2019. The percentage of Tier 1 contracts decreased slightly from April to May 2020, but only fell below the FY 2019 level in September. Panel B reports the percentage of contract signers with AFQT Categories I–IIIA in each month of FY 2019 and FY 2020. Contracts in FY 2020 were equally or slightly more likely to have AFQT Categories I–IIIA for each month in the first half of FY 2020 than they were in the first half of FY 2019. The percentage of contracts with AFQT Categories I–IIIA increased slightly from March to April 2020 and remained slightly elevated above its FY 2019 level until September 2020.

Finally, another metric of recruiting difficulty is the percentage of PS recruits. As shown in Figure 7, the percentage of Army contracts with prior ser-

FIGURE 6

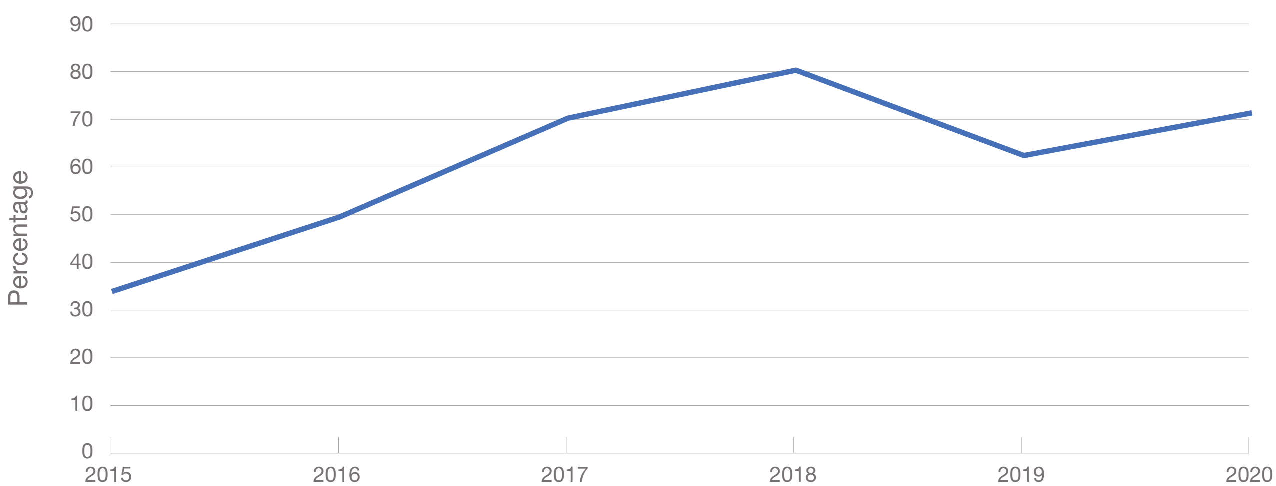
Percentage of Army Contracts with Tier 1 Education and Armed Forces Qualification Test Categories I–IIIA



SOURCE: Authors' calculations from DMDC data.

FIGURE 7

Percentage of Army Prior Service Contracts



SOURCE: Authors' calculations from DMDC data. Prior service is determined using the information provided in the DMDC MEPCOM data and may differ from the definition used by the Army.

vice rose in FY 2020 relative to FY 2019, but did not exceed the five-year high of FY 2018.

Summary

Although Army enlisted accessions and contracts decreased in FY 2020 relative to previous years, the Army was able to meet its FY 2020 end strength goal through increased retention of retirement-eligible enlisted personnel. The quality of Army enlisted recruits also rose relative to FY 2019. We conclude from these results that the Army showed some resiliency to the pandemic. However, the drop in enlistment contracts in the second half of the year, combined with a small increase in the FY 2021 end strength goal (Office of the Undersecretary of Defense [Comptroller]/Chief Financial Officer, 2020), might put further pressure on Army recruiting. Furthermore, increased retention among retirement-eligible personnel might require the Army to slow promotion to higher grades in the future.

Results for the U.S. Marine Corps

Policies During the Pandemic

During March 2020, Marine Corps recruiters shifted to online-only prospecting and meetings with applicants (Kronenberg, 2020). In March and April of that year, the Marine Corps also modified policies regarding shipping recruits to basic training, which decreased accessions. Shipping to Marine Corps Recruit Depot Parris Island was paused for one week at the end of March because a recruit tested positive for COVID-19 (Snow, 2020a). The Marine Corps also instituted a two-week quarantine at the beginning of basic training in March 2020; in April 2020, they reduced the size of training classes to provide recruits with greater ability to practice social distancing (Snow, 2020b).

In early April, the Marine Corps announced that separating personnel who needed additional time to transition could extend their enlistment contracts through June 30, 2020, with potential for further extensions through September 30, 2020, if additional time was needed (Marine Corps Administrative Message 213/20, 2020). These changes are relatively similar to those made by the Army, and we would expect the effects on recruiting and retention outcomes to be qualitatively similar.

In March 2020, the Marine Corps unveiled a talent management plan—*Force Design 2030*—that began a major restructuring of the force. The plan calls for modernizing the force, cutting force elements and reducing end strength (U.S. Marine Corps, 2020). This restructuring, although independent of the pressures of COVID-19, likely led to reduced end strength for the Marine Corps, implying that accessions, retention, or both could be lower than initially planned at the beginning of FY 2020.

Changes in End Strength, Accessions, and Retention

As shown in Table 4, at the beginning of FY 2020, the Marine Corps planned to increase end strength by approximately 100 personnel, implying that either accessions or retention (or both) would rise slightly relative to their levels in FY 2019. Actual end strength in FY 2020 fell by 5,051 from FY 2019, missing the end-strength goal set at the beginning of the year. However, as mentioned earlier, the Marine Corps announced a force restructuring plan in March 2020 that would gradually reduce end strength to 172,000, and the fall in Marine Corps end strength may well reflect the restructuring plan rather than difficulties related to the pandemic (U.S. Marine Corps, 2020).

Both recruiting and retention fell for the Marine Corps in FY 2020. As shown in Panel A of Figure 8, Marine Corps accessions fell by 12 percent from FY 2019 to FY 2020. Panel B of Figure 8 plots the number of Marine Corps accessions in each month of FY 2019 and FY 2020. Accessions were lowest (relative to FY 2019) during March, April, July, and September 2020. The drop in accessions in April and May is to be expected because of the pause in shipping to basic training and the restrictions on other in-person recruiting activities. The drop in accessions between June and September likely reflects the force restructuring plan.

As shown in Figure 9, Marine Corps retention fell for personnel at all experience levels. The expected number of years served per enlisted recruit fell from 4.6 years in FY 2019 to 4.5 years in FY 2020. However, retention fell by more for service members with fewer than 20 YOS. Among those with less than 20 YOS, expected years served fell by 8 percent; among those with at least 20 YOS, expected years served fell only 1 percent.

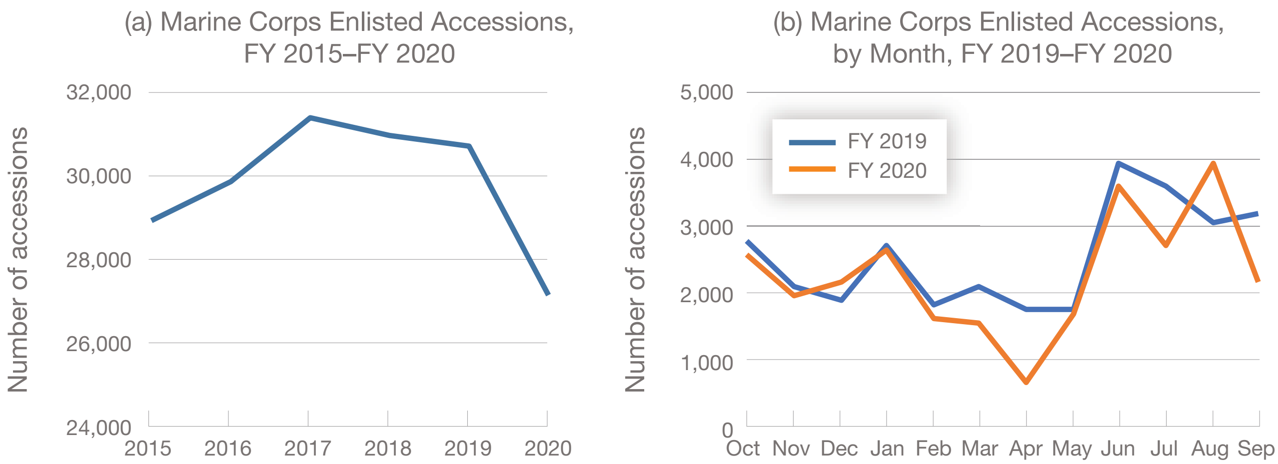
TABLE 4
Marine Corps End Strength Goals

Fiscal Year 2019 Actual	Fiscal Year 2020 Goal	Fiscal Year 2020 Actual
186,009	186,200 (+100 more than FY 2019 projection)	180,958

SOURCE: Office of the Undersecretary of Defense (Comptroller)/Chief Financial Officer, 2019, 2020, 2021.

FIGURE 8

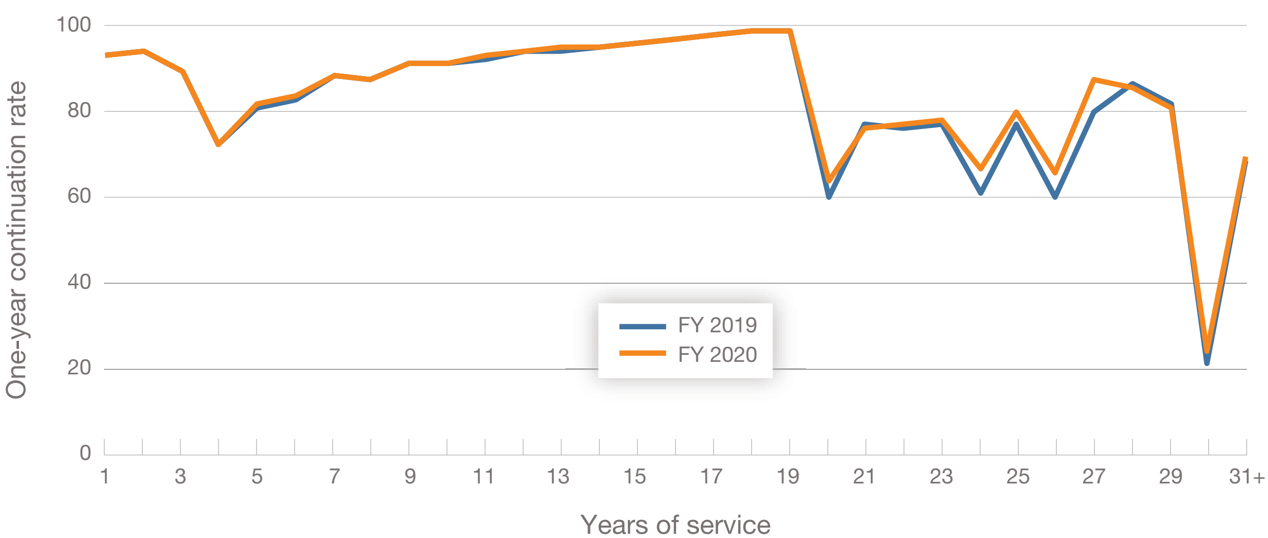
Marine Corps Enlisted Accessions



SOURCE: Authors' calculations using DMDC data.

FIGURE 9

Marine Corps Retention in Fiscal Years 2019 and 2020



SOURCE: Authors' calculations using DMDC data.

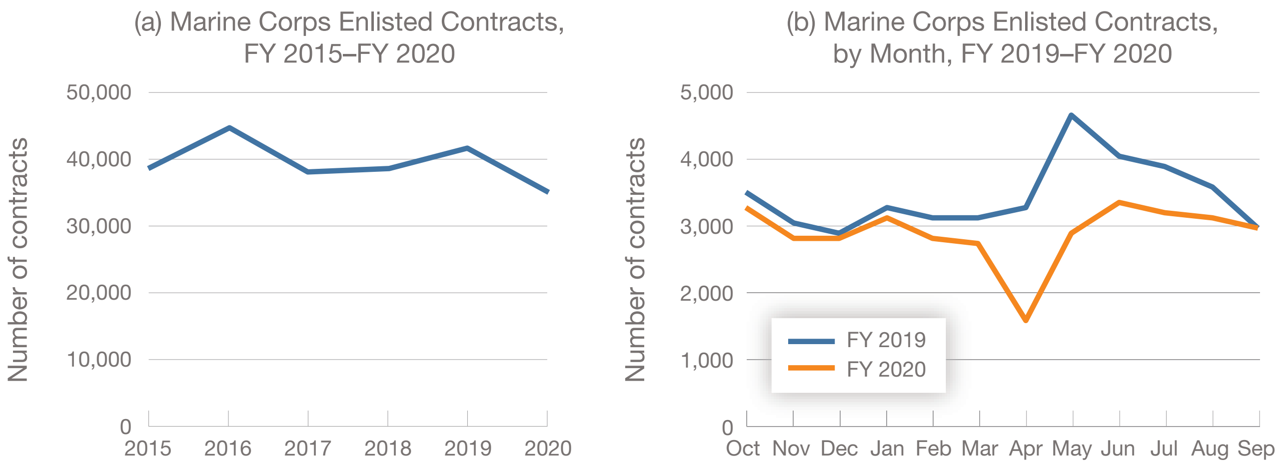
Changes in Contracts and Recruit Quality

Figure 10 describes how Marine Corps enlistment contracts changed in FY 2020. As shown in Panel A, contracts fell by 16 percent from FY 2019 to FY 2020. Panel B shows the number of Marine Corps enlistment contracts produced in each month of FY 2019 and FY 2020. Contracts were lowest in April and May 2020 (when some recruiting activities were virtual) compared with FY 2019. However, contracts remained below their FY 2019 rate in June, July, and August 2020, which could be related to the new Marine Corps force restructuring plan.

Figure 11 shows the percentage of Marine Corps NPS contracts that are high-quality. As shown in Panel A, the quality of contracts rose in FY 2020 relative to FY 2019, reversing a previous downward trend. Panel B plots the quality of contracts in each month of FY 2019 and FY 2020. The quality of contracts rose particularly from April to May 2020; the quality

FIGURE 10

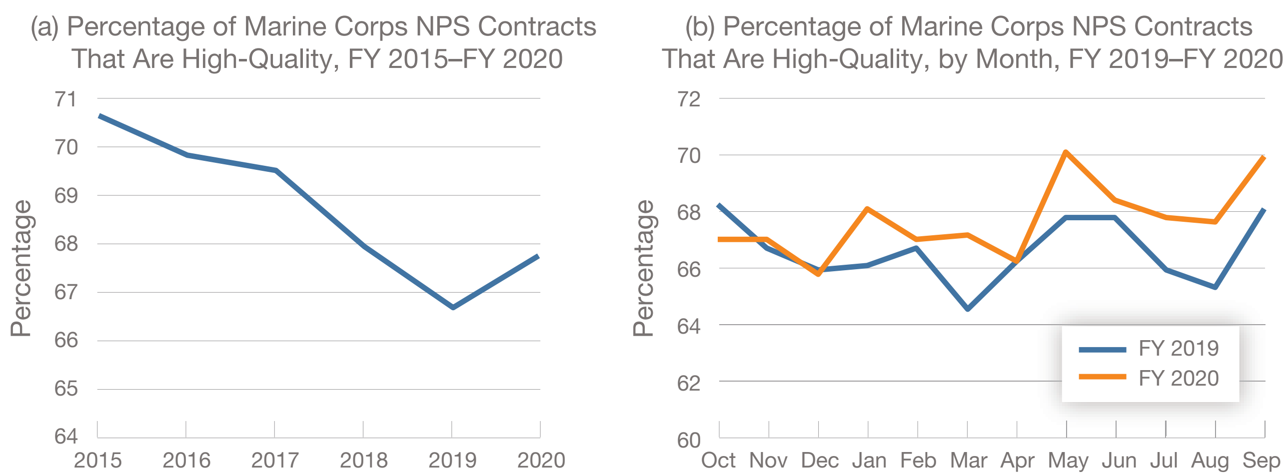
Marine Corps Enlistment Contracts



SOURCE: Authors' calculations using DMDC data.

FIGURE 11

Percentage of Marine Corps Non-Prior-Service Enlistment Contracts That Are High-Quality



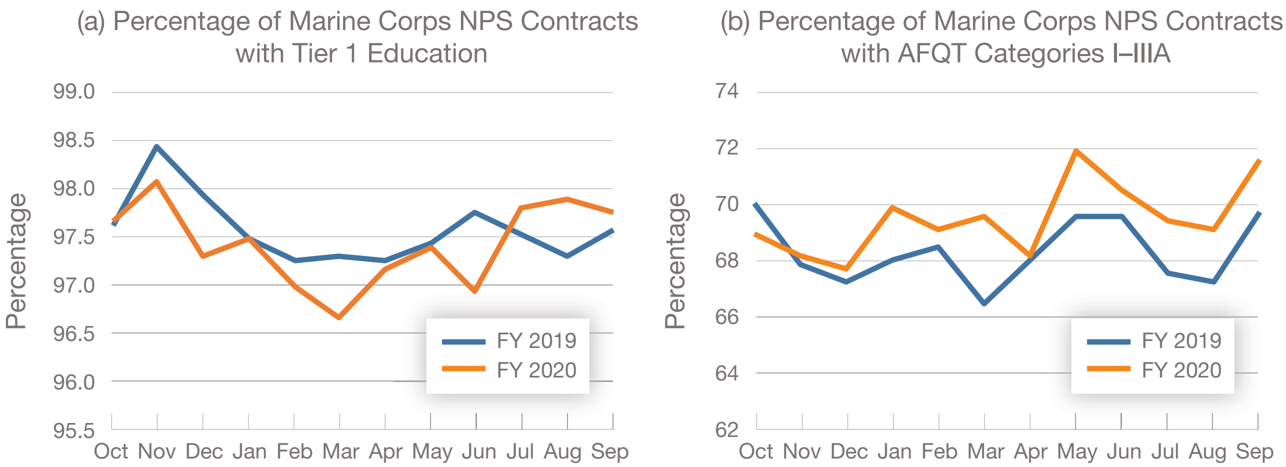
SOURCE: Authors' calculations from DMDC data. *High-quality* refers to recruits with Tier 1 education and AFQT Categories I–IIIA.

remained higher than that of FY 2019 for the remainder of the FY.

Figure 12 further breaks down the quality metrics to provide a better illustration of how the Marine Corps responded to the pandemic in terms of maintaining recruit quality. The Marine Corps met the OSD benchmarks of 90 percent of recruits having Tier 1 education and 60 percent having AFQT scores in Categories I–IIIA in each month of FY 2020. Panel A reports the percentage of contracts with Tier 1 education in each month of FY 2019 and FY 2020. The percentage of contracts in FY 2020 with Tier 1 education was relatively similar to the percentage of contracts with Tier 1 education throughout FY 2019. Panel B reports the percentage of contracts with AFQT Categories I–IIIA in each month of FY 2019 and FY 2020. Contracts in FY 2020 were equally or slightly more likely to have AFQT Categories I–IIIA for each month in the first half of FY 2020 than they were in the first half of FY 2019. The percentage of contracts with AFQT Categories I–IIIA increased sharply from April to May 2020 and remained

FIGURE 12

Percentage of Marine Corps Contracts with Tier 1 Education and Armed Forces Qualification Test Categories I–IIIA



SOURCE: Authors' calculations from DMDC data.

slightly elevated above the level in the corresponding months of FY 2019 for the remainder of the FY.

Summary

Marine Corps enlistment contracts and enlisted accessions dropped during FY 2020, as did retention of mid-career personnel. The Marine Corps ended FY 2020 with its end strength 5,242 (nearly 3 percent) under its goal from the beginning of FY 2020. However, the reductions in Marine Corps accessions, retention, and end strength are consistent with the parameters of its new restructuring plan, which includes a reduction in force strength across all years of service.

Results for the U.S. Navy

Policies During the Pandemic

Beginning by early April, Navy recruiters moved to largely virtual recruiting, with all prospecting moved to telephone or online (Werner, 2020a). News articles from spring 2020 attributed short-term drops in recruiting contracts in part to difficulties associated with virtual recruiting, though some interviews highlighted that the Navy had already been engaged in some online recruiting activities prior to the pandemic and therefore may have had something of a head start (Mondal, 2020). The Navy paused shipping to basic training in March and cut training class sizes in April. In May, training classes returned to their usual size upon the completion of renovations at Naval Station Great Lakes; renovations had allowed recruits to better practice social distancing (Werner, 2020b). With respect to retention, the Navy approved six-to-12-month contract extensions for personnel with planned separation dates before April 1, 2021, excluding certain groups of personnel (Naval Administration Message 089/20, 2020). These changes are generally similar to those made by the Army, and we would expect the effects on recruiting and retention outcomes to be qualitatively similar.

Changes in End Strength, Accessions, and Retention

As shown in Table 5, the Navy planned to increase end strength in FY 2020 by 1,600 personnel over the projected FY 2019 level at the time that the FY 2020 budget was written in March 2019. This increase in personnel strength is part of a Navy plan to increase the size of the fleet (Cancian, 2020). Such an increase in strength would require that recruiting, retention, or both rise relative to their levels in FY 2019. The Navy

TABLE 5
Navy End Strength Goals

Fiscal Year 2019 Actual	Fiscal Year 2020 Goal	Fiscal Year 2020 Actual
336,985	340,500 (+1,600 more than FY 2019 projection)	346,520

SOURCE: Office of the Undersecretary of Defense (Comptroller)/Chief Financial Officer, 2019, 2020, 2021.

exceeded its end strength goal by nearly 6,000 personnel, raising its end strength by 9,265 over FY 2019.

Figure 13 reports the number of accessions in the Navy in each year from FY 2015 to FY 2020 (Panel A) and in each month of FY 2019 and FY 2020 (Panel B). Navy accessions dropped in April 2020 relative to FY 2019, but they had more than recovered by July. Overall, Navy accessions rose 2 percent relative to FY 2019.

The relative steadiness of Navy accessions means that retention must have risen in order to raise end strength. Figure 14 reports retention in FY 2019 and FY 2020 in the Navy. Retention of early-career personnel and retirement-eligible personnel rose; in December 2020, the Navy reported that FY 2020 retention of first-term sailors was 69 percent, above its benchmark of 57 percent (Maucione, 2020). However, expected years served in the Navy fell slightly, from 8.9 years in FY 2019 to 8.8 years in FY 2020. Expected years served rose by 8 percent for personnel with at least 20 YOS, whereas expected years served fell by 2 percent for personnel with less than 20 YOS.

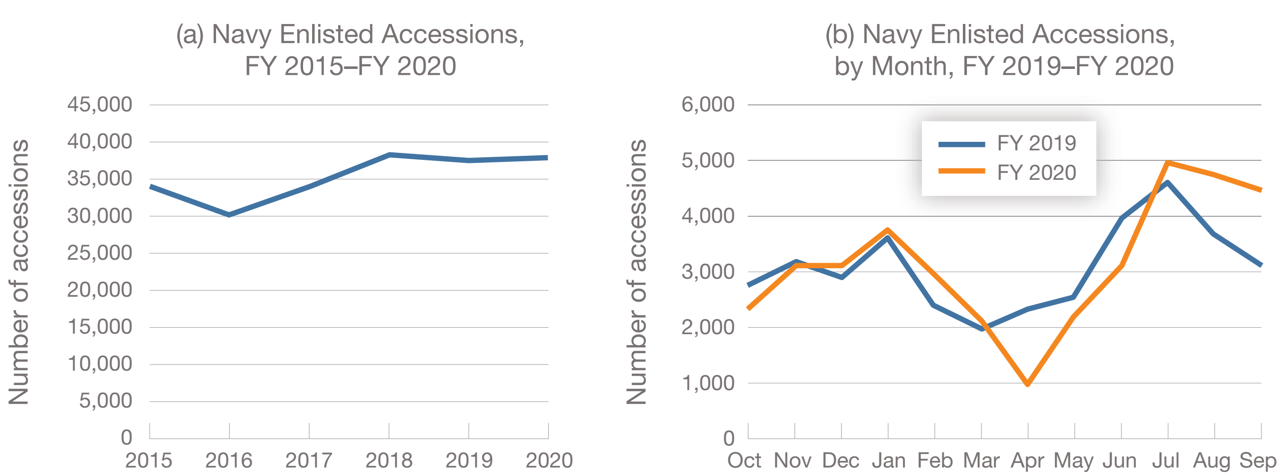
Changes in Recruit Quality

Figure 15 describes how Navy enlistment contracts changed in FY 2020. As shown in Panel A, contracts fell by 14 percent from FY 2019 to FY 2020, contrary to the relatively steady number of accessions. Panel B shows the number of Navy enlistment contracts produced in each month of FY 2019 and FY 2020. Contracts were lowest (relative to FY 2019) in April and May 2020, when some recruiting activities were virtual. Although contracts began to recover in June, they remained lower than their level in FY 2019 for the remainder of FY 2020.

Figure 16 reports the percentage of Navy NPS contracts that are high-quality. As shown in Panel A, the quality of contracts stayed relatively steady in FY 2020 relative to FY 2019, but also shows a drop between FY 2016 and FY 2018. Panel B plots the quality of contracts in each month of FY 2019 and FY 2020. The quality of contracts rose from April to May 2020 but quickly fell back to a level similar to that of FY 2019 for the remainder of the FY.

Figure 17 further breaks down the quality metrics. The Navy met the OSD benchmarks of 90 percent of recruits having Tier 1 education and 60 per-

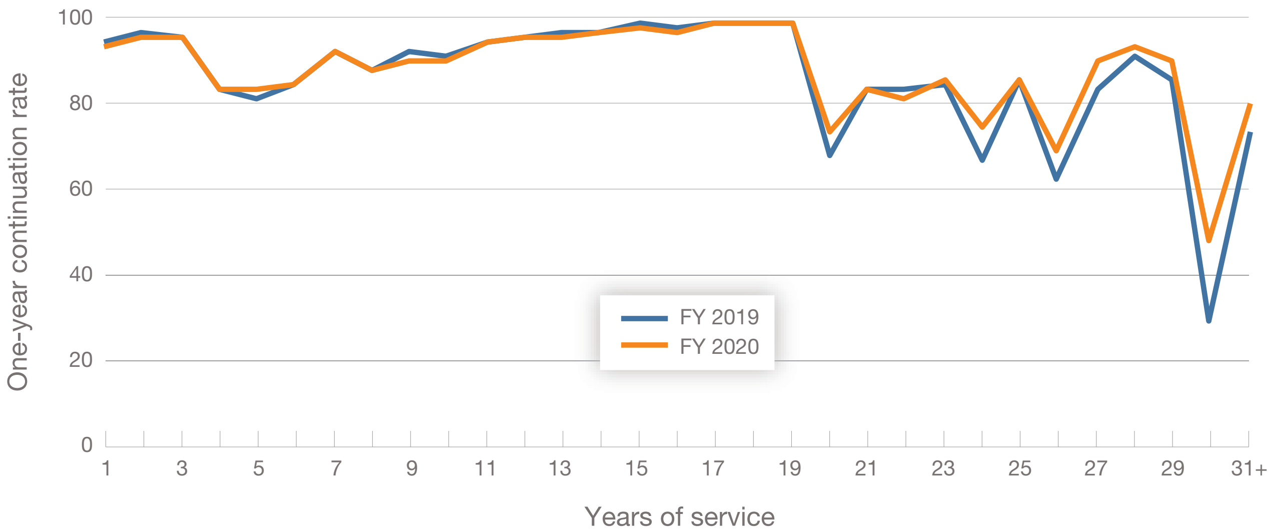
FIGURE 13
Navy Enlisted Accessions



SOURCE: Authors' calculations using DMDC data.

FIGURE 14

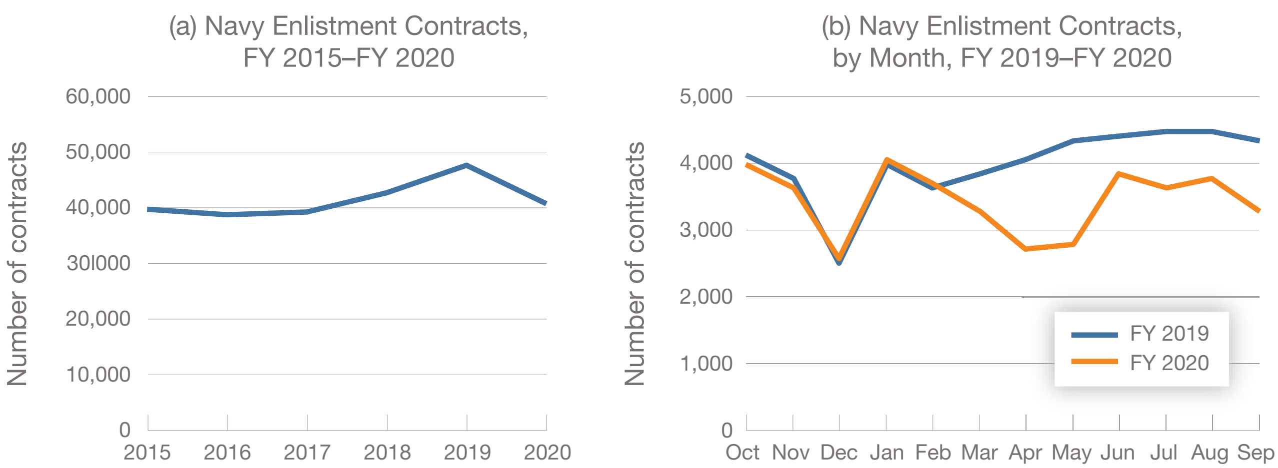
Navy Retention in Fiscal Years 2019 and 2020



SOURCE: Authors' calculations using DMDC data.

FIGURE 15

Navy Enlistment Contracts

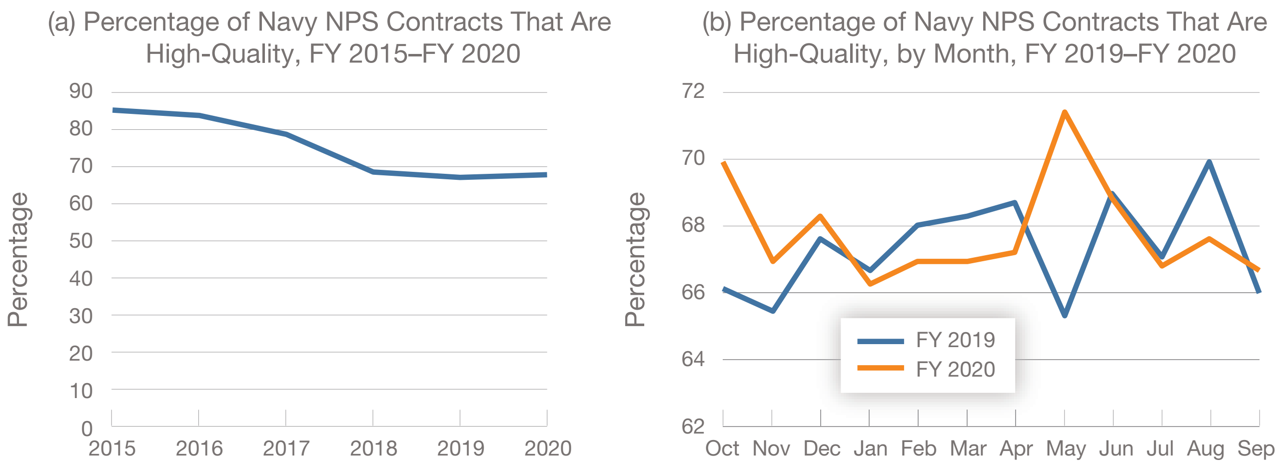


SOURCE: Authors' calculations using DMDC data.

cent having AFQT scores in Categories I–IIIA in each month of FY 2020. Panel A reports the percentage of contracts with Tier 1 education in each month of FY 2019 and FY 2020. The percentage of contracts in FY 2020 with Tier 1 education was lower than the percentage of contracts with Tier 1 education in the corresponding months of FY 2019 throughout the first half of FY 2020 and increased to a level similar to the corresponding months of FY 2019 from March to May 2020. Panel B reports the percentage of AFQT Categories I–IIIA contracts in each month of FY 2019 and FY 2020. From January to September of 2020, the percentage of contracts with AFQT Categories I–IIIA was relatively similar to the percentage in the corresponding months of 2019, with the exception of May (when the level in 2020 was substantially higher) and August (when the level in 2020 was somewhat lower).

FIGURE 16

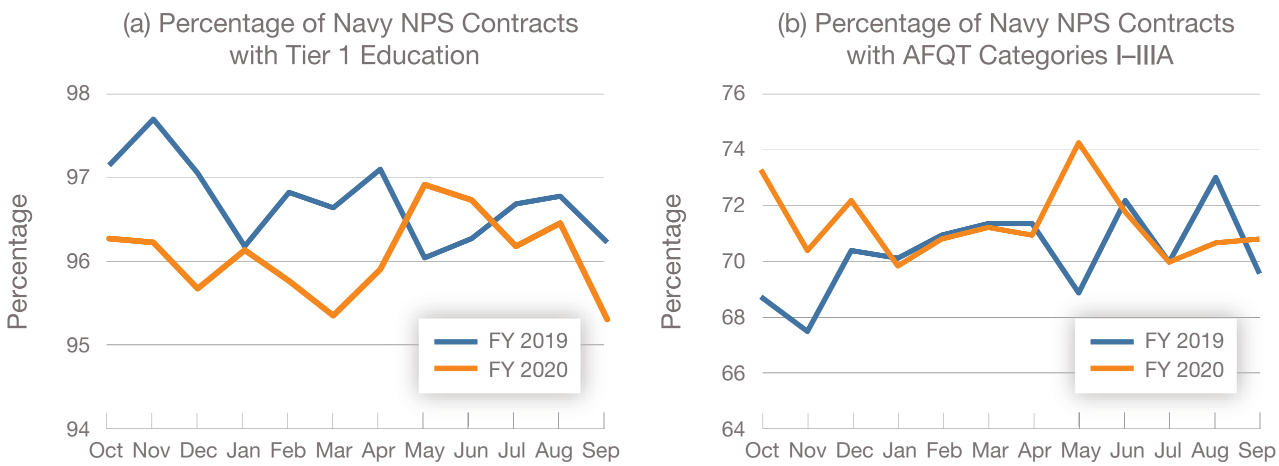
Percentage of Navy Non-Prior-Service Contracts That Are High-Quality



SOURCE: Authors' calculations from DMDC data. *High-quality* refers to recruits with Tier 1 education and Categories I–IIIA AFQT scores.

FIGURE 17

Percentage of Navy Contracts with Tier 1 Education and Armed Forces Qualification Test Categories I–IIIA



SOURCE: Authors' calculations from DMDC data

Summary

The Navy raised end strength in FY 2020, primarily through increased retention. Navy accessions rose slightly during FY 2020 relative to FY 2019, but retention rose by substantially more. The Navy also maintained recruit quality. Although the Navy seemed to show resiliency in terms of meeting end strength and sustaining recruit quality, the decrease in contracts, steady level of accessions, and planned expansion of the Navy may lead to greater pressure on the Navy to increase accessions in FY 2021. Furthermore, the larger-than-planned expansion of end strength likely put pressure on the Navy budget, which was already strained by plans to increase the fleet to 500 ships. Moving forward, the Navy will likely cut end strength and plan on a smaller expansion of the fleet (Cancian, 2020, 2021).

Results for the U.S. Air Force

Policies During the Pandemic

Beginning in early April, Air Force recruiters moved to largely virtual recruiting (Clash, 2020). The Air Force also lowered its accession goal early in the pandemic in recognition of the difficulties that recruiters were facing (Losey, 2020). The Air Force paused shipping to basic training at Lackland Air Force Base in April 2020 and opened a second, smaller basic training location at Keesler Air Force Base to partially offset the smaller training classes. In June, the Air Force restored the size of training classes at Lackland Air Force Base to their usual size, with the final training class at Keesler Air Force Base beginning in September (Vergun, 2020). With respect to retention, by early April 2020, short-term contract extensions were available for Air Force personnel (Correll, 2020). These changes are generally similar to those made by the Army and Navy, and we would expect the effects on recruiting and retention outcomes to be qualitatively similar.

Changes in End Strength, Accessions, and Retention

As shown in Table 6, the Air Force planned to increase end strength in FY 2020 by 2,500 personnel over the projection for FY 2019 at the time of the writing of the FY 2020 budget in March 2019. Such an increase would require that recruiting, retention, or both rise relative to their levels in FY 2019. The Air Force exceeded its end strength goal in FY 2020 by 905 personnel, which was an increase in end strength of 1,604 personnel.

Figure 18 reports the number of accessions in the Air Force in every year from FY 2015 to FY 2020 (Panel A) and in each month of FY 2019 and FY 2020 (Panel B). The pattern of accessions in the Air Force in FY 2020 relative to FY 2019 was relatively similar to that of the Army. Accessions were lowest, relative to their level in FY 2019, in April and May, but they began to recover in June. In total, Air Force accessions fell by 18 percent relative to FY 2019, consistent with the downward revision in the Air Force accession goal after the pandemic hit.

The drop in Air Force accessions means that retention must have risen in order to raise end strength. Figure 19 shows that retention rose at almost every YOS between FY 2019 and FY 2020, consistent with news articles noting record high retention (Cohen, 2020). Expected years served per recruit rose from 9.0 years in FY 2019 to 9.9 years in FY 2020. The increase in retention was especially high for those with at least 20 YOS: Expected years for those personnel increased by 41 percent, relative to an 8 percent increase for personnel with less than 20 YOS.

Changes in Recruit Quality

As shown in Panel A in Figure 20, contracts fell by 22 percent from FY 2019 to FY 2020, a slightly larger drop than the 18 percent drop in accessions. Panel B shows the number of Air Force enlistment contracts produced in each month of FY 2019 and FY 2020. Contracts were lowest, relative to FY 2019, in April and May 2020, when some recruiting activities were virtual. Contracts began to recover in June, but they remained lower than their FY 2019 level for the remainder of FY 2020.

In terms of recruit quality, Figure 21's Panel A shows that the quality of contracts rose in FY 2020 relative to FY 2019, reversing a downward trend from FY 2017 to FY 2019. Panel B plots the quality of contracts in each month of FY 2019 and FY 2020. The quality of contracts rose relatively steadily over the course of FY 2020, with no clear trend break during the early months of the COVID-19 pandemic.

Figure 22 further breaks down the quality metrics to better understand how the Air Force responded to the pandemic in terms of maintaining

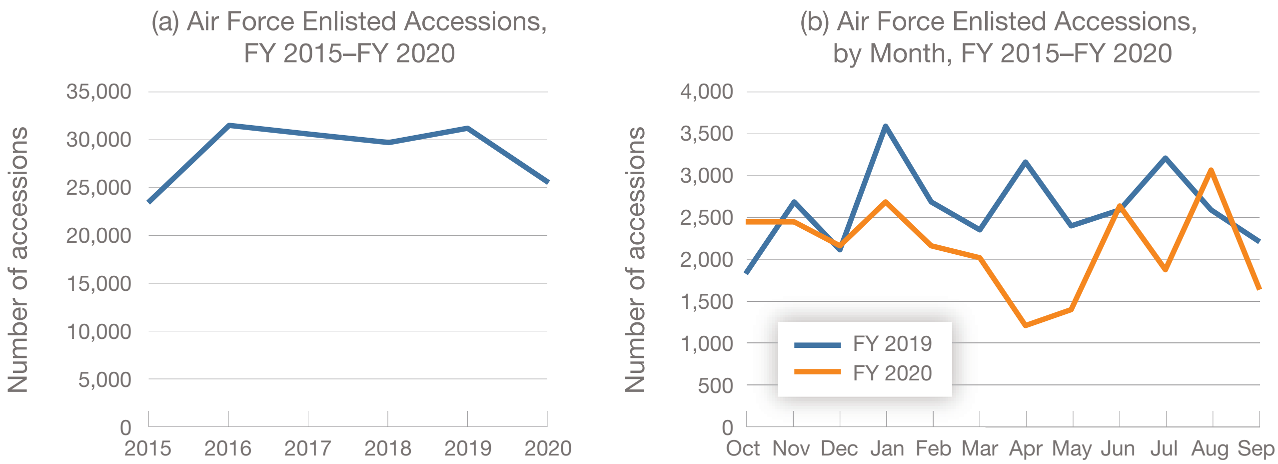
TABLE 6
Air Force End Strength Goals

Fiscal Year 2019 Actual	Fiscal Year 2020 Goal	Fiscal Year 2020 Actual
332,101	332,800 (+2,500 more than FY 2019 projection)	333,705

SOURCE: Office of the Undersecretary of Defense (Comptroller)/Chief Financial Officer, 2019, 2020, 2021.

FIGURE 18

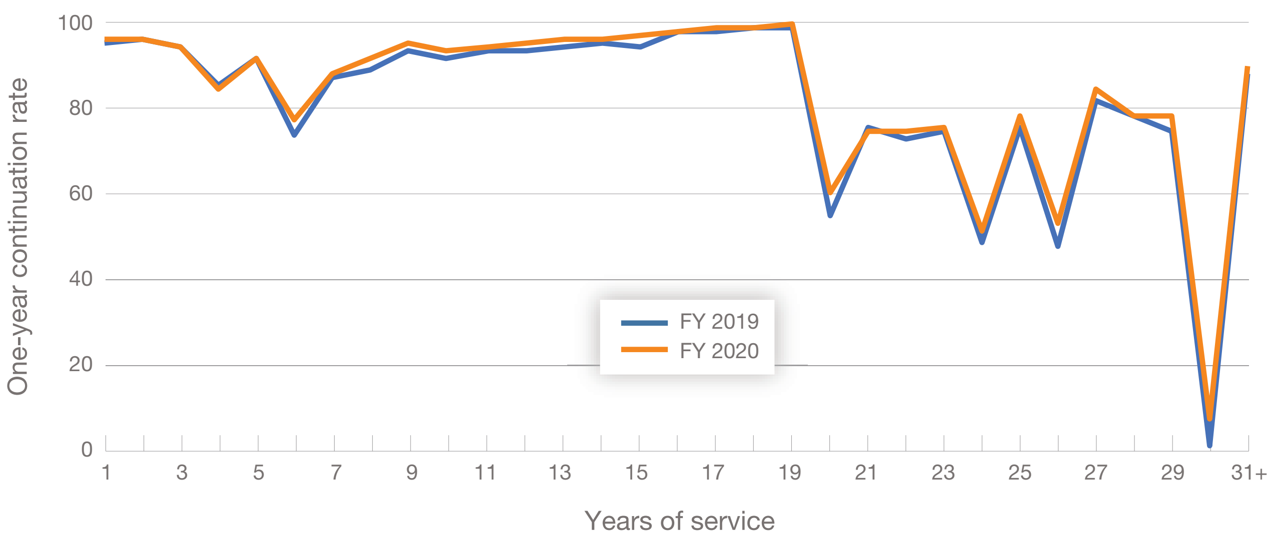
Air Force Enlisted Contracts



SOURCE: Authors' calculations using DMDC data.

FIGURE 19

Air Force Retention in Fiscal Years 2019 and 2020

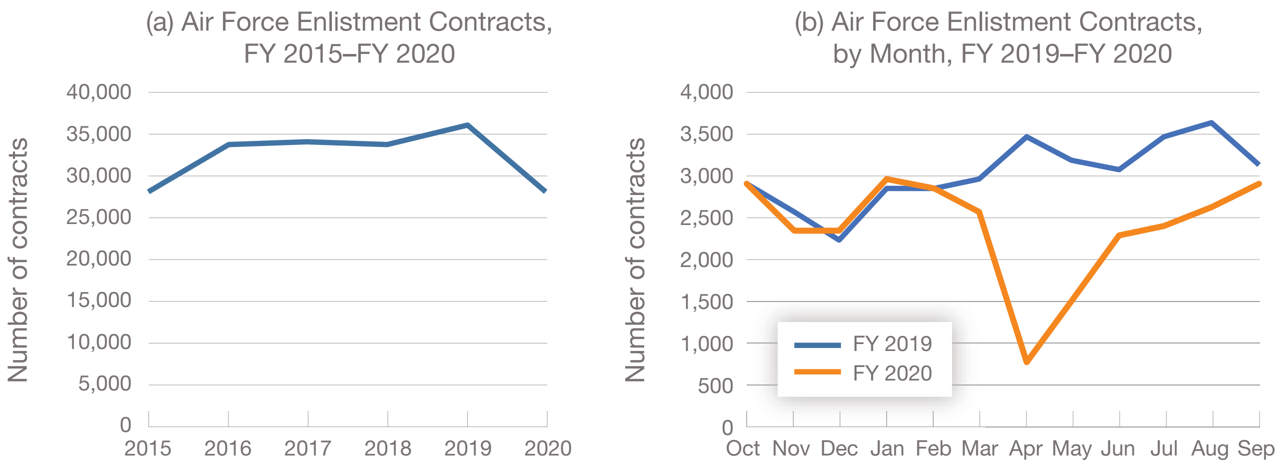


SOURCE: Authors' calculations using DMDC data.

recruit quality. The Air Force met the OSD benchmarks of 90 percent of recruits having Tier 1 education and 60 percent having AFQT scores in Categories I–IIIA in every month of FY 2020. Panel A reports the percentage of contracts with Tier 1 education in each month of FY 2019 and FY 2020. The percentage of contracts in FY 2020 with Tier 1 education was similar to the percentage of contracts with Tier 1 education in the corresponding months of FY 2019 throughout the first half of FY 2020 and fell to a level slightly below that of the corresponding months of FY 2019 starting in March 2020. Panel B reports the percentage of contracts with AFQT Categories I–IIIA in each month of FY 2019 and FY 2020. The percentage are of contracts with AFQT Categories I–IIIA in the first half of FY 2020 was relatively similar to the percentage in the corresponding months of 2019 but was substantially higher than the percentage in the

FIGURE 20

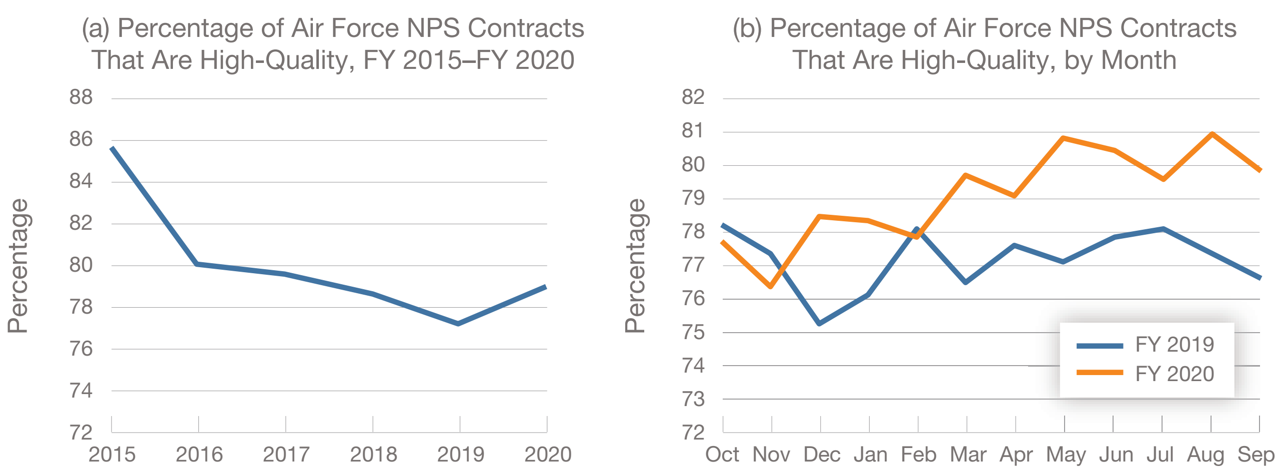
Air Force Enlistment Contracts



SOURCE: Authors' calculations using DMDC data.

FIGURE 21

Quality of Air Force Enlistment Contracts



SOURCE: Authors' calculations from DMDC data. *High-quality* refers to recruits with Tier 1 education and Categories I–IIIA AFQT scores.

corresponding months of FY 2019 from March to September of FY 2020.

Summary

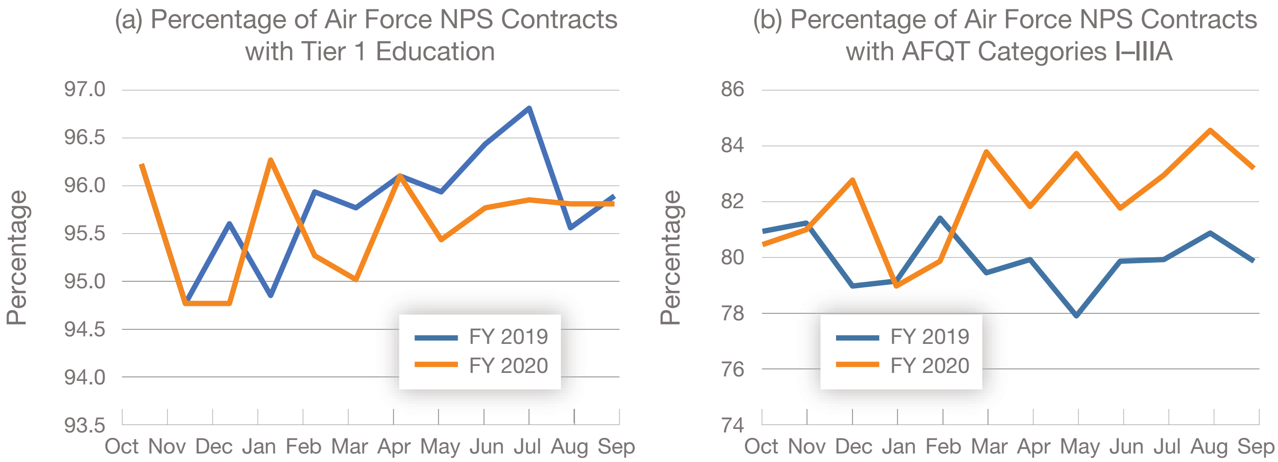
The Air Force raised end strength in FY 2020, primarily through increased retention. Although the Air Force did meet its FY 2020 accession goal, that goal was reduced substantially during the early months of the pandemic. Recruit quality rose over the year. The Air Force clearly showed resiliency in terms of meeting end strength and sustaining recruit quality.

Conclusions

Despite the challenges associated with the emergence of COVID-19, the Army, Air Force, and Navy all exceeded their FY 2020 end strength goals. The decrease in Marine Corps end strength is more likely linked to a new force restructuring plan that began at the same time as the COVID-19 pandemic. Accessions fell in the Army, Air Force, and Marine Corps, whereas they increased slightly for the Navy. Retention rose, especially for retirement-eligible personnel, for the Army, Navy, and Air Force; retention fell

FIGURE 22

Percentage of Air Force Contracts with Tier 1 Education and Armed Forces Qualification Test Categories I–IIIA



SOURCE: Authors' calculations from DMDC data.

for the Marine Corps, especially among personnel with less than 20 YOS. All four services maintained or improved the quality of enlistment contracts in FY 2020 relative to FY 2019.

This analysis does not take into account changes in recruiting and retention targets, recruiting resources, the economy, or other factors that past research shows affect individuals' decisions to join or remain in the military (e.g., Warner and Asch, 1996). A more complete analysis of the effect of COVID-19 on military recruiting and retention would include this information to tease out the effect of the threat of infectious disease from the effects of economic factors and changes in policies and resources that the services made to compensate for the pandemic. Analyses that included these additional factors could help determine the portion of the changes in Marine Corps enlistment contracts that was related to the new force restructuring plan, which changed recruiting targets, versus the portion that was related to the COVID-19 pandemic. More broadly, such research could provide information on the effectiveness of policies, such as virtual recruiting, that the services adopted during the pandemic.

Endnotes

[1] As first highlighted by Dertouzos, 1984, recruiters do not passively process contracts but can emphasize different categories of enlistments and the intensity of their effort, based on their contract goals and incentives. Consequently, demand factors also affect contracts.

[2] The Navy and Marine Corps rarely accept recruits with prior military service, and the Air Force accepts only a small number each year.

[3] An alternative metric is the reenlistment rate among enlisted members eligible to reenlist. Reenlistment occurs at the end of each enlistment contract and represents the voluntary decision of eligible members to continue to serve instead of separating at the end of their obligated service. Because we lack data on enlistment term length and reenlistment eligibility, we opted to use continuation rates to measure retention.

[4] Such attrition may occur because of service-ending injuries that make members unfit for continued service or "for the good of the service" (e.g., because of drug or alcohol abuse or performance issues). Continuation rates reflect the services' attrition policies to some degree.

[5] It is beyond the scope of this report to consider other factors that might have affected retention, such as enlistment bonuses and services' attrition policies.

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About This Report

The emergence of coronavirus disease 2019 (COVID-19) and the accompanying statewide shutdowns altered traditional models of recruiting and retaining military personnel. Furthermore, both the dramatic increase in the unemployment rate and the restrictions on in-person interactions could have changed individuals' incentives to join or remain in the military.

This report provides an exploratory and descriptive analysis of the changes in military enlisted recruiting and retention during the first six months of the COVID-19 pandemic. The analysis examines changes in end strength, enlisted accessions, enlisted retention, enlistment contracts, and the quality of enlistment contracts in each month of fiscal year 2020, relative to those of previous years. The report also covers the changes in military personnel policies made during the COVID-19 pandemic.

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This research should be of interest to policymakers responsible for recruiting and retention policies as well as researchers in military personnel policy.

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For more information on the Forces and Resources Policy Center, see www.rand.org/nsrd/frp or contact the director (contact information is provided on the webpage).

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