Military and Nonmilitary Careers: Youth Perceptions, Aspirations, and Influences

Response to DACOWITS June 2020 RFI 14

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Introduction

The Defense Advisory Committee on Women in the Services (DACOWITS) requested a literature review on perceptions of careers and early career aspirations among the Nation's youth. This review explores youth career perceptions and development; career influences; and strategies and best practices for influencing youth career decisions, both in general and within the context of military service.

Chapter 1 begins with an overview of childhood cognitive development and ways career exposure and development is encouraged outside the typical classroom setting. This chapter also summarizes evidence on youth perceptions of various career fields. Chapter 2 provides an in-depth review of the factors that influence youth career aspirations, including careers in the Military Services. Chapter 3 describes the programs and practices currently used to increase military exposure and encourage military service. Chapter 4 presents a review of general best practices for engaging youth and innovative military practices for recruitment. Chapter 5 concludes with a summary of strategies for influencing career choices both in and out of military service.

Chapter 1. Youth Cognitive Development and Career Perceptions

Bottom Line Up Front

- Youth in the middle childhood (6–10 years old) and adolescent (11–14 years old) age groups experience significant shifts in critical and abstract thinking, exploring autonomy, and identifying personal strengths and weaknesses.

- Extracurricular programs and organized social activities help adolescents and preadolescents build skill sets and create new relationships in safe environments. Programs pertaining to career development and leadership are particularly popular for school-aged children.

- Youth perceptions of nonmilitary careers vary; middle and high school students tend to be attracted to careers in healthcare and business, while possible careers in science, technology, engineering, and math (known as STEM) and trades (e.g., electrician, plumber, mechanic) are less popular.

- Youth generally have positive impressions of the Military Services; however, the percentage of students who think they will "definitely or probably" serve has remained stagnant at around 13 percent since 2001.

To better understand how and when youth begin to consider their future careers, it is helpful to understand the changes they experience at different ages of development. Being aware of the types of changes youth experience before and during adolescence can help identify the most appropriate ways to encourage career interest and education. Recognizing how youth perceive different types of careers may also provide a valuable foundation for understanding how to best promote military and other types of career opportunities.

A. Psychology of Youth Cognitive Development

Youth functional and emotional development begins shortly after birth and continues through and beyond adolescence.[1, 2, 3] While the first 3 years of a child's life have been highlighted as a crucial time for foundational cognitive development, executive functioning progression such as organizing, planning, and prioritizing continues into adolescence and postadolescence.[4] Beyond foundational development, research has shown middle childhood (ages 6–10) and early adolescence (ages 11–14) are particularly formative in cognitive development:[5]

- **Middle childhood,** beginning around age 6, is marked by a large shift in cognitive development, when youth begin to use reason and develop greater self-awareness and increased problem-solving skills.[6]

- **Adolescence,** beginning around age 11, is often defined as starting at puberty and ending once a person achieves "relative self-sufficiency."[7] Cognitively, adolescence is characterized by an increase in abstract thinking skills, a better understanding of personal strengths and weaknesses, and greater autonomy and independence.[8, 9] Adolescents also concurrently experience significant biological and social changes.[10, 11]

Given the psychological, biological, and social changes that typically occur during these developmental periods, especially adolescence, youth in the adolescent age group are particularly susceptible to outside influence and tend to take greater risks compared with youth of other ages.[12, 13, 14]

B. Youth Development and Influence Outside of the Classroom

During middle childhood youth often begin to expand their social circles for the first time and participate in organized social activities (e.g., youth groups, sports), which may offer less stringent rules than the standard classroom setting while still allowing individuals to build skill sets and relationships in safe environments.[15] Organized youth programs can also provide intellectually stimulating opportunities outside of the classroom for adolescents, giving them the support they need as they experience significant shifts in cognitive, physical, and social development.[16]

"Out-of-school time" (OST) programs also contribute to youth career preparation. Although some standard curricula for kindergarten (K) through 12th grade include career development, opportunities for OST programs can supplement or complement regular classroom education.[17] OST programs focusing particularly on career skills, workforce development, and leadership have reported higher recruitment and retention rates compared with other programs.[18, 19, 20] Despite the popularity of OST programs, research has not been able to establish a strong relationship between program participation and increased future career success for youth.[21]

C. Youth Perceptions of Selected Professions

The career perceptions of middle and high school students can be shaped by gender stereotypes and tend to vary by demographics such as socioeconomic status.[22, 23] For example, while women tend to be underrepresented in science, technology, engineering and math (STEM) fields and leadership positions, men tend to be underrepresented in communal fields such as healthcare and early education.[24, 25] Tools and programs focused on youth career perceptions and development should be sensitive to preconceived notions of "appropriate" careers for students living with different demographic realities.[26]

1. Healthcare

Careers in healthcare generally rank among the most popular careers relative to the interest and aspirations of 8th through 12th grade youth; registered nurse and physician/surgeon ranked first and second, respectively, in Exploring's 2017 Career Interest Survey.[27] Among middle school-aged students in particular, more than 30 percent of surveyed 13- to 14-year-olds agreed they would like a job in the medical field.[28] Different perceptions were found to exist among underrepresented racial and ethnic minority students, however; minority students from a 2014 focus group study cited a negative perception of math and science, lack of peer support, uncertain financial aid, and stigmas for men around certain healthcare professions like nursing as reasons for not pursuing healthcare careers.[29]

2. Business

Along with healthcare, careers in business rank among the most popular career aspirations for adolescents; among surveyed 13- to 14-year-olds, nearly 60 percent said they would like a career in business.[30] Unlike many other professional areas, work in business ranks among the top career goals for both male and female adolescents throughout the world.[31]

3. STEM

Adolescents often have a low level of knowledge and understanding about STEM fields.[32, 33] Even if students display an interest in STEM at the beginning of high school, that interest often decreases over time. The High School Longitudinal Study of 2009, which surveyed students in 9th grade and again in

11th grade, found about half of the 9th grade students who were interested in pursuing a STEM career changed their minds 2 years later.[34] The lack of interest in STEM careers compared with other career types is similar in the United Kingdom: a 2013 study showed about 15 percent of students aged 13–14 were interested in a STEM career—only slightly more than for the lowest ranked field, trades (e.g., electrician, plumber, and dental hygienist).[35]

Perceptions of STEM careers seem to be driven by middle and high school students' lack of knowledge of STEM subjects and the types of work STEM careers entail rather than a dislike of or disinterest in the subjects or poor performance in math.[36, 37, 38] One of the main influences for a student's desire to pursue a STEM career is family science capital—the knowledge and understanding of science, and proximity to those who work in a STEM field—as well as influence by mentors and peers.[39, 40] Extant literature has also reiterated how the persistence of stereotyped gender roles and expectations has partly contributed to the underrepresentation of women in STEM careers and the difference in STEM career perceptions between male and female students.[41]

4. Trades and Skilled Trades

Careers in trades are typically ranked among the lowest career aspirations by modern-day middle school-aged students.[42] Part of this disinterest in trades among youth could stem from the emphasis on attending college after high school rather than pursuing a trade career. However, despite the perceptions of younger students, enrollment in trade schools after high school increased by nearly two-thirds between 1999 (9.6 million students) and 2014 (16 million students);[43] this increase suggests student perceptions of trade careers may shift as they near the end of high school.

5. Military

Current academic research on youth perceptions of the Military Services and military careers is limited, with nearly all research on the topic sponsored by the DoD. From 1975 to 2001, the Defense Manpower Data Center conducted an annual youth survey, the Youth Attitude Tracking Study, measuring attitudes toward military service and propensity to serve.[44, 45] Starting in the early 2000s, DoD's Joint Advertising, Market Research, and Studies program (JAMRS) began conducting biannual youth surveys to determine youth's propensity to serve and perceptions of military service.[46] JAMRS is currently the primary data source for information about youth perceptions of the Military Services and military careers.

Among nonmilitary and non-Reserve Officer Training Corps (ROTC) youth aged 15–21 surveyed in 2001, 4 percent reported they might join the Military Services in response to questions about their professional plans in the coming years, compared with more than 58 percent who reported they might go to college and 54 percent who reported they might be working.[47] This study also found that propensity to serve decreased with age; 23 percent of youth aged 15–19 reported a propensity to serve compared with 12 percent of youth aged 20–21. Among this same sample, nearly half of survey respondents reported a very or somewhat positive general impression of the Military Services (see Figure 1.1).[48]

Figure 1.1. Youth General Impression of Military
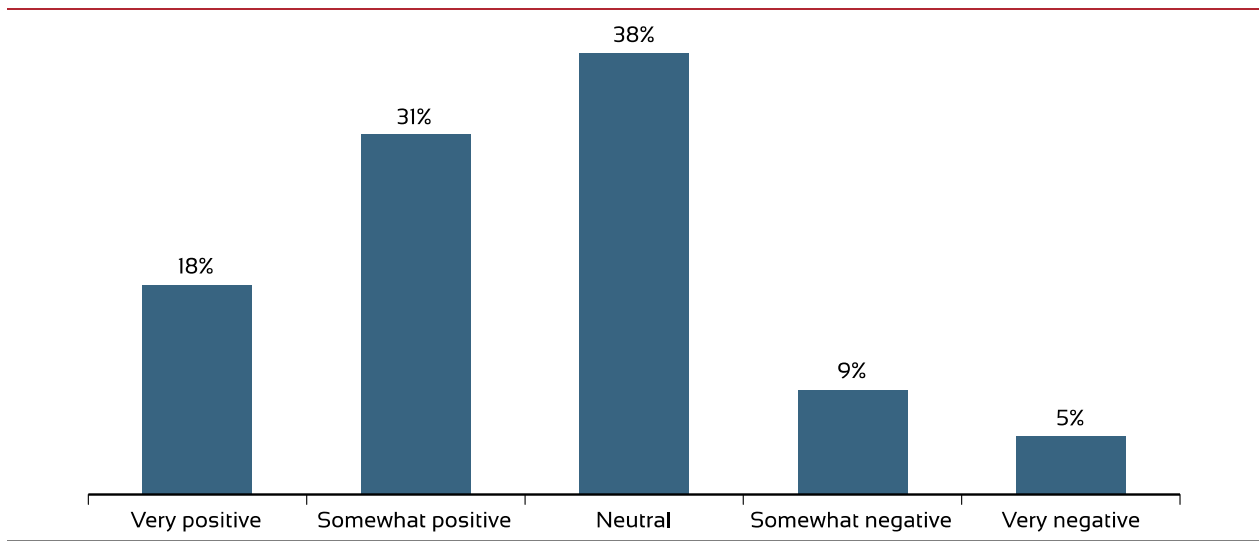
Note: Respondents ranged in age between 15 and 21.
Source: Bailey et al., 2002[49]

A study published in 2006 found enlistment among high school graduates was also positively associated with plans to attend college, as well as with lower socioeconomic status and greater exposure to military service.[50] JAMRS research has found that over the past 20 years, the propensity to serve among both men and women ranged between 9 and 16 percent but remained fairly stagnant most years (see Figure 1.2).[51] Among youth aged 16–21, the top reasons for considering a military career included financial aid for education, ability to travel, salary, and an ability to help others. Top reasons for *not* considering a military career included the possibility of physical or mental injury or death, being away from family and friends, having career interests outside of the Military Services, and interference with college plans.[52]

Figure 1.2. Youth Aged 16–21 Who Said They Would Definitely or Probably be Serving in the Military
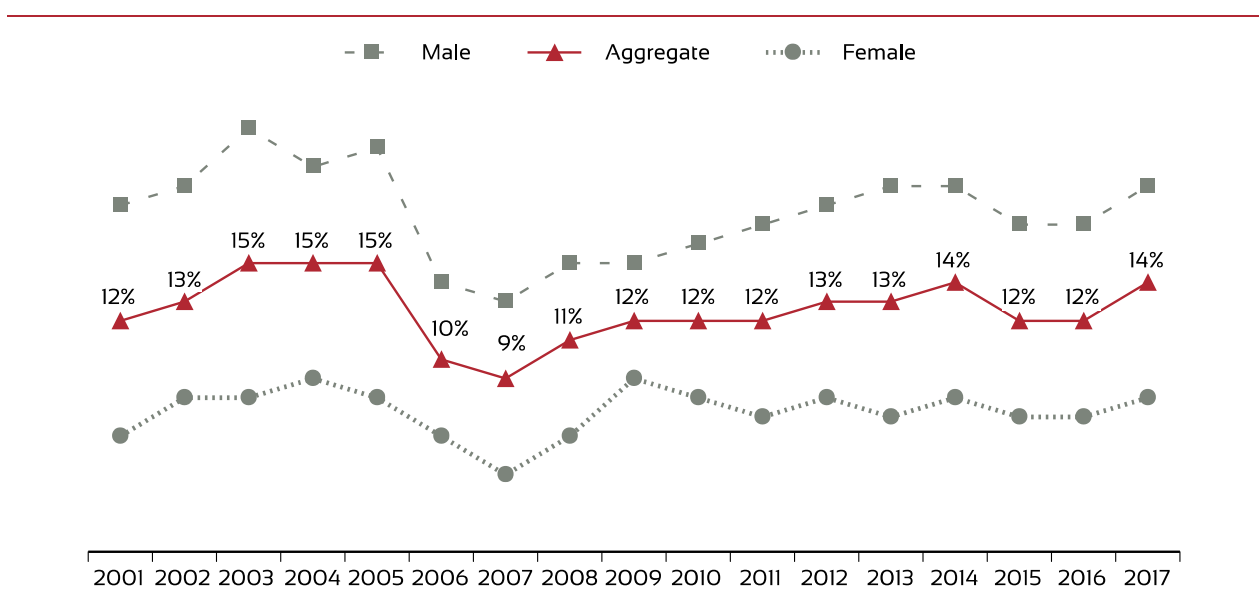
Note: All percentages were from the spring or summer of each year except for 2002, which was from November.
Source: DoD, Joint Advertising Marketing Research & Studies, Office of People Analytics, 2018[53]

Chapter 2. Influential Factors in Youth Career Decisions

Bottom Line Up Front

- Parents seem to have the strongest influence on youth career aspirations and decisions from early childhood to adulthood, including their attitudes toward military service and their propensity to join.

- Youth of all ages identify certain occupations as more appropriate for members of certain genders and racial/ethnic groups, indicating youth gender and racial identity could limit their access to certain career choices as early as age 4.

- The portrayal of occupations through different media platforms, such as television and social media, informs youth perceptions of what it may be like to achieve certain careers as an adult.

- Disadvantaged youth perceive the Military Services as a bridge to their pursuits of education, training, and financial stability that may not be available to them otherwise, and in some cases may be more likely to value the financial and social support the Military Services offer.

It is important to understand not only current literature on the cognitive development path of youth and how they perceive different careers but also what factors influence youth to aspire to certain careers and ultimately influence their career decisions. This section provides an overview of the primary factors that influence youth career decisions and aspirations, and the factors that may indicate a higher propensity to pursue a military career.

A. Factors That Influence Youth Career Decisions and Aspirations

Youth career decisions and aspirations are influenced by a variety of factors, including parents, gender, race and ethnicity, media, and teachers or school staff.

1. Parents

Recent literature has indicated parental influence on youth career decisions can begin as early as middle school and continue into their postsecondary education.[54] Studies with youth have found parental influence is consistently reported as having the greatest impact on career aspirations and decisions.[55, 56, 57, 58] However, researchers have offered mixed opinions on whether mothers or fathers have a greater impact on a child's career decisions. Otto (2000) found a sample of male and female high school juniors in North Carolina were more likely to be influenced by their mothers than their fathers when it came to career planning.[59] However, Paa & McWhirter (2000) found fathers had a greater perceived influence on the career decisions of male high school students, while mothers had a greater perceived influence on the career decisions of female high school students.[60]

Parents also play a key role in motivating their children to consider diverse career options. Taylor and colleagues (2004) contended children might be less likely to explore diverse career paths without the support or endorsement of their parents.[61] Kracke (1997) found children whose parents were involved in their career-planning activities were more likely to conduct thorough and effective information-seeking activities about career options.[62]

Youth career decisions can also be influenced by their parents' occupational history and personal values. Studies have found while many parents approve of different career paths for youth in general, many believe their children should pursue a similar educational or occupational path as themselves.[63, 64] Children also absorb personal values from their parents that can influence their career decisions. Children learn about various aspects of work from their parents, including information about their parents' careers and other occupations, their beliefs and attitudes toward work, and their motivation to succeed in their careers. Otto's (2000) study found these influences could result in similar career expectations between parents and children; 82 percent of the 362 high school juniors he surveyed reported their preferred occupations were similar to their parents' preferences.[65] Polenova et al. (2018) also suggested parents' cultural values could influence which occupations their children pursued; they found several Asian-American college students from immigrant families felt strongly encouraged to pursue occupations preferred by their parents.[66] However, Keller and Whiston (2008) contended parental pressure to pursue certain careers could be detrimental to a child's exploration of career options and career decisionmaking if the child's preferences differed from the parents'.[67]

2. Gender

The influence of gender on youth career aspirations and decisions has been discussed frequently in recent literature. Studies have found gender stereotyping influences the career aspirations of not only high school-aged youth but also in children as young as 4 years old.[68] One 2018 survey study of more than 13,000 United Kingdom students aged 7–11 found across all age groups, student career aspirations were influenced by gender-specific ideas about certain occupations. For example, boys in the study were four times as likely to report a desire to become an engineer and twice as likely to report a desire to become a scientist compared with girls, while girls were nine times as likely to report a desire to become a teacher and almost four times as likely to report a desire to become a veterinarian compared with boys.[69] Another recent study found similar gendered career preferences among 4-year-old children and 14-year-old children; this finding suggests gendered career preferences may not evolve as children grow older.[70]

Research in other areas on how gender influences career aspirations has found conflicting evidence. For example, Patton and Creed (2007) found a sample of male high school students showed greater career aspirations than female high school students toward professional occupations,[71] while Mau and Bikos (2000) found the opposite: the sample of female high school students indicated greater career aspirations than male high school students toward professional occupations.[72] Alternatively, other studies have reported finding men and women aspired to professional occupations at similar rates.[73]

3. Race and Ethnicity

Current literature has indicated racial and ethnic minority students may perceive their available career choices as more limited than nonminority students.[74] Hill et al. (2003) reported the perception of greater career barriers among minority children aged 12–14 was associated with lower career aspirations. [75] However, the literature was mixed on whether minority students showed lower career aspirations than nonminority students in general.[76, 77] Similar to the perception of gendered occupations,[78] Bigler et al. (2003) found African-American youth aged 6–7 and 11–12 saw certain occupations as being associated with certain racial groups;[79] this finding suggests minority youth perceive their career choices as limited from an early age. Youth, particularly those without college-educated parents[80] or role models,[81] may be more susceptible to beliefs about which careers are best suited for certain genders or racial groups.

4. Media

Television and social media platforms can play a role in influencing a child's career aspirations by showing them what it may be like to achieve certain careers through programming. Television in particular has been found to provide important information to children about various occupations, including those they may not have considered prior to seeing them on the screen.[82] The influence of popular television programs on educational enrollment in certain academic programs has been studied extensively in recent years. For example, after the release of the television program "CSI: Crime Scene Investigation" in 2000, one study found enrollment in the forensics program at West Virginia University grew from 4 graduates in 2000 to more than 500 graduates in 2006.[83] Another study found the number of applicants to Michigan State University's forensic science graduate program increased from 60 in 1994 to more than 145 in 2002.[84] However, other studies have cautioned additional confounding factors can influence increases in enrollment in forensic science programs, such as an increase in the use of forensic science in the judicial system.[85] Larsen et al. (2003) surveyed 495 nurses to determine what factors influenced their decisions to pursue a nursing career and found about 22 percent of respondents reported being influenced by the portrayal of nurses on television and by other media sources.[86]

5. Teachers and Other School Staff

Numerous studies have indicated with the exception of parents, children most often pursue career guidance from teachers and school counselors.[87, 88, 89] Career counseling in school can help students better understand the connection between their education and future careers, ultimately enhancing students' academic motivation by clarifying the importance of the work they complete in school.[90, 91] Career counseling has also been shown to be especially important for middle school students establishing future career pathways and selecting high school classes to progress toward their preferred occupations.[92, 93] The American School Counselor Association in particular encourages school counselors to engage in students' career development in a variety of ways:

- ▶ Introduce careers to students in lower elementary grades (pre-K through third grade.[94]
- ▶ Provide learning and experiential opportunities for students to develop career readiness skills.[95]
- ▶ Identify student interests, abilities, and postsecondary education plans.
- ▶ Help students understand how school is connected to future careers.
- ▶ Help students transition from school to postsecondary education or the workforce.[96]
- ▶ Advise students on multiple postsecondary pathways, including college and the Military Services.[97]

B. Factors That Influence Attitudes Toward a Career in the Military Services

In addition to factors that influence youth career aspirations more broadly, multiple studies have been conducted to examine which factors influence youth to join the Military Services and determine if characteristics such as race, ethnicity, or socioeconomic background are associated with a greater likelihood of youth pursuing a military career. This section provides a detailed discussion of the literature on these influences and characteristics.

1. Family and Parental Influence

Family structure has been found to influence the likelihood of youth joining military service. For example, youth who are part of an alternative family structure—such as single-parent families, families in which parents are divorced, or families that include a stepparent—have been found to be more likely to join the Military Services than youth from typical family structures.[98, 99] In particular, studies have shown male children who grow up in single-parent families are more likely to pursue a military career than enroll in college, and male children who grow up in families with a stepparent are twice as likely to join the Military Services as male children from two-parent households without a stepparent.[100]

Studies have also suggested children from single-parent families often have less access to financial support to pursue college than children from two-parent families[101] and are more likely to have experienced social isolation and a lack of parental attention. This disparity could make the financial benefits and supportive peer group offered by the Military Services more attractive to youth from such families.[102] Other studies have found divorced and remarried families may be less likely to contribute money toward a child's college education, making children from such families more likely to join the Military Services for access to education benefits.[103] Other research has shown children of parents with more educational achievement are less likely to join.[104, 105]

Studies have found parents' attitudes toward military service often influence their children's propensity for joining.[106] For example, Gibson and colleagues (2007) suggested parental endorsement of military service and guidance regarding the enlistment process were associated with greater propensity to serve for youth.[107] With regard to a family's military history, studies indicated children of parents with a history of military service were more likely to join than children whose parents had not served.[108, 109] However, only 15 percent of youth aged 16–24 had a parent with a history of military service in 2016—a sharp decrease from 1995, when 40 percent of youth had parents with a history of service.[110]

2. Socioeconomic Status

Many studies have examined the influence of socioeconomic status on the propensity of youth for military service. MacLean and Elder (2007) found children from economically disadvantaged families were more likely to pursue military service than individuals from economically privileged families as a means of leaving impoverished neighborhoods or to improve their economic status.[111] Bouffard (2005) suggested youth were more likely to consider joining the Military Services if they came from an economically disadvantaged background, so they could pursue educational and training options not available to them outside of military service.[112, 113] Elder et al. (2010) echoed these findings; they suggested the probability of youth joining the Military Services decreased as household income increased.[114] Multiple researchers have suggested recruits from disadvantaged backgrounds may be especially attracted to military service to access benefits such as housing assistance, healthcare, and child care.[115, 116, 117]

3. Previous Disciplinary Issues and Substance Abuse

Literature on whether substance abuse is an indicator of a higher propensity to serve in youth after high school has been mixed. Barry et al. (2013) found youth who engaged in binge drinking were significantly more likely than those who did not binge drink to report a greater propensity for military service after high school.[118] Other studies, such as by Bachman et al. (2000), found no relationship between the use of cigarettes, alcohol, or marijuana and the propensity to serve after high school.[119] Relatedly, many

other research studies have indicated youth are more likely to join the Military Services if they have a history of delinquent behavior. Sampson et al. (1997) and Shihadeh and Flynn (1996) found male youth with a history of delinquent behavior were more than 40 percent more likely to join the Military Services than their nondelinquent counterparts, while female youth with a history of such behavior were 80 percent more likely to join than their nondelinquent counterparts.[120, 121] However, studies have also indicated the association between delinquency and joining the Military Services is not linear, finding youth with higher levels of delinquency are less likely to serve than youth with lower levels of delinquency. Researchers have suggested this relationship may be a result of youth with higher levels of delinquency being unable to see the Military Services as beneficial to them.[122] Researchers have also suggested the regimented structure of military service may attract youth with a history of delinquency as an environment to support personal growth and transition away from future delinquent behaviors.[123, 124, 125]

4. Other Influences

In addition to the more frequently studied influences on propensity to serve discussed earlier in this chapter, other factors have also been identified that remain important for understanding why youth may be more likely to pursue a career in the Military Services. A discussion of these factors follows:

Race and ethnicity

▶   Multiple studies have cited African-American youth as being more likely than White youth to join the Military Services.[126, 127]

▶   The pay gap between African Americans and Whites is significantly smaller in the Military Services than in the civilian labor market.[128]

▶   African-American men are more likely to choose to remain in the Military Services as a career than White men.[129] Researchers have suggested this disparity may arise as a result of African-American Service members' concerns about racial discrimination, which they perceive to be more prevalent in the civilian labor market than in military culture.[130]

Geography

▶   Bachman et al. (2000) identified regional differences in propensity to serve among youth, highlighting a lower propensity to serve among youth in the Northeast as compared with youth in the South or Midwest, where military service is a more common career option.[131]

▶   Regions where youth experience a higher propensity to serve, such as the South, generally have a greater military institutional presence, providing youth with more exposure to veteran and active duty military personnel.[132, 133]

Chapter 3. Youth Programs Supported by DoD and the Military Services

Bottom Line Up Front

- Academic literature on the impact and effectiveness of DoD- and Military Service-supported youth programs was limited but indicated central management of programs might improve participant access to the programs.

- For the two identified studies that addressed the impact of DoD- and Military Service-supported youth programs on propensity to join the Military Services, the findings were mixed. The mixed findings suggest further study of this topic may be necessary.

DoD and the Military Services support a variety of youth programs aimed at promoting educational and leadership development and cultivating important skills in civilian youth to contribute to their success as youth and adults. Although these programs are supported by DoD and the Military Services, their purpose is not to recruit future Service members. However, the programs have been cited as providing significant public-relations benefits to the Military Services because they raise awareness about military service and promote positive images of serving.[134] This section describes various program details (see Table 2.1) and discusses findings from studies on program outreach outcomes.

Table 2.1. DoD Youth Program Mission Statements, Locations, Annual Operating Costs, and Youth Served

Program Name	Mission Statement	Locations	Operating Costs	Description of Youth Served
Army Educational Outreach Programs (AEOP)	"To provide both students and teachers a collaborative, cohesive, portfolio of Army-sponsored STEM programs that effectively engage, inspire, and attract the next generation of STEM talent through K [kindergarten] through college programs and expose them to Department of Defense STEM careers"[135]	3,656 K–12 schools in 2018[136]	$11,209,194[137]	30,311 youth aged 4–18 participated across 12 AEOP programs in 2018[138]
Civil Air Patrol Cadet Programs	"To support America's communities with emergency response, diverse aviation and ground services, youth development and promotion of air, space and cyber power"[a 139]	1,000+ local units in 2020[140]	$10,528,050[141]	About 27,000 youth aged 12–20 participated in 2019[142]
DoD STARBASE	"To expose our nation's youth to the technological environments and positive civilian and military role models found on Active, Guard, and Reserve military bases and installations, nurture a winning network of collaborators, and build mutual loyalty within our communities, by providing 25 hours of exemplary hands-on instruction and activities that meet or exceed the National Standards"[143]	69 sites in 33 States and U.S. territories in 2019[144]	$28,219,681[145]	99,744 youth participated in 2019; 94 percent of program participants were fifth grade students[146]

Program Name	Mission Statement	Locations	Operating Costs	Description of Youth Served
National Guard Youth Challenge	"The mission of the National Guard Youth Challenge Program is to intervene in and reclaim the lives of 16-18 year old high school dropouts, producing program graduates with the values, life skills, education, and self-discipline necessary to succeed as productive citizens"[147]	41 sites in 30 States and U.S. territories[148]	$143,312,192[149]	13, 457 youth aged 16–18 participated in 2017[150]
U.S. Naval Sea Cadet Corps	"Through organization and cooperation with the Department of the Navy, to encourage and aid American youth to develop, train them in seagoing skills, and to teach them patriotism, courage, self-reliance and kindred virtues"[151]	388 units in 46 States and U.S. territories through 2013[152]	$6,173,469[153]	983 youth aged 10–13 participated in the U.S. Navy League Cadet Corps in 2013; 2,446 participants aged 13–17 participated in the Naval Sea Cadet Corps in 2013[154]
Young Marines	"The mission of the Young Marines is to positively impact America's future by providing quality youth development programs for boys and girls that nurtures and develops its members into responsible citizens who enjoy and promote a healthy, drug-free lifestyle"[155]	250+ units in 38 States[156]	$671,034[157]	8,500 youth aged 8–18 participated in 2018[158]

Note: [a] The listed mission statement is for the Civil Air Patrol but not specifically the Cadet Program.

Only a few of the programs listed in Table 2.1 have been formally evaluated to ensure they are serving their intended populations and to identify their impact on participants' educational and occupational outcomes. A 2018 RAND Corporation study found DoD STARBASE program participants were, as intended, minority students disproportionately from low-income households, and DoD STARBASE programs were more likely to be located in school districts with higher rates of public assistance receipt, property crime, and violent crime, and greater numbers of households with minority students, and income below the poverty level. This study also indicated DoD STARBASE programs and National Guard Youth Challenge programs were often located in areas without Junior ROTC programs and were more likely to be located in States with lower measures of confidence in the Military Services compared with States where JROTC programs were present. The researchers in this study ultimately recommended implementing central management of DoD youth programs such as STARBASE, JROTC, and the National Guard Youth Challenge to ensure they were established in optimum locations to improve access to DoD youth programs.[159]

DoD youth programs have also been studied to determine their impacts on participant outcomes, such as educational and occupational attainment and likelihood of joining the Military Services. An evaluation of the National Guard Youth Challenge program found a sample of participants experienced significant educational and occupational improvements 3 years after graduating from the program in comparison with youth who did not participate in the program. For example, 72 percent of the youth who attended the program had received a general education diploma (known as GED) or high school diploma 3 years after graduation, while only 55 percent of the control group members had achieved this educational

status. Program participants were found to be more likely to be employed in a job earning $10 an hour or more than control group members and reported higher average annual earnings.[160]

The findings have been mixed on whether DoD youth programs influence participants to join the Military Services. One study found a sample of participants in the National Guard Youth Challenge program were just as likely as control group members to choose military service,[161] while a 2018 evaluation of DoD STARBASE programs found areas with DoD youth programs had higher application rates to join the Military Services than areas without such programs.[162] However, because of the lack of rigorous study on this topic, it is difficult to draw strong conclusions from these findings.

Chapter 4. Practices for Influencing Career Choices

Bottom Line Up Front

- OST programs focused on career development and choices are popular among the adolescent age group.

- Recruitment opportunities among the middle childhood and adolescent age groups are mixed; although military recruiters are given the same access to students as other types of recruiters, general rules and access for recruiters vary by school.

- The Army has taken innovative approaches to expanding outreach, including increasing its social media presence, expanding recruitment efforts in urban areas, improving its community presence, and offering additional benefits to new recruits.

## A. General Best Practices: How and When to Engage Youth

According to the research on youth cognitive development outlined in Chapter 1, adolescents (ages 11–14) experience a significant shift in autonomy, abstract thinking skills, and understanding of personal strengths and weaknesses. A complement to this development is activity outside of the traditional classroom setting: organized social activities (e.g., youth groups, sports) and OST programs allow adolescents to cultivate their strengths and identify their weaknesses among their peers in safe environments. Among adolescents, OST programs focused on career skills and choices tend to be particularly successful, especially programs that emphasize career development and leadership. However, it is important to note while OST programs can increase career knowledge and exposure, program participation does not necessarily lead to future career success.

Although youth may enlist in the Military Services as early as age 17 with parental consent, the success and availability to implement recruitment activities in middle and high schools vary. The No Child Left Behind Act of 2001 (NCLB) allows military recruiters to access the contact information for secondary school students whose schools receive funding under NCLB unless parents requested the information not be shared.[163] NCLB also allows military recruiters the same access to students as college recruiters, but access varies depending on each school's rules for all types of recruiters.[164, 165]

B. Military Practices: Increasing Recruitment and Propensity to Serve

Propensity to serve and Military Services recruitment are crucial to an all-volunteer force. In fiscal year (FY) 2018, the Navy, Marine Corps, and Air Force just met their recruitment goals, while the Army fell short (see Figure 4.1)[166] To increase exposure to the Military Services and introduce military career choices, especially at a time when the number of recruitment programs have been reduced,[167] the Army has focused on new, innovative approaches to recruitment, including—

Figure 4.1. FY 2018 Recruitment Goals and Accessions by Service and Number of Recruits
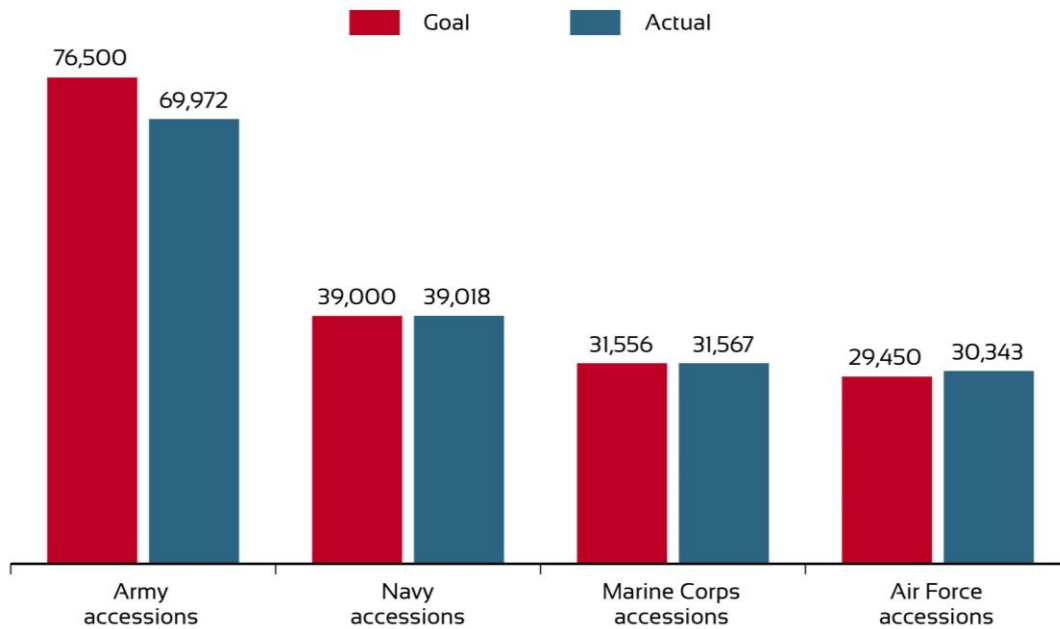
Source: DoD, 2018[168]

▶ **Increased and creative digital and social media presence.** The Army actively engages potential recruits via its "GoArmy" social media pages (e.g., Instagram, Twitter, Facebook) and encourages creativity in its posts.[169] Although the purpose of GoArmy pages is recruitment and outreach, the Army focuses many of its posts on nonrecruiting topics such as current events, careers and career development, culture, and sports.[170, 171, 172, 173]

▶ **Increased recruiting in large urban areas.** Recruiters have typically had less success in metropolitan areas compared with Southern and Western rural areas.[174] In an effort to increase urban recruitment, the Army selected 22 cities throughout the United States for focused recruitment efforts in 2019.[175, 176] Efforts included outreach at community centers and events, meeting with city officials and school staff members, and development of relevant pilot programs. According to the Army Recruiting Command, April 2019 recruitment increased in 18 of the 22 cities compared with the year prior.[177]

▶ **Offering additional incentives to recruits.** In May 2019 the Army increased its signing bonus for infantry or indirect fire crewman recruits for the remainder of that fiscal year.[178]

▶ **Creation of an eSports team.** The Army created its eSports team in 2018 as an outreach initiative under its Marketing and Engagement Brigade.[179, 180] Although eSports team members are not official recruiters and focus instead on increasing exposure to the Military Services and improving perceptions of the Army, eSports produced more than 13,000 Army "recruiting leads" in FY 2020 by May.[181, 182] The Navy and Air Force are currently working to implement similar eSport initiatives.[183]

Chapter 5. Conclusions and Implications

A variety of important factors influence the career aspirations and decisions of youth, starting with youth psychological development. Adolescents between the ages of 11 and 14 experience major shifts in their desire to explore their autonomy, personal strengths, and weaknesses. This shift, combined with increased access to and engagement with extracurricular social activities, is an important phase in youth career development as they begin to build and understand their skill sets and shape their beliefs about work and future career aspirations. Simultaneously youth interact with a variety of external factors that influence their aspirations and overall perceptions of work and potential career paths, including the Military Services. These factors include the beliefs and professional history of their parents; guidance from teachers and school counselors; and perceptions of societal norms around the appropriateness of certain occupations for themselves based on their gender, socioeconomic background, race, and ethnicity.

DoD and the Military Services support youth of many ages through youth programs aimed at developing leadership and life skills while also encouraging their pursuit of a variety of educational and professional paths. Although these programs are accessible to youth in many geographic areas and are not designed as a means to increase recruitment into the Military Services, few studies have sought to determine whether these programs increase participants' likelihood of entering military service after high school or consistently improve participants' professional and educational outcomes. However, as evidenced by the Army's incorporation of new social media outreach strategies, a greater focus on previously underrecruited areas, and the development of an eSports team to improve its presence among youth, the Military Services continue to remain flexible in their recruitment approaches.

As DACOWITS considers marketing and recruitment efforts, it is critical to understand the wide variety of factors that shape and influence youth career perceptions. Any new recruitment program or changes to existing programs must be designed to consider social, cultural, and psychological contexts within which youth live. Additional research on the effectiveness of existing youth programs on influencing propensity would better inform DoD strategy and efforts to engage youth.

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