

# Military-Connected Undergraduates

Exploring Differences Between National Guard, Reserve, Active Duty, and Veterans in Higher Education

November 2015

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Molina, Dani, and Andrew Morse. 2015. *Military-Connected Undergraduates: Exploring Differences Between National Guard, Reserve, Active Duty, and Veterans in Higher Education*. Washington, DC: American Council on Education and NASPA – Student Affairs Administrators in Higher Education.

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## TABLE OF CONTENTS

Acknowledgements.....	i
List of Tables and Figures .....	ii
Foreword.....	iv
Executive Summary .....	vi
Introduction.....	1
Background of National Guard, Reserve, Active Duty, and Veterans .....	3
About the Data .....	5
Exploring Differences Between Military-Connected Undergraduates.....	6
1. Demographics and Income.....	6
2. Family Circumstances.....	8
3. Enrollment Characteristics.....	9
4. STEM Enrollment .....	11
5. Employment.....	12
6. Financial Aid.....	13
7. Factors Associated with Non-completion .....	14
Conclusion.....	17
Considerations for Future Research.....	18
Questions to Consider.....	19
References .....	21



## ACKNOWLEDGMENTS

The authors of this research report gratefully acknowledge our colleagues at the American Council on Education (ACE) Center for Policy Research and Strategy (CPRS) for supporting this important work. Lorelle Espinosa, Christopher Nellum, and Jennifer Crandall provided conceptual and editorial feedback. This work was especially strengthened by Nellum's recommendations throughout the project. We appreciate Jonathan M. Turk's statistical support. We give special gratitude to ACE's publishing and graphic design teams for their contributions to the final version of this report. We also express our sincere thanks to Amelia Parnell with NASPA's Research and Policy Institute for her careful review of this publication. We also wish to thank the external reviewers who provided critical feedback and research direction. This work's contributors helped inform a richer narrative about military-connected undergraduates.

## LIST OF TABLES AND FIGURES

Table 1: Select VA and DoD Higher Education Benefits .....	4
Table 2: Number and Percent Distribution of Undergraduates by Military Status .....	5
Figure 1: Military-Connected Undergraduates by Gender.....	6
Figure 2: Military-Connected Undergraduates by Race/Ethnicity .....	6
Figure 3: Average Age Upon Entry into Postsecondary Education of Military-Connected Undergraduates.....	7
Figure 4: Average Adjusted Gross Income of Military-Connected Undergraduates .....	7
Figure 5: Military-Connected Undergraduates by Dependent Status .....	8
Figure 6: Military-Connected Undergraduates by Single Parent Status.....	8
Figure 7: Military-Connected Undergraduates by Degree Sought .....	9
Figure 8: Military-Connected Undergraduates by Institutional Sector .....	9
Figure 9: Military-Connected Undergraduates by Residency Status .....	10
Figure 10: Military-Connected Undergraduates by Proportion of Courses Taken Online.....	10
Figure 11: Military-Connected Undergraduates by Attendance Intensity .....	11
Figure 12: Military-Connected Undergraduates by Enrollment in STEM Fields.....	11
Figure 13: Military-Connected Undergraduates by Employment Status.....	12
Figure 14: Military-Connected Undergraduates by Source of Financial Aid.....	13
Figure 15: Military-Connected Undergraduates by Average Mix of Financial Aid Package.....	14
Figure 16: Military-Connected Undergraduates by Number of Non-completion Factors.....	15



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## FOREWORD

A historic number of military personnel and veterans are enrolling in America's colleges and universities, pursuing credentials that will help them in the labor market. Measuring how successful these students are—and identifying ways to increase their success—is a national imperative.

This groundbreaking report documents important differences between veterans and other students with a connection to the military and how those differences may affect their access and success in postsecondary education. One of the most compelling points of the report shows just how many risk factors military-connected students have—factors that might impede their college enrollment, persistence, and completion, no matter what their personal strengths and motivations are.

Moreover, the report shows that we cannot simply lump together different types of individuals with a connection to the military; rather, there are important differences between, for example, members of the National Guard, reservists, active duty personnel, and veterans with regard to such things as income, single parent status, and use of online courses—all of which may affect the success of students in their pursuit of postsecondary credentials.

While this report is filled with insights, ultimately there remain unanswered questions. Are data available that can help the nation better understand the outcomes of the large investment of money that this growing student population and the nation are making in their postsecondary success? Is there a way for researchers to harness national data and systematically identify the practices associated with better postsecondary outcomes for these students in ways that are truly useful for institutions? The answer, right now, is no.

As former commissioner of the National Center for Education Statistics, I know just how hard it is to balance the privacy of students with the benefit of data that can answer important policy questions. But we can strike this balance. The U.S. Departments of Veterans Affairs (VA) and Defense (DoD) have valuable data on National Guard members, reservists, active duty personnel, veterans, and their dependents that use VA and DoD education benefits, as well as data on their demographic and socioeconomic backgrounds.

If these data were made more widely available, we could, for the first time, gain an understanding of the enrollment, progression, and attainment rates of military-connected individuals in higher education. And we could then trace these students into the workforce, identifying how successful they are in gaining employment and earning middle class wages. In short, these data would give us a powerful empirical lens through which to identify what works and for whom. What is more, it would provide further insight into the types of data we should be collecting.

We can do this while protecting the privacy of these students. Yes, there is some risk in making anonymized data available to researchers—but there are also risks in not using our increasingly powerful analytic tools to identify successful pathways for these students through our colleges and universities, and into the workforce. Ultimately, I believe this report shows us that we can and should develop the data needed so that our institutions of higher learning can better serve the military-connected individuals who serve us so well.

**Mark S. Schneider**

Vice President and Institute Fellow  
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Former Commissioner  
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## EXECUTIVE SUMMARY

In recent years, the enactment of the Post-9/11 GI Bill and the ongoing drawdown of military personnel from the wars in Iraq and Afghanistan have contributed to substantial growth in the number of service members and veterans who use their earned educational benefits to enroll in U.S. postsecondary education (U.S. Department of Veterans Affairs 2015a). Consonant to the growing presence of military-connected individuals on campuses across the country, institutional leaders, along with policymakers from the states to the White House, are deliberating next steps in policy and practice to support the postsecondary success of service members and veterans.

But our nation's effort to support military-connected students is tempered by an insufficient understanding of this diverse student population. Only recently, for example, have researchers begun to document the time service members or veterans may take to complete a degree (Cate 2014). What is more, the higher education and stakeholder communities are without evidence of how demographic characteristics and service backgrounds might intersect with the postsecondary experiences and outcomes of these students. Through a clearer empirical lens, the higher education and stakeholder communities can build and affirm strategies to support military-connected undergraduates in ways that reflect their needs and characteristics. To this end, leaders in higher education and policy can use existing and powerful analytical tools to enrich our nation's understanding of these students.

In this report, we break important ground toward a more inclusive understanding of military-connected undergraduates by using U.S. Department of Education data from the 2011-12 academic year to disaggregate various military personnel (i.e., members of the National Guard, reservists, and active duty personnel) from veterans to examine points of difference on demographic and socioeconomic characteristics, as well as on key factors associated with college enrollment, persistence, and completion. In doing so, we provide three key takeaways.

**Key takeaway 1:** America's military-connected undergraduates are diverse along demographic and economic lines.

- One third of National Guard members (33 percent) and reservists (31 percent) in college were women, while roughly one in five active duty members (22 percent) and veterans (21 percent) in higher education were women.
- Nearly half of active duty individuals (48 percent) and reservists (47 percent) were racial/ethnic minorities or multiracial.
- National Guard members in college had the highest incomes (\$47,503), on average, relative to reservists (\$34,937), active duty personnel (\$35,413), and veterans (\$30,538).

**Key takeaway 2:** A vast majority of military-connected students applied for and received financial aid. However, the sources of financial aid (i.e., loans, grants, VA/DoD benefits) varied by military background and not all use VA/DoD education benefits.

- Reservists were the most likely among military-connected undergraduates (68 percent) to receive VA/DoD education benefits, whereas fewer than half of National Guard students (46 percent) received these benefits.
- National Guard (59 percent) and reserve (57 percent) members were most likely to receive grants, whereas roughly half of veterans (52 percent) and active duty (48 percent) received such aid.
- Nearly one-third of veterans (31 percent) received loans, whereas fewer than one in 10 active duty students (9 percent) incurred loan debt as part of their financial aid packages.

**Key takeaway 3:** A large share of military-connected undergraduates face life circumstances that research shows are associated with postsecondary non-completion.

- More than 60 percent of active duty undergraduates were identified as having four or more risk factors associated with not completing college. By contrast, 44 percent of veterans, 37 percent of reservists, and 30 percent of National Guard members had four or more of these risk factors.

### Guiding Strategies

This report is only the first step toward a more inclusive understanding of our nation's service members and veterans in higher education. To broaden this understanding, we offer four guiding strategies as policymakers and higher education leaders deliberate next steps to support the postsecondary success of service members and veterans in higher education. Through research studies, program evaluations, and policy analyses, we encourage the higher education and stakeholder communities to:

1. **Disaggregate the various components of the military** (i.e., National Guard, reserves, and active duty) from veterans to develop a new definition and better understanding of military-connected undergraduates on factors related to college enrollment and completion. Examining points of similarity and difference helps to frame a more appropriate narrative on service members and veterans in higher education, and decreases the likelihood of developing inadequate policies and practices.
2. **Use existing national-level datasets to study the college experiences, matriculation and persistence patterns, and outcomes of military-connected undergraduates.** Researchers can analyze national-level data that are already collected by the U.S. Department of Education's National Center for Education Statistics (NCES) to inform rich discussion about service members and veterans in higher education.
3. **Examine the link between institutional programs/services and the transition, experiences, and success of military-connected undergraduates.** There remains little empirical evidence of effective practices to support military-connected undergraduates on campus. By building this evidence, campus practitioners can affirm effective strategies and target possible next steps for improvement where needed.

4. **Examine the intersections between military-connectedness and higher education experiences along demographic and socioeconomic lines.** To examine possible issues related to the experience of military-connected undergraduates, and to cultivate a more informed narrative on these students, it is critically important to ensure that support systems target those who need them and policy actions accommodate the diverse characteristics of this growing student population.

We present this report to build upon the understanding that the higher education and stakeholder communities have about the diverse characteristics of military-connected undergraduates. Further, we seek to encourage leaders to examine the extent to which current policy and practice reflects the diverse needs of today's National Guard members, reservists, active duty personnel, and veterans in postsecondary education. Central to this mission is the need to inform discussion among institutions and external partners on areas where new practices and policies are needed. Finally, we call upon researchers to frame studies that build a more nuanced understanding of military-connected individuals in relation to their fluid and evolving postsecondary educational goals, pursuits, and outcomes. Through a more inclusive narrative, leaders in higher education and policy can design more focused approaches to support the success of military-connected students.

## INTRODUCTION

The U.S. Government Accountability Office (2013) reports that more than 5 million post-9/11 service members will transition out of the military by 2020. Consonant to the ongoing draw-down of military personnel, recent studies affirm that earned VA/DoD educational benefits offer a key incentive in the enlistment decisions of service members and veterans (DiRamio, Ackerman, and Mitchell 2008; Eighmey 2006; Woodruff, Kelty, and Segal 2006; Zinger and Cohen 2010). Given the college-going aspirations of our nation's service members and veterans, and the increasing necessity for postsecondary attainment as a prerequisite for socioeconomic mobility, many more of those who enter into military service will continue to use their earned VA/DoD educational benefits to pursue a postsecondary credential in the coming years.

During the last several years, taxpayers and the higher education community have invested in resources and support services in efforts to ease the transition of service members and veterans to higher education and to enable these individuals to succeed. Since its enactment in 2009, the Post-9/11 GI Bill<sup>1</sup> has at present translated into an investment of more than \$53 billion to support the postsecondary education of

Since its enactment in 2009, the Post-9/11 GI Bill has at present translated into an investment of more than \$53 billion to support the postsecondary education of more than 1.4 million service members, veterans, and their families.

### What do we mean by military-connected undergraduates?

In this report, “military-connected undergraduates” refers to National Guard members, reservists, active duty personnel, and veterans.

more than 1.4 million service members, veterans, and their families (Worley 2015). In its second iteration of *From Soldier to Student*, the American Council on Education and its association partners found that 62 percent of colleges and universities surveyed provide some type of program or service for service members and veterans on their campuses (McBain et al. 2012). Among the many examples of resources and support services provided to military-connected undergraduates are resource centers, support personnel, and student-led organizations that seek to assist these students as they navigate from enrollment to completion.

Yet, the investment in our nation's service members and veterans is tempered by evidence that points to lingering issues on factors that relate to their postsecondary access and success. According to the U.S. Department of Education's Beginning Postsecondary Students

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<sup>1</sup> GI Bill® is a registered trademark of the U.S. Department of Veterans Affairs (VA). More information about education benefits offered by VA is available at the official U.S. government Web site at <http://www.benefits.va.gov/gibill>.

(BPS) Longitudinal Study,<sup>2</sup> for example, veterans who attend college are less likely than nonveterans to have taken higher levels of college preparatory mathematics during high school—this is important because math proficiency is a significant factor associated with college attendance (Adelman 1999, 2006; Perna and Titus 2005). BPS data also show that during college, 44 percent of veterans report never meeting with an academic advisor and 44 percent report not meeting with faculty outside of class—supportive connections that are tied to students’ college retention and completion (Pascarella and Terenzini 2005). BPS data indicate that six years after entry into college, 59 percent of veterans are still without a postsecondary credential.

Evidence does not point solely to the presence of impediments to success among military-connected students, however. Through the *Million Records Project*, Student Veterans of America (SVA) argues the importance of framing a narrative about service members and veterans in higher education that appropriately reflects the characteristics of this population (Cate 2014). For instance, a number of stakeholders have used six-year graduation rates as a proxy for student success in four-year degree programs. Looking at college completion rates beyond the six-year time frame, SVA found that military-connected individuals completed college at rates similar to those of their nonveteran peers (Cate 2014).

Indeed, a one-size-fits-all understanding of service members and veterans may lead to policy actions and support systems that conflate substantive differences among military-connected undergraduates on factors that influence higher education access and success. This will do little to address lingering problems that some service members and veterans face in pursuit of their

educational aspirations. An improperly informed narrative of our nation’s service members and veterans may also lead to an unsuitable set of success expectations that, when not met, engender deficit thinking and perpetuate damaging stereotypes about this diverse and growing student population. Further, it is important to consider that military-connected undergraduates possess other identities (i.e., gender, race/ethnicity, and class) that may affect the student experience in ways that have yet to be understood by higher education. To these ends, we present analyses of national-level data to offer a primer on the differences among military-connected undergraduates in relation to demographic characteristics, as well as on key factors associated with postsecondary enrollment, persistence, and completion. In doing so, we hope to cultivate a national conversation on

the extent to which policy actions and support systems reflect military-connected individuals in relation to college access and attainment, and to illuminate appropriate next steps where they may be needed.

**An improperly informed narrative of our nation’s service members and veterans may also lead to an unsuitable set of success expectations that, when not met, engender deficit thinking and perpetuate damaging stereotypes.**

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2 Authors’ analyses of U.S. Department of Education’s BPS:04/09 data on NCES QuickStats.



## BACKGROUND OF NATIONAL GUARD, RESERVE, ACTIVE DUTY, AND VETERANS

Several differences are known between National Guard members, reservists, active duty personnel, and veterans, particularly in terms of their *military obligations* and *available education benefits* (Buryk et al. 2015; Szymendera 2015; U.S. Department of Veterans Affairs 2015b).

- **Members of the National Guard and reserves** typically spend two weeks per year and one weekend per month training, commonly called “drilling period.” They can be classified as veterans for purposes of receiving VA benefits if, as the Congressional Research Service notes, they have fulfilled their active duty service and the full period for which they were called upon (Szymendera 2015). National Guard members have a unique state and federal dual-service function, which is why Guard members serve for both state emergencies and for federal deployments (i.e., active duty service). Reservists can only be ordered for full-time active duty service, not state emergencies.
- **Active duty** personnel are full-time service members.
- **Veterans** have served on active duty, completed their service obligations, and met length-of-service requirements.

Several differences exist between available VA or DoD education benefits for members of the National Guard, reservists, active duty individuals, and veterans. Table 1 shows that available benefits vary by military status and time in service. Moreover, military-connected students may have access to several educational benefits at once. As found in RAND Corporation’s research on federal education benefits for service members, education programs available for active duty individuals may also be available to reservists and members of the National Guard (typically known as the *reserve component*) with qualifying active duty service (Buryk et al. 2015). These programs include the Montgomery GI Bill–Active Duty, Tuition Assistance, and Post-9/11 GI Bill. Additionally, there are instances when education benefits are only available to the reserve component; these include the Montgomery GI Bill–Selected Reserve and the Reserve Educational Assistance Program. RAND Corporation found that service member eligibility for education benefits depends, in large part, on the lifecycle of the military-connected individual and that, many times, VA or DoD education benefits are available in tandem. Most importantly, researchers argued that education programs may overlap if a service member seeks to earn a college degree quickly. It is important to note, too, that it is possible to deplete eligibility of VA/DoD education benefits without completing a postsecondary credential. Understanding benefit eligibility can enable practitioners and students to make the most effective use of these resources in support of postsecondary success.

**Table 1. Select Department of Veterans Affairs and Department of Defense Higher Education Benefits**

	Tuition Assistance (TA)	TA Top-Up	Post-9/11 GI Bill	Montgomery GI Bill Active Duty	Montgomery GI Bill Selected Reserve	Reserve Educational Assistance Program	Veterans Educational Assistance Program	Vocational Rehabilitation and Employment
<b>Military Status</b>	<b>Benefit Availability</b>							
National Guard	Available	Available	Available	Available	Not Available	Available	Not Available	Available
Reserve	Available	Available	Available	Available	Available	Available	Not Available	Available
Active Duty	Available	Available	Available	Available	Not Available	Not Available	Not Available	Available
Veteran	Not Available	Not Available	Available	Available	Not Available	Not Available	Available	Available

Sources: Buryk et al. 2015, *Federal Educational Assistance Programs Available to Service Members*, Santa Monica, CA: RAND Corporation; U.S. Department of Veterans Affairs 2015a, *Veterans Benefits Administration: Annual Benefits Report, Fiscal Year 2013*.

## ABOUT THE DATA

Data for this research report were provided by the U.S. Department of Education’s National Center for Education Statistics (NCES) through restricted use (License Number 14010026). NCES data analyzed in this report come from the 2011–12 National Postsecondary Student Aid Study (NPSAS:12), a nationally representative sample of undergraduate and graduate students in the United States during the 2011–12 academic year. The NPSAS dataset includes a broad array of student demographic, financial, academic, and enrollment characteristics, as well as a robust sample size of National Guard, reserve, active duty, and veteran college students. Table 2 shows that there were an estimated 1,132,860 military-connected individuals in college in academic year 2011-12, which represents about 5 percent of the undergraduate population once the data are weighted. (Weighting is a technique in survey research aimed at accurately reflecting the population under study when simple random sampling is not possible. A weighting technique, also called sample balancing, is used to correct for over- or under-sampling and self-selection of survey respondents. For this study, the sampling weight “WTAA00” was used in all analyses with the goal of projecting the results presented here to the undergraduate population.)

**Table 2. Number and Percent Distribution of Undergraduates by Military Status**

Military Status	Number	Percent*
No military service	21,922,582	95.1
National Guard	31,898	0.1
Reserves	74,310	0.3
Active duty	170,790	0.7
Veteran	855,862	3.7
Total undergraduates	23,055,442	100.0
Total military-connected undergraduates	1,132,860	4.9

*Source:* Author’s analysis of 2011-12 National Postsecondary Student Aid Study (NPSAS:12) data provided by the U.S. Department of Education, National Center for Education Statistics.

\* Percentages may not equal 100 due to rounding.

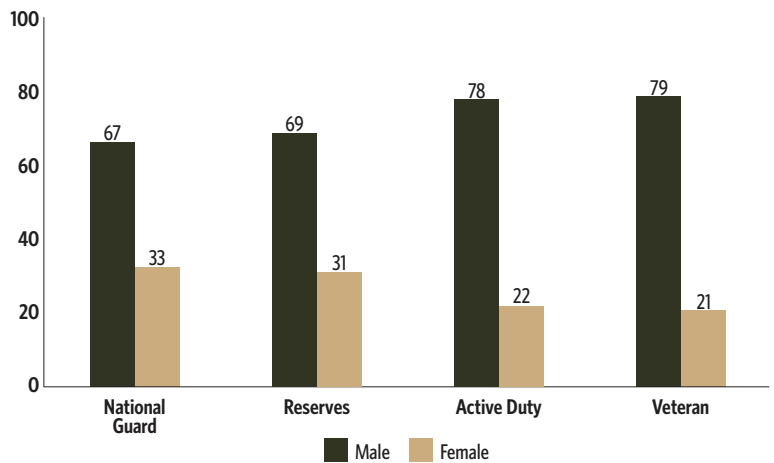
## EXPLORING DIFFERENCES BETWEEN MILITARY-CONNECTED UNDERGRADUATES

Researchers have looked closely at service members and veterans on key factors related to the college experience, but missing are examinations of points of similarity and difference among military-connected undergraduates (Ackerman and DiRamio 2009; DiRamio, Ackerman, and Mitchell 2008; DiRamio and Jarvis 2011; Hamrick and Rumann 2013; Livingston, Havice, Cawthon, and Fleming 2011; Persky and Oliver 2011; Radford 2009; Radford and Weko 2011; Radford, Wun, and Weko 2009; Rumann and Hamrick 2010; Rumann, Rivera, and Hernandez 2011; Steele, Salcedo, and Coley 2010; Wheeler 2012; Zinger and Cohen 2010). Further, research has inadequately framed how the gender, race/ethnicity, and income of service members and veterans may impact their college experiences. Without disaggregating findings across military groups, key differences among these students on factors related to college enrollment and completion may be overlooked. To this end, we examine several characteristics and circumstances of military-connected undergraduates, and offer findings across the groups on factors related to college access and success.

### 1. Demographics and Income

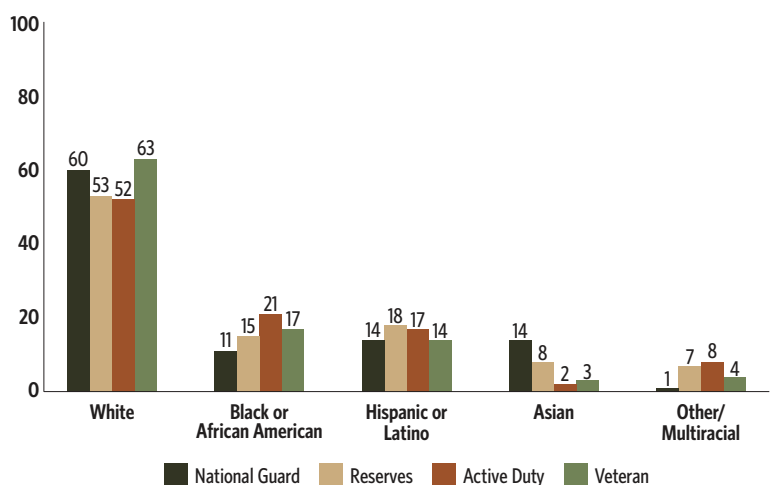
Researchers have documented the importance of understanding the diverse demographic and socioeconomic characteristics of today's postsecondary degree seekers (Lumina Foundation 2013; Shapiro et al. 2014). Only recently, however, have researchers

Figure 1. Military-Connected Undergraduates by Gender (%)



Source: U.S. Department of Education, National Center for Education Statistics, 2011–2012 National Postsecondary Student Aid Study.

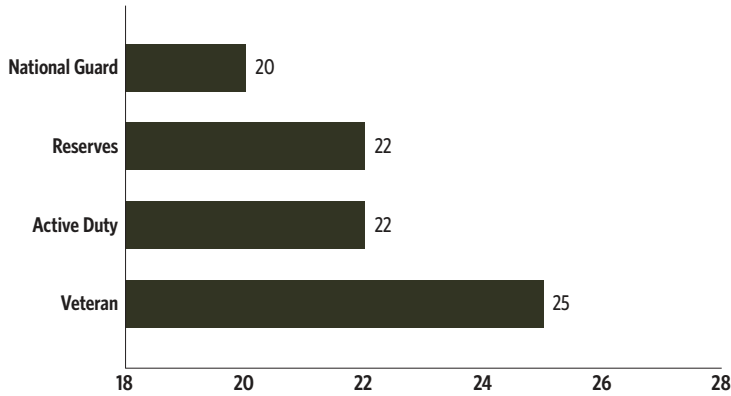
Figure 2. Military-Connected Undergraduates by Race/Ethnicity (%)



Source: U.S. Department of Education, National Center for Education Statistics, 2011–2012 National Postsecondary Student Aid Study.

begun to explore demographic characteristics and income backgrounds as they may relate to the higher education experiences of military-connected undergraduates (Molina 2015).

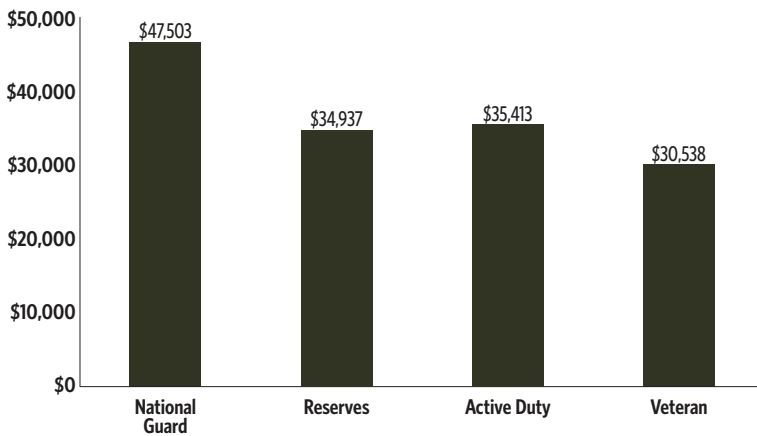
**Figure 3. Average Age Upon Entry into Postsecondary Education of Military-Connected Undergraduates (%)**



Source: U.S. Department of Education, National Center for Education Statistics, 2011–2012 National Postsecondary Student Aid Study.

(22 percent) and veteran (21 percent) undergraduates. In terms of race/ethnicity, Figure 2 depicts that nearly half of active duty (48 percent) and reserve (47 percent) undergraduates identified as racial/ethnic minorities or multiracial. Among white military-connected undergraduates, higher proportions were veterans (63 percent) and National Guard members (60 percent).

**Figure 4. Average Adjusted Gross Income of Military-Connected Undergraduates (%)**



Source: U.S. Department of Education, National Center for Education Statistics, 2011–2012 National Postsecondary Student Aid Study.

efficiency. Across the military-connected groups, undergraduates differed on their average adjusted gross income (AGI). Figure 4 shows that AGI ranged from \$30,538 per year among veterans to \$47,503 per year among National Guard members, reflecting notable differences in the earnings levels of these students.

Military-connected undergraduates are a diverse student population. Nevertheless, the higher education and stakeholder communities are without sufficient evidence to determine whether

Our nation’s service members are diverse, with 30 percent of active duty personnel and 25 percent of reservists and National Guard members identifying as a racial/ethnic minority,<sup>3</sup> and recent data affirm the growing presence of women who serve (U.S. Department of Defense 2010, 2013).

Although women comprise a smaller population across military-connected groups, the composition of enrollment by gender and military status varied among these students. As shown in Figure 1, members of the National Guard (33 percent) and the reserves (31 percent) had higher percentages of females in college compared to active duty

In terms of age, the U.S. Department of Veterans Affairs (2015c) reported that only 15 percent of all student veterans are of traditional college age (18–23), noting further that most student veterans range between 24 and 40 years old. As Figure 3 depicts, though, age upon initial enrollment in postsecondary education varied by military status. The average ages of National Guard members and veterans at the time of their initial enrollment differed the most, ranging from the ages of 20 to 25, respectively.

Research has found that family income is one of the strongest predictors of college enrollment and institutional choice (Perna and Jones 2013), even after accounting for demographic background and academic pro-

3 For the purposes of this report, racial/ethnic minority students reflect those from black/African American, Hispanic/Latino, Asian, or other/multiracial backgrounds.

policy actions and support systems encompass the diverse characteristics of service members and veterans in college. As policymakers and higher education leaders deliberate next steps to support the postsecondary success of service members and veterans, it will be important to closely consider the racial/ethnic and income diversity of those who pursue higher education.

## 2. Family Circumstances

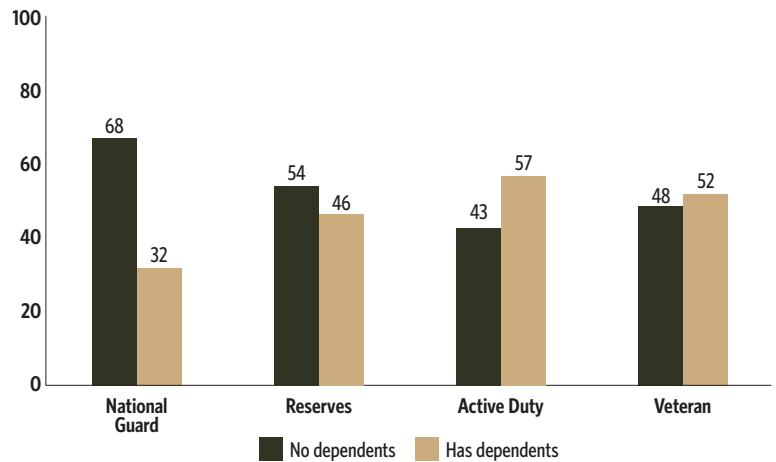
Data from the U.S. Department of Education’s BPS:04/09 survey show that approximately one in five beginning undergraduates have at least one dependent, and researchers have documented several unique characteristics of these students that may lead to non-completion (Choy 2002; Coley 2000; Schmid and Abell 2003). Supporting at least one dependent as a single parent is an important factor that may influence their persistence and attainment patterns (Advisory Committee on Student Financial Assistance 2012; Aspen Institute 2013; Women Employed 2011).

Among military-connected undergraduates, Figure 5 shows that the proportion of students with at least one dependent varied. More than half of students on active duty (57 percent) and veterans (52 percent) reported having dependents upon enrollment in a postsecondary institution, whereas approximately one in three National Guard students (32 percent) reported having at least one dependent. Further, one in five veterans and more than one in 10 active duty (13 percent) and National Guard (11 percent) members were single parents while enrolled (Figure 6).

These findings lead to several questions: To what extent, if at all, might differences in the enrollment, persistence, and completion patterns exist among military-connected undergraduates who have at least one dependent? What impact might single-parent status

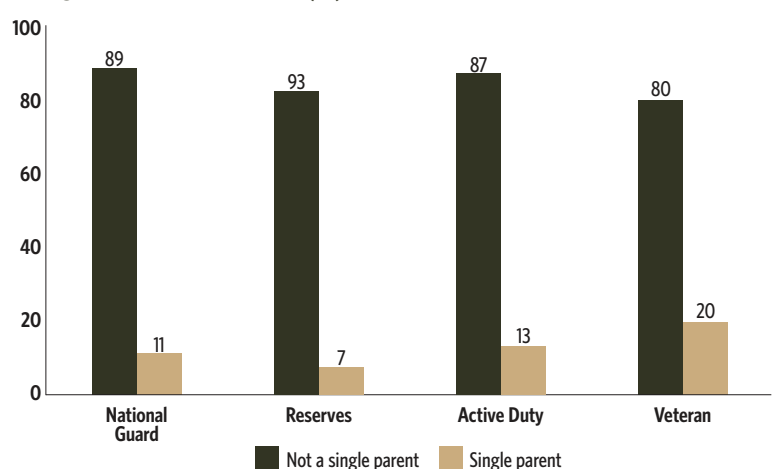
have on these patterns? Do policy actions and support systems encompass needs that may also be influenced by military service responsibilities? Although many military-connected undergraduates balance family and military responsibilities while enrolled, little attention has been given to whether these students have the support and resources they may need to pursue and complete a postsecondary credential. Moreover, the higher education and stakeholder communities are without evidence demonstrating the extent to which family characteristics may differently impact access and attainment across the groups.

**Figure 5. Military-Connected Undergraduates by Dependent Status (%)**



Source: U.S. Department of Education, National Center for Education Statistics, 2011–2012 National Postsecondary Student Aid Study.

**Figure 6. Military-Connected Undergraduates by Single Parent Status (%)**



Source: U.S. Department of Education, National Center for Education Statistics, 2011–2012 National Postsecondary Student Aid Study.

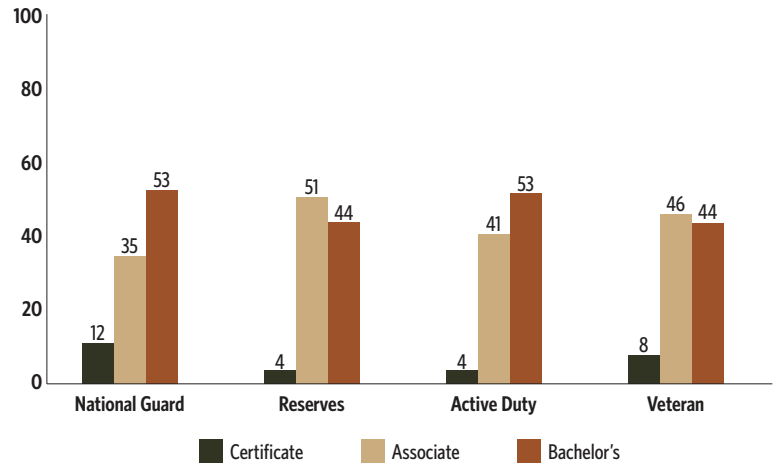
### 3. Enrollment Characteristics

Access has long been a commanding theme in American higher education, and landmark policy actions such as the enactment of the Pell Grant and other aid programs have enabled millions to pursue a postsecondary credential that may have otherwise been out of reach (National Association of Student Financial Aid Administrators 2012). For service members and veterans, too, the ongoing re-enactment of the GI Bill has contributed, at least in part, to the longstanding presence of military-connected undergraduates in colleges and universities across the country (Radford 2009). Consistent with America’s emphasis on the importance of access has been ongoing growth in the degree options, delivery methods, and institutional choices available to those who aspire to pursue and attain a credential. As the conversation on access continues, so, too, will questions into the intersections of access, choice, and success across our nation’s diverse student populations. Among these lines of inquiry must be a focus on the college enrollment and institutional choice patterns of military-connected undergraduates.

In terms of military-connected undergraduates’ enrollment by degree sought, Figure 7 shows that more than half (53 percent) of National Guard and active duty members in higher education pursued four-year degrees and 51 percent of enrolled reservists pursued two-year degrees. National Guard members (35 percent) were least likely among the groups to be enrolled in two-year programs, and the most likely (12 percent) to be enrolled in certificate programs. Veterans were almost evenly split in the percentage seeking two-year (46 percent) and four-year (44 percent) degrees.

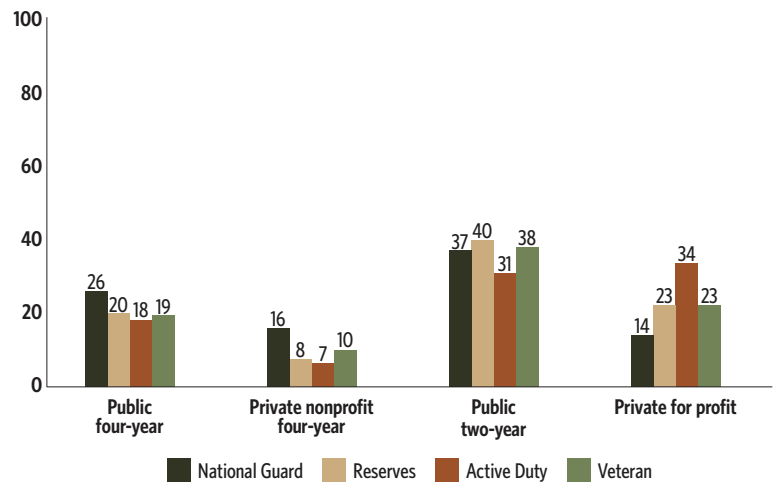
In terms of postsecondary enrollment by institutional sector, substantial proportions from each group were enrolled in public two-year institutions. Of active duty undergraduates, more than one in three (34 percent) enrolled in the private for-profit sector (Figure 8). Among the groups, National Guard

**Figure 7. Military-Connected Undergraduates by Degree Sought (%)**



Source: U.S. Department of Education, National Center for Education Statistics, 2011–2012 National Postsecondary Student Aid Study.

**Figure 8. Military-Connected Undergraduates by Institutional Sector (%)**



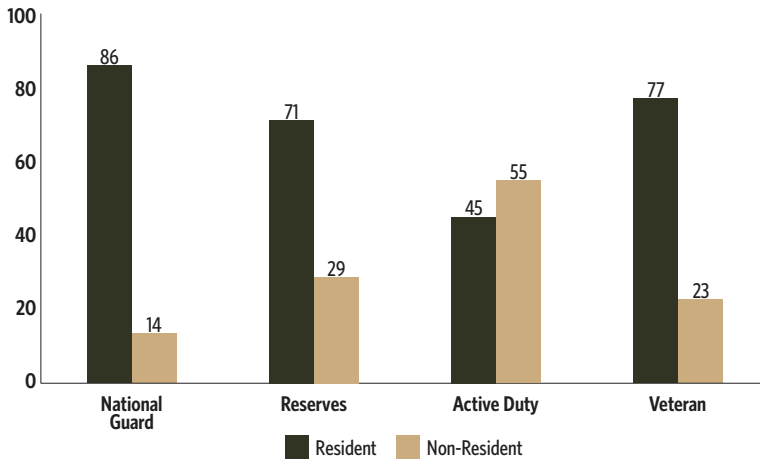
Source: U.S. Department of Education, National Center for Education Statistics, 2011–2012 National Postsecondary Student Aid Study.

Note: Percentages will not add to 100 because students who were attending more than one institution or others are not shown.

members were most likely to be enrolled in four-year institutions within the public or private sector (26 percent and 16 percent, respectively).

Notable differences were found between military-connected undergraduates based on residency status in the state where they lived at the time of enrollment (Figure 9). A large percentage of active duty personnel (55 percent) were attending a college or university in a state in which they were not classified as a resident.

**Figure 9. Military-Connected Undergraduates by Student Residency Status (%)**



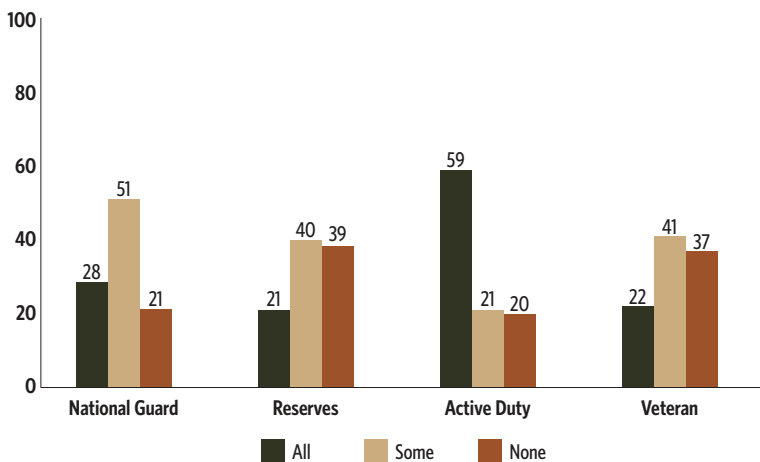
Source: U.S. Department of Education, National Center for Education Statistics, 2011-2012 National Postsecondary Student Aid Study.

in which they were not classified as a resident. In contrast, a vast majority of National Guard members (86 percent), veterans (77 percent), and reservists (71 percent) enrolled in postsecondary institutions in states where they held residency status.

The National Postsecondary Student Aid Study (NPSAS), used to inform this report, captures the proportion of “alternative coursework” taken by students - classes that were taught only online, at night, or on the weekend. Of those who enroll in alternative coursework, the proportion of classes taken online varied between military-connected undergraduates. For instance, active duty undergraduates (59 percent) were more likely than their military-connected peers to take all of

their coursework online (Figure 10). Reservists (39 percent) and veterans (37 percent) were most likely to not have taken classes online. By contrast, 21 percent of National Guard and one in five active duty undergraduates reported taking no courses online while enrolled.

**Figure 10. Military-Connected Undergraduates by Proportion of Courses Taken Online (%)**



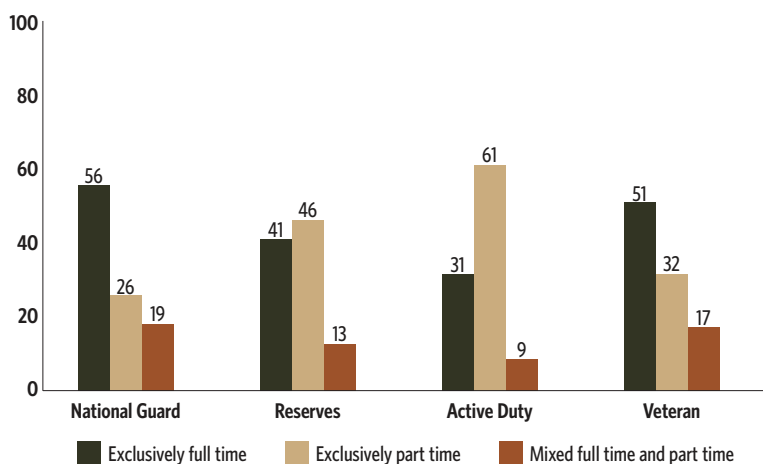
Source: U.S. Department of Education, National Center for Education Statistics, 2011-2012 National Postsecondary Student Aid Study.

Differences were also noted among military-connected undergraduates in terms of their attendance intensity (Figure 11), or whether students maintain enrollment exclusively full time, exclusively part time, or a mix of full- and part-time attendance while enrolled at a college or university. For example, National Guard undergraduates (56 percent) and veterans (51 percent) were most likely to enroll exclusively full-time, whereas active duty (61 percent) and reserve (46 percent) students were most likely to enroll exclusively part time.

It is important to note that even though National Guard members and reservists are not full-time military personnel unless ordered to active duty, there are differences in the attendance intensity of these



**Figure 11. Military-Connected Undergraduates by Attendance Intensity (%)**



Source: U.S. Department of Education, National Center for Education Statistics, 2011–2012 National Postsecondary Student Aid Study.

two military-connected groups, with fewer reservists attending college exclusively full time.

The findings affirm the utility of flexible educational delivery as an access pathway for service members and veterans in higher education. With so many military-connected students taking coursework online, the findings also indicate that it is important for institutional leaders to consider whether support systems may be out of reach for those whose service responsibilities limit access to resources and services, particularly those that are offered only on campus.

The findings also raise important, yet unexplored, questions about the factors that

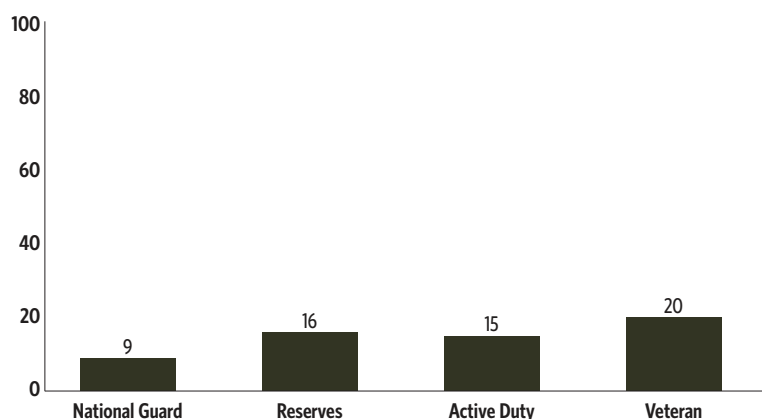
may contribute to enrollment patterns between military-connected undergraduates. Other than being called to active duty, what factors might lead to differences in the enrollment patterns of military-connected students? What are the demographic and socioeconomic characteristics of students among military-connected undergraduates who enroll exclusively part-time? Do institutional characteristics (i.e., support infrastructure) contribute to the enrollment patterns of military-connected undergraduates? A better understanding of characteristics and factors that influence the enrollment patterns of military-connected undergraduates, coupled with evidence on points of similarity and difference between them, can affirm policy actions and support systems that reflect the needs of service members and veterans in higher education.

#### 4. STEM Enrollment

Our nation’s ongoing advancements in science and technology have shaped an economy that increasingly relies on proficiency in science, technology, engineering, and mathematics (STEM) as a prerequisite to workforce readiness (Carnevale, Smith, and Strohl 2013; Committee on STEM Education 2013). Alongside the increased reliance on STEM proficiency, there is evidence that points to a gap between occupations that require these skills and the corresponding supply of graduates who possess them (Rothwell 2014).

The U.S. Department of Education reported that approximately 14 percent of all undergraduates studying at a college or university in the United States enroll in a STEM<sup>4</sup> discipline (Chen and

**Figure 12. Military-Connected Undergraduates by Enrollment in STEM Fields (%)**



Source: U.S. Department of Education, National Center for Education Statistics, 2011–2012 National Postsecondary Student Aid Study.

4 For the purposes of this report, STEM fields include mathematics, natural sciences (including physical sci-

Weko 2009). As Figure 12 shows, the proportions of service members and veterans who enrolled in a STEM field varied when compared to the national figure. Among military-connected undergraduates, for example, National Guard members (9 percent) were least likely to enroll in a STEM discipline, whereas one in five veteran undergraduates (20 percent) enrolled in a STEM field.

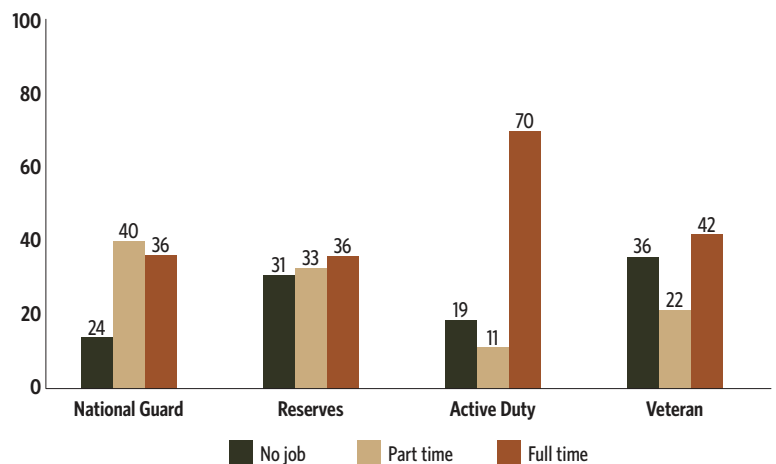
With service occupations and training that often reinforce technological and scientific skills, military-connected undergraduates can offer value in an increasingly STEM-based workforce. Yet, Beginning Postsecondary Students Longitudinal Study data suggest that many student veterans lack the prerequisite mathematics coursework for advanced STEM coursework during college. Important to the conversation, then, are examinations of ways to increase STEM attainment among student veterans and to gain a deeper understanding of STEM attainment among other military-connected undergraduates who have not been given appropriate attention in the literature.

## 5. Employment

To attain career goals and maintain other life responsibilities, many of today’s students must pursue postsecondary education while employed. According to the U.S. Department of Education, three-quarters of part-time college students work 20 hours per week or more while enrolled, and approximately one in four students who maintain full-time enrollment work at least 20 hours per week (Kena et al. 2014). As research has pointed out, though, work responsibilities, particularly those maintained out of necessity, can navigate students away from attaining a postsecondary credential (Advisory Committee on Student Financial Assistance 2012; Perna 2010). The obstacles that working students must navigate while enrolled should encourage our nation’s institutional leaders to dig deeper into effective strategies that support persistence and attainment (Soares 2013).

For military-connected undergraduates, navigating the balance between life responsibilities and educational goals may mean that service obligations, dependent care, or other factors make work a necessity. A majority of military-connected students worked either part time or full time while enrolled in postsecondary education. As illustrated in Figure 13, however, employment statuses differed among military-connected undergraduates. As expected, the vast majority of active duty undergraduates (70 percent) worked full time while enrolled. However, it is possible that some students on active duty work part time or not at all if they are in college as part of an Reserve Officer Training Corps/Naval Reserve Officer Training Corps scholarship, Green to Gold program, or other program through the military that allows active duty personnel to pursue a college education while limiting their employment time on active duty. By contrast, 36 percent of

**Figure 13. Military-Connected Undergraduates by Employment Status (%)**



Source: U.S. Department of Education, National Center for Education Statistics, 2011-2012 National Postsecondary Student Aid Study.

ences and biological/agricultural sciences), engineering/engineering technologies, and computer/information sciences.

National Guard and reserve members, and 42 percent of veterans held full-time employment while enrolled. Approximately one-third of veterans (36 percent) and reservists (31 percent) were neither employed part-time nor full-time while enrolled. Four in 10 National Guard members and one-third of reservists worked part time.

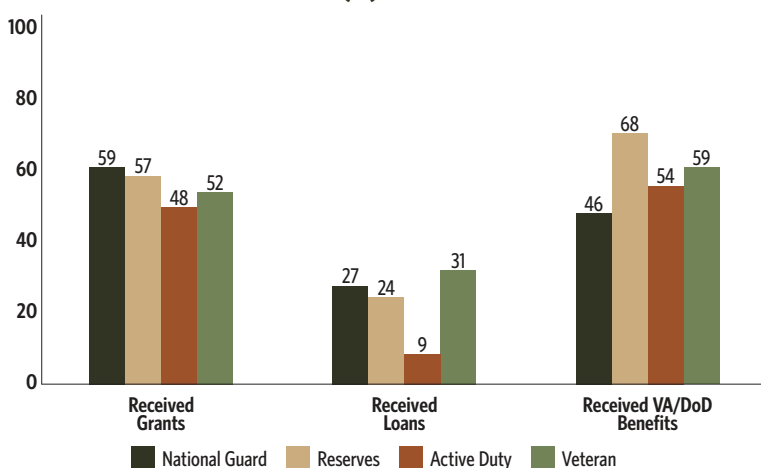
Although these data point out differences among the groups, more information is needed about the intersection of military background, employment, and the pursuit of a postsecondary education. Knowing more about the employment patterns of military-connected undergraduates may yield information about whether differences in work responsibilities affect their college experiences and outcomes.

## 6. Financial Aid

Researchers have demonstrated the importance of financial aid as a tool to increase postsecondary access, persistence, and completion. For example, Perna and Jones (2013) noted that grant aid is positively associated with college enrollment, and Pascarella and Terenzini (2005) found that grant aid positively affects college persistence and completion. Further, Perna and Jones (2013) found that loans have a positive effect on college enrollment if a student received sufficient grant aid, while Dowd and Coury (2006) found that loans have a negative effect on persistence and no effect on attainment among community college students. Researchers argue that the positive effects of grants and need-based aid on college access and success are particularly pronounced for low-income and racial/ethnic minority students (Long and Riley 2007).

Although financial aid is a key point of inquiry in the access, persistence, and attainment literature, little evidence has documented the financial aid backgrounds of military-connected undergraduates, including those who receive VA or DoD education benefits. A descriptive look at financial aid among military-connected undergraduates may lead to important clues that will build a better understanding about the access, persistence, and completion patterns of these students. Moreover, this inquiry may illuminate whether financial aid varies among service members and veterans in higher education.

**Figure 14. Military-Connected Undergraduates by Source of Financial Aid (%)**



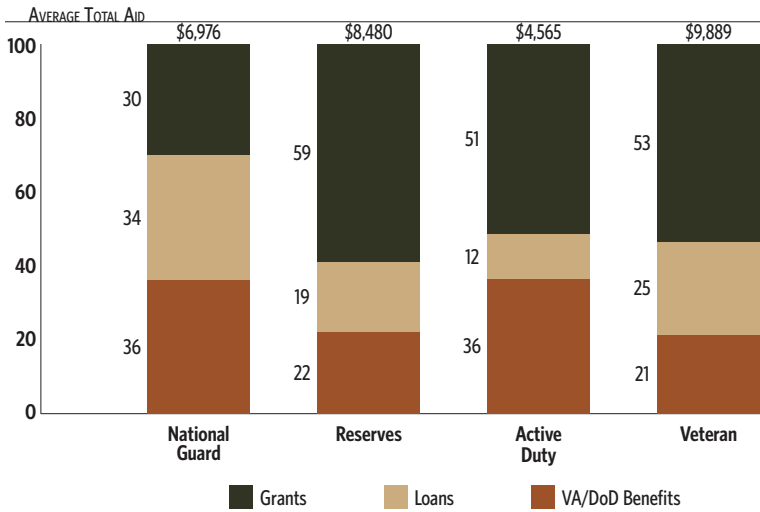
Source: U.S. Department of Education, National Center for Education Statistics, 2011–2012 National Postsecondary Student Aid Study.

The present study found that more than four in five military-connected undergraduates applied for and received any financial aid (i.e., grants, loans, and/or VA/DoD benefits). As noted in Figures 14 and 15, however, points of variation in the sources and average amounts of financial aid were observed.

As shown in Figure 14, reservists were the most likely among military-connected undergraduates (68 percent) to receive VA/DoD education benefits, whereas fewer than half of National Guard members (46 percent) received these benefits. Nearly one-third of veterans (31 percent) received loans, whereas fewer than one in 10 active duty students (9 percent) incurred loan debt as part of their financial aid packages. Members of the

National Guard (59 percent) and reservists (57 percent) were most likely to receive grants to support tuition and related educational expenses.

**Figure 15. Military-Connected Undergraduates by Average Mix of Financial Aid Package (%)**



Source: U.S. Department of Education, National Center for Education Statistics, 2011–2012 National Postsecondary Student Aid Study.

Among military-connected undergraduates who received aid, average total amounts ranged from \$4,565 for college students on active duty to \$9,889 for student veterans (Figure 15). Of those aid packages, the mix of loans, grants, and VA/DoD benefits differed among military-connected undergraduates. On average, VA/DoD education benefits constituted the greatest share of the total aid packages of reservists (59 percent of the package), veterans (53 percent of the package), and active duty personnel (51 percent of the package). Among National Guard members, however, VA/DoD education benefits comprised the smallest proportion (30 percent) of their aid packages, with a relatively even proportion of grant (36 percent) and loan (34 percent) aid received by these students. Among military-connected undergraduates, loans

comprised the highest proportion of National Guard undergraduates’ (34 percent) total financial aid packages, on average. Loans comprised one-quarter of the average total aid received by veterans, and the proportion of aid derived from loans were smaller for reservists (19 percent of the aid package) and active duty (12 percent of the aid package) undergraduates.

It is important to note that 41 percent of student veterans did not use VA/DoD education benefits, even though earning money for college is one of the primary reasons cited for enlisting in the military (Eighmey 2006; Woodruff, Kelty, and Segal 2006; Zinger and Cohen 2010), and the financial resources are available through various VA education programs (U.S. Department of Veterans Affairs 2015d). Moreover, many National Guard (54 percent), active duty (46 percent), and reserve (32 percent) students also did not receive VA/DoD education benefits. Although some military-connected undergraduates may not yet qualify for these benefits at the time financial aid is awarded, it may be worthwhile to study more closely whether eligibility was the sole reason why benefits were not received.

## 7. Factors Associated with Non-completion

Across the United States, the national discussion on policy actions and support systems to enable our nation’s diverse student population to complete a postsecondary credential has built to a crescendo. Leaders in higher education and policy have jointly targeted strategies that seek to encompass the diversity of postsecondary students along demographic and socioeconomic lines (Complete College America 2011; Lumina Foundation 2013). Although many of these students possess the strengths to persist to completion, barriers that coincide with managing life and work responsibilities lead to departure from higher education without a credential.

Researchers have identified seven factors that negatively affect postsecondary persistence and

attainment (Choy 2002; Coley 2000; Horn, Premo, and Malizio 1995; Schmid and Abell 2003; Skomsvold, Radford, and Berkner 2011). These factors have informed the development of a proxy measure by the U.S. Department of Education, used as an index of risk for non-completion among nontraditional students, to determine the likelihood for not completing a college education (U.S. Department of Education 2015). It is important to note, however, that these factors do not dictate that a particular student will depart prior to completion, nor do they represent the complete scope of factors that may influence attainment. The factors include:

1. Delayed college enrollment
2. No high school diploma
3. Part-time college enrollment
4. Financially independent
5. Have dependents
6. Single parent status
7. Full-time work while in college

Although researchers have examined these factors in relation to the persistence and completion patterns of many of today’s undergraduates, large-scale studies have not yet explored the presence of these risk factors for military-connected undergraduates. In addition, research has not explored whether differences in factors that may contribute to non-completion are present among service

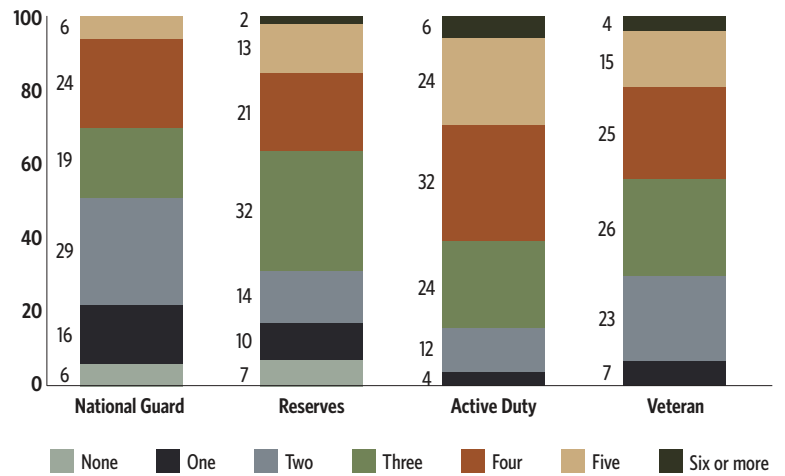
members and veterans in higher education. Offering descriptive analysis of military-connected undergraduates in relation to well-established non-completion factors will cultivate a more nuanced understanding that may point to needed next steps in policy, research, and practice.

Figure 16 depicts the extent to which military-connected undergraduates are associated with each of the seven non-completion factors described above. As the figure shows, seven percent of reservists and six percent of National Guard members who were in college had no circumstances associated with not completing college, while all active duty personnel and veterans had at least one factor associated with not finishing college. Remarkably, more than 60 percent of active duty undergraduates were

identified as exhibiting four or more factors. The findings demonstrate that the vast majority of military-connected undergraduates, who may otherwise possess the strengths and aspirations to persist until completion, must tend to multiple responsibilities that may pose substantial challenges to their educational pursuits.

These findings lead to important, yet unanswered questions about how the educational environ-

**Figure 16. Military-Connected Undergraduates by Number of Non-completion Factors (%)**



Source: U.S. Department of Education, National Center for Education Statistics, 2011–2012 National Postsecondary Student Aid Study.

Seven percent of reservists and six percent of National Guard members who were in college had no circumstances associated with not completing college, while all active duty personnel and veterans had at least one factor associated with not finishing college.

ment and the underlying policy context can enable those who may be navigating military service, work obligations, and other life responsibilities on the journey toward college completion. When Complete College America (2011) published its *Time is the Enemy* report, the organization offered compelling evidence that institutional leaders and policymakers must challenge traditional thinking about higher education delivery and push for quality-focused, yet more flexible methods to both educate students and support them along the way. This thinking, and the approaches that follow, must encompass the characteristics and needs of today's service members and veterans in higher education. Until a richer narrative is cultivated, however, the higher education and stakeholder communities cannot be sure that support systems and policy actions sufficiently address the needs of military-connected undergraduates.

## CONCLUSION

This report illuminated many points of difference among military-connected undergraduates along demographic and economic lines, as well as on key factors associated with the postsecondary enrollment and completion of this growing student population. We presented these findings as a primer for the higher education and stakeholder communities to build a better understanding of military-connected individuals in higher education. The importance of this understanding is at least twofold. First, it will enable the higher education and stakeholder communities to examine the extent to which support systems and the policy context encompass the needs and characteristics of these individuals in relation to their access, persistence, and completion. Second, such an understanding may point to next steps in policy and practice that address lingering barriers to college attendance and attainment. To these ends, we can use existing national-level data to inform dialogue amongst higher education and policy leaders to examine postsecondary challenges and opportunities of military-connected students. By framing an inclusive, data-informed narrative around this growing college population, we enable campus leaders and professionals to better support the postsecondary goals of today's military-connected students.

## CONSIDERATIONS FOR FUTURE RESEARCH

In the spring of 2015, ACE and NASPA hosted a convening of leading researchers on military-connected students. The purpose of the gathering was to identify and build upon the understanding that institutional and policy leaders have about service members and veterans in higher education (Molina & Morse 2015). Two key recommendations for research emerged from the discussion. The first, which we attempt to accomplish in this report, is to disaggregate existing national-level data housed by the U.S. Department of Education’s National Center for Education Statistics (NCES) such that points of difference or similarity can be explored across service member (i.e., National Guard, reserve, active duty) and veteran populations. Second, researchers on campuses and within systems of higher education should be empowered to analyze existing data at these levels to inform a richer understanding of military-connected students. Such research could in turn support postsecondary policy and practice that strengthens access and degree completion for military-connected students.

Although national-level data sources are available through the U.S. Department of Education’s National Center for Education Statistics (NCES), other large datasets that could yield important information on military-connected undergraduates are inaccessible to researchers. For instance, DoD and the VA collect data on National Guard members, reservists, active duty personnel, veterans, and their dependents that use VA/DoD education benefits, including data on their demographic and socioeconomic backgrounds. Moreover, DoD collects force reduction and education

eligibility information, as well as data on accurately identifying service members before leaving the military and their transition into higher education. Careful analyses of these data could lead to important discoveries about how military-connected individuals think about and approach higher education. However, this information is not publicly available and accessible to researchers.

Given access limitations to VA/DoD data, experts who work with data on service members and veterans in higher education may also consider important questions about balancing the need to protect privacy with efforts to make useful and informative data available to those who are qualified to analyze it. On their individual campuses, institutional researchers could develop a measure to accurately classify the military status of students with current or prior active duty service, while being mindful that some students may not wish

to disclose this information. Such an identifying measure should accurately identify National Guard members, reservists, active duty personnel, veterans, and their dependents. Accounting for differences among military-connected students can enable institutional leaders to better target strategies and policies that support the postsecondary access and success of students with prior and current military service.

**Researchers need a common language with which to study military-connected undergraduates, and better approaches to identify service members and veterans on campus while upholding an ethical commitment to privacy and protection.**



## QUESTIONS TO CONSIDER

**A**s the higher education and stakeholder communities deliberate how findings from this report can inform discussion on the effectiveness of practice and policy, or lead to new research, we offer questions for consideration by partners in the success of military-connected undergraduates.

### Questions for Practitioners/Student Affairs Professionals

1. What assessment practices (i.e., needs assessments, institutional research) can help colleges and universities better understand the needs of military-connected students?
2. What training is available for staff, faculty, and administrators on the differences between military-connected students and their unique needs?
3. What services and programs do institutions offer military-connected students? Are they effective in meeting their intended goals?
4. Are military-connected students a) being educated on VA/DoD education benefits available to them, b) receiving the appropriate education on maximizing their finite benefits, and c) being awarded the maximum amount of financial aid?

### Questions for Institutional Leaders

1. How does your institution define and outwardly communicate a commitment to serving military-connected students?
2. Are there opportunities to create a task force that includes various campus stakeholders to address the needs of military-connected students?
3. Are there opportunities to examine whether existing institutional policies or protocols appropriately support the needs and characteristics of military-connected undergraduates?
4. How can institutional policies (such as those that support outreach and recruitment, admission, enrollment, transfer and articulation, and student support services) be developed or strengthened to better support the pathways by which military-connected students access the institution and complete their degrees?

### Questions for Policymakers

1. How might policy actions incentivize institutions to maximize military-connected undergraduate access to affordable, high-quality, and flexible educational delivery models and support systems?
2. Are there opportunities to examine whether existing policy may impede access to an affordable postsecondary education for military-connected individuals who aspire to pursue a degree while away from home?

3. How can new resources be made available or existing resources leveraged to catalyze innovation and promote the sustainable implementation of effective strategies in support of military-connected undergraduate success?

### Questions for Researchers

1. Knowing what we now know about military-connected students, how can the research community best create standards for identifying students with connections to the military?
2. If you had access to existing national-level data, what unanswered questions would you be able to address in relation to the postsecondary access, experience, and outcomes of military-connected students?
3. Aside from large-scale quantitative analyses, how might researchers be able to leverage other modes of scholarly inquiry (e.g., qualitative studies and survey research) in ways that break new ground on our understanding of military-connected students in higher education?

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