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A Mixed Method Analysis of Student Service Member/Veteran Engagement With University Military-Focused Student Services

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ABSTRACT

Student service member/veteran (SSM/V) university enrollment has grown exponentially in recent years. In response, many U.S. universities have developed military-focused student services to address navigational and social challenges SSM/Vs face on campus. While research suggests these services are beneficial, few studies have empirically examined how often contemporary SSM/Vs engage with them across universities, how engagement connects to predictors of university success, or how SSM/Vs describe such connections. Using social capital theory, surveys (n=531), and interviews (n=59) of SSM/Vs across four universities, we analyze SSM/V military-focused service engagement levels, correlations between engagement and campus belonging and institutional satisfaction, and SSM/V perspectives on engagement. Findings suggest SSM/Vs very rarely engage in these services. Higher engagement, however, is significantly associated with more campus belonging and institutional satisfaction. Interviewees describe how the moral support military-focused service staff offer while providing reliable administrative assistance, as well as SSM/V-dedicated spaces and community building, foster belonging and satisfaction.

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In recent years, student military service members/veterans (SSM/Vs)—defined as retired/discharged veterans, those on active U.S. military duty, or those in the Reserves or National Guard—have been one of the fastest growing groups of adult undergraduates in U.S. universities (Cate et al., 2017; Radford et al., 2016).[1] Like veterans who enrolled in large numbers after World War II, post-9/11 SSM/Vs diversify American higher educational institutions (Remenick, 2019). Not only do they bring advanced teamwork, problem-solving, and technical skills, but they are also older, more often disabled, and more often from lower-income backgrounds (e.g., Durdella & Kim, 2012; Sullivan & Yoon, 2020). Colleges and universities offer many SSM/Vs a smoother re-entry point into civilian life and an opportunity for upward mobility (Kleykamp, 2010). Given the substantial financial support SSM/Vs receive from GI bill expenditures, and these students' national service, their success is important.

Nevertheless, SSM/Vs often encounter health, administrative, and social challenges on campus that separate them from other adult students. Psychological and physical impairments stemming from military service can lead to struggles with addiction, emotional detachment, and a reluctance to ask for assistance (e.g., Hodges, et al., 2022). Many SSM/Vs also face mid-semester deployments, obstacles transferring military credits, complex GI benefit tasks, and university systems that operate under a different logic than the military (Rumann & Hamrick 2010; Vacchi & Berger, 2013). Social interaction among SSM/Vs is a particular problem. SSM/Vs often struggle with alienation and loneliness in universities, encountering socio-communicative barriers and stereotypes that portray them as mentally unstable or violent (Barry et al., 2014). For many SSM/Vs, this new environment is comparatively cold and bereft of the camaraderie and common purpose that marked their military experience (Borsari et al., 2017). This may help explain findings that SSM/Vs feel lower feelings of campus belonging (Barry et al., 2021) as well as lower levels of satisfaction with their universities than civilian students (Benbow et al., 2024). These differences can be important. Campus belonging (Hurtado & Carter, 1997) is a significant factor in the university success of marginalized students (Strayhorn, 2018), while institutional satisfaction has been linked to persistence for adult students in general (Bean & Metzner, 1985) and more positive university experiences for SSM/Vs (Benbow & Lee, 2022).

In response to the post-9/11 SSM/V enrollment surge, many colleges and universities have been developing SSM/V-specific student services to address these challenges. Backed by research (e.g., Kirchner, 2015), recent service additions have included student affairs officials, counselors, social programs, resource centers, and student lounges dedicated to SSM/Vs (McBain et al., 2012). While evidence suggests these services help students instrumentally and socially, however, surprisingly few recent studies have systematically or holistically examined

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[1] We use the terms "adult students" and "nontraditional students" interchangeably throughout to reference university undergraduate students aged 25 years and older.

their utilization or impact among contemporary SSM/Vs. Indeed, several studies have focused on the scope and student perceptions of military-focused service offerings, usually at individual universities (Barmak et al., 2023; Morris et al., 2022; Oswald et al., 2019; Yeager & Rennie, 2021; Vest et al., 2024), but little work has examined post-COVID student engagement across multiple, dispersed institutions. Further, no work, to our knowledge, has tested SSM/V military-focused service engagement levels nor statistical correlations between engagement and proven indicators of student persistence and success like campus belonging and institutional satisfaction (Bean & Metzner, 1985; Strayhorn, 2018). There is also a lack of comprehensive investigations using both quantitative and qualitative approaches, which could not only build knowledge on whether there are empirical associations between SSM/V military-focused service engagement and university success, but also how students themselves perceive these connections—and their instrumental and social utility—in their daily lives.

With these gaps in mind, this convergent parallel mixed-methods study uses SSM/V surveys (n=531), interviews (n=59), and a social capital theoretical frame—emphasizing the importance of social aspects of military-focused services engagement (Borsari et al., 2017)—to answer three research questions (RQs):

RQ1. How often do SSM/Vs engage with university military-focused services?

RQ2. How, if at all, does SSM/V university military-focused services engagement associate with student feelings of campus belonging and institutional satisfaction in university?

RQ3. How do SSM/Vs describe their engagement with university military-focused services, and how, if at all, do they explain the influence of this engagement on their feelings of campus belonging and institutional satisfaction?

This study aims to describe military-focused service engagement, as well as influences of and perceptions of this engagement, among SSM/Vs across multiple universities. Our literature review therefore starts with an examination of factors influencing SSM/Vs in universities. This is followed by a review on the development of military-focused student services in U.S. universities. We conclude with a review of research on the influence of these services on SSM/V campus belonging and institutional satisfaction.

Background

SSM/V University Experiences

American military conflicts abroad have led to the deployment of approximately 3 million service members since 2001 (Bilmes, 2021), precipitating an expansion of state and federal higher educational benefits for returning veterans (Borsari et al., 2017). Such benefits typically pay student tuition, housing, and ancillary educational expenses, supporting a substantial influx of SSM/Vs into higher education institutions. Though recent, up-to-date national statistics are elusive, existing research suggests SSM/Vs have a median age in the early 30s and most enroll in public four-year universities (SVA, 2021).

Because of their age, the challenges confronting SSM/Vs often mirror those encountered by other adult or "nontraditional" students, conventionally defined as learners aged 25 and above (Markle, 2015). Mature students are more often first-generation, transfer, and delayed-entry students, usually reside off-campus, and more often come from economically disadvantaged backgrounds (Dill & Henley, 1998). They are also usually financially independent and less interested in engaging socially in out-of-classroom campus activities and services than traditional students (Wyatt, 2011). Classroom interactions are key to academic and social integration for these students (e.g., Deil-Amen, 2011), though additional work and family obligations often demand a complex balancing act that takes time and focus away from studies (Bean & Metzner, 1985).

Military experience, however, brings additional difficulty for SSM/Vs, many of whom are enrolling in university and re-entering civilian life simultaneously. A wide body of scholarship centers on health issues that can hinder academic success, including substance abuse, emotional distancing, a disinclination towards help-seeking, military sexual trauma, and psychological and physical injuries (e.g., Barry et al., 2014). Studies also point to several different kinds of administrative challenges SSM/Vs face, such as mid-semester activations among active duty, Reserve, and/or Guard members, (Rumann & Hamrick, 2010); difficulties earning transfer credit for military training and education (Benbow & Lee, 2022; Vacchi & Berger, 2013); and the ambiguities and complications of GI benefit requirements (e.g., Hodges et al., 2022).

Importantly, studies have also focused on the mismatches SSM/Vs encounter as they transition from the military—a conservative institution in which teamwork and camaraderie suffuse daily interactions—to the more liberal university, known for its emphasis on individualism and self-exploration (Borsari et al., 2017). These incongruities often result in troubled communication between SSM/Vs and peers or faculty (DiRamio et al., 2008), stereotypes of SSM/Vs as damaged, violent, or intellectually inferior (Benbow & Lee, 2022), and SSM/V feelings of alienation and dissatisfaction on campus (Rumann & Hamrick, 2010). The social piece of this transition is critical for SSM/Vs, who have been found to feel less social support (Whiteman et al., 2013), less of a sense of campus belonging (Barry et al., 2021), and less institutional satisfaction (Benbow et al., 2024) than civilian student peers.

Military-Focused Student Services

SSM/Vs enter postsecondary education with diverse backgrounds, high-level work training and experience, and a persistent focus on their academic goals (Sullivan & Yoon, 2020). But as post-9/11 SSM/V enrollment surged through the late-2000s and early 2010s, researchers and educators began to recognize the need for additional navigational and social resources to better support SSM/Vs on campus (e.g., Barmak et al., 2023). According to a survey of several hundred higher educational institutions nationwide by McBain and colleagues (2012), 74% of 4-year public colleges and universities were providing veteran-specific services by 2012, a substantial increase from 2009. More institutions were also beginning to focus not only on recruiting SSM/Vs, but also on centering them in their long-term strategic planning efforts (McBain et al., 2012).

The new military-focused initiatives often grew out from GI benefit processing or "certification," the foundation of SSM/V support on university campuses (Hodges et al., 2022). Staff members performing this task, typically located in financial services or registrar's offices, officially endorse veteran student academic eligibility; apply for tuition, fee, and housing payments; and generally provide SSM/Vs assistance and information on the GI benefits that pay for college (Borsari et al., 2017; Kirchner, 2015). This facet of support became much more labor-intensive as SSM/V enrollment quickly expanded in the post-9/11 era (Hodges et al., 2022). At the same time, because it represented the most significant point of contact between institutional representatives and SSM/Vs, research suggested it had outsized influence on student perceptions of, and experiences in, their university (e.g., Griffin & Gilbert, 2015).

Universities aiming to give growing numbers of SSM/Vs a more substantial institutional foothold—and take advantage of broader sentiment and governmental funding supporting veterans—soon expanded from benefit support to more in-depth, holistic SSM/Vs services. GI benefit certification, which before the post-9/11 surge had been a part-time task on many campuses, became a full-time job or was transferred to SSM/V-specific service staff (Kirchner, 2015). Many universities created dedicated positions for campus SSM/V service coordinators (McBain et al., 2012) to oversee benefit certification and provide guidance on campus resources, provide faculty outreach, assist students who are unexpectedly deployed (Griffin & Gilbert, 2015; Hodges et al., 2022), and to connect SSM/Vs to other campus services and organizing SSM/V-oriented programming—including peer mentoring programs, campus orientation sessions, career counseling, and social gatherings (e.g., Barmak et al., 2023). Many universities have also created dedicated SSM/V-specific offices or veteran resource centers (VRCs), designed to be one-stop-shops for student information, benefit processing, and campus social and academic support (Hodges et al., 2022; Kirchner, 2015). VRCs also often house veteran student lounges (Yeager & Rennie, 2021).

Military-Focused Service Influences and Belonging and Satisfaction

Numerous studies link college engagement and social interaction to positive student outcomes (e.g., Kuh et al., 2008; Pascarella & Terenzini, 2005). Scholarship indicates contact with veteran-specific services can be helpful for SSM/Vs, even if previous research suggests engagement may be low (Vent at al., 2024; Wyatt, 2011). SSM/V interactions with college educators in general, and veteran service coordinators in particular, provide an enhanced sense of institutional support, increased educational optimism, and social belonging (Benbow & Lee, 2022; Oswald et al., 2019; Southwell et al., 2018), while dedicated and experienced benefit certification staff can alleviate many of the burdens that come with SSM/V college finances (e.g., Norman et al., 2015, p. 708). VRCs, meanwhile, are reported to offer numerous benefits, practical and affective, from help understanding campus resources to social fellowship in an unfamiliar environment (Griffin & Gilbert, 2015). Research also indicates that social and community participation can be meaningful for many SSM/Vs (Eakman et al., 2019). Though qualitative research has noted adverse experiences among some students (e.g., Vest et al., 2024), other studies have suggested that engagement can increase relational support, reduce stress, and help SSM/Vs become more socially acclimated to university life (Morris et al., 2022; Yeager &

Rennie, 2021). The military-oriented specificity of this new wave of services seems to be significant, with studies suggesting that military-focused services show students and the wider community that SSM/Vs are a valued population with unique support requirements (Hodges et al., 2022; Norman et al., 2015).

Still, existing work on university military-focused services is valuable but often dated, which is problematic because data suggest current SSM/Vs differ experientially and demographically from those who attended college in the 2000s and 2010s due to changes in U.S. military deployments and COVID-19-oriented disruptions (e.g., SVA, 2017, 2021). Second, though a handful of more recent studies shed light on modern military-focused services, many focus on single institutions (Barmak et al., 2023), gather data from small numbers of participants (Kappell et al., 2017), or sample GI bill-supported family members without military experience (Oswald et al., 2019). Third, and importantly, recent work in this domain has most often been either quantitative or qualitative. Quantitatively, studies have tested SSM/V campus engagement with associated outcomes (Morris et al., 2023; Southwell et al., 2018), but this work has not focused specifically on SSM/V engagement with the military-focused student services that have been broadly implemented since the SSM/V post-9/11 enrollment surge (McBain et al., 2012). Interviews are a crucial exploratory tool, and it is important to include SSM/V voices (e.g., Barmak et al., 2023; Yeager & Rennie, 2021; Vest et al., 2024). To our knowledge, however, no studies have used rich, SSM/V-centered qualitative data to explain quantitative links between military-focused service engagement and key SSM/V outcomes. A mixed method approach that triangulates associational and experiential findings (Creswell & Plano Clark, 2018), looking at important predictors of SSM/V university persistence, would be valuable.

Campus belonging (Hurtado & Carter, 1997), arises from feeling valued by others at the university and offers a sense of purpose and meaning that has proven to be significant to the college persistence of marginalized students (Strayhorn, 2018). Institutional satisfaction has also been shown to be a meaningful affective predictor of student college persistence (Schreiner & Nelson, 2013). Bean and Metzner (1985) argue that institutional satisfaction is particularly significant for adult students, whose time away from formal studies, off-campus responsibilities, and preference for practical over abstract knowledge may lead to intentions to discontinue their higher education. Both predictors relate to all-important SSM/V social experiences in the university that have been well-documented in the literature (Borsari et al., 2017; Hodges et al., 2022), so both offer informative indicators of whether and how military-focused services may be valuable. Neither, however, has been tested as a possible outcome of SSM/V military-focused service engagement.

Theory

Because social support is a crucial component of SSM/V university experience, as well as a central justification for SSM/V military-focused service provision (Barry et al., 2012; Benbow & Lee, 2022; Borsari et al., 2017; Hodges et al., 2022; Vacchi & Berger, 2013), we conceptualize SSM/V engagement with military-focused services using the theory of social capital: valuable assets and resources that can be accessed through social ties and networks (Lin, 2001).

Lin (2001) views social capital as resources like information, advice, or emotional support that are developed within and flow through relationships. According to Lin (2001), whether and how much valuable support we accrue depends on a process beginning with an individual's "position," meaning their hierarchical standing in social spheres based on their backgrounds, credentials, or life experiences. One's position may include military service, age, gender, or other experiences or identities. Social support access also depends on "structures," or broader meso- or macro-level systems that place normative values on people's interactions, including the military, the university, or one's academic department. Based on these positional and structural conditions, one develops (or not) "accessibility" to social capital resources through relationships that they then "mobilize" through social interactions. This accessibility and mobilization can help them gain beneficial instrumental or affective "returns."

In part, the theory rests on the idea that individuals who put time and energy into engaging with others will often see returns on their investment. Importantly, however, access to beneficial social capital is not a given, as it is distributed asymmetrically according to positional and structural inequalities (Bourdieu, 1986). Research shows, for example, that students with military experience often feel socially disconnected on campus because they are unfairly stigmatized as psychologically damaged, potentially violent, or intellectually inferior (e.g., Borsari et al., 2017). Following other work, we expect that engagement with university veteran-specific resources, including information, benefit assistance, SSM/V spaces, and dedicated personnel, may undermine some alienating factors in the university environment by affording SSM/Vs the opportunity to build relationships offering instrumental and affective value (Griffin & Gilbert, 2015). This process of developing social capital is displayed in Figure 1.

With this model in mind, we first operationalize social capital theory by focusing on measuring SSM/V engagement (conceived socially as "accessibility and mobilization") with several prominent military-focused service facets represented as focal independent variables to answer RQ1. Second, we test whether this engagement statistically correlates with campus belonging and institutional satisfaction ("returns"), as dependent variables, to answer RQ2. Third, we focus on qualitatively understanding how these broader trends may be explained by SSM/Vs. Here our inductive analysis centers on SSM/V perspectives on veteran student service social engagement ("accessibility and mobilization") and how, if at all, this engagement leads to feelings of campus belonging and institutional satisfaction ("returns") to answer RQ3.

Figure 1. SSM/V veteran-services social capital development model (Lin, 2001)
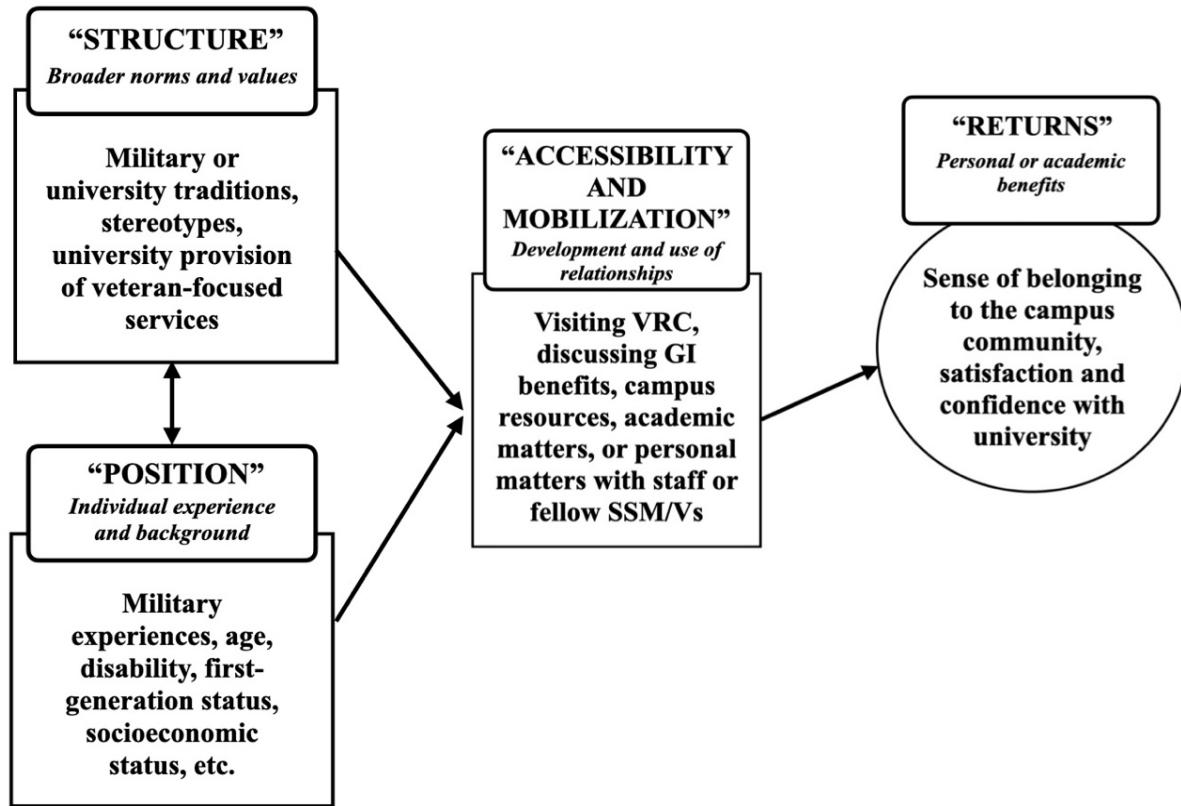
The diagram shows three squares and one circle, each with a label. At the far left are two squares arranged vertically. Between the two boxes is a vertical, two-sided arrow. The top box is labeled, "'STRUCTURE,' Broader norms and values." Within this box, it says, "Military or university traditions, stereotypes, university provision of veteran services." The lower box is labeled, "'POSITION,' Individual experience and background." Within this box it says, "Military experiences, age, disability, first-generation status, socioeconomic status, etc." Each of these boxes has a one-sided arrow pointing to a third box, positioned to their right horizontally, labeled, "'ACCESSIBILITY AND MOBILIZATION,' Development and use of relationships." Within this box is says, "Visiting VRC, discussing GI benefits, campus resources, academic matters, or personal matters with staff or fellow SSM/Vs." This box has a one-sided arrow pointing to a circle that is positioned to its right horizontally labeled, "'RETURNS,' Personal or academic benefits." Within this circle it says, "Sense of belonging to the campus community, satisfaction and confidence with university."

Methods

Data in this study come from the first phase of a larger study on the social experiences and academic pathways of SSM/Vs. We use a convergent parallel mixed-methods approach based on surveys and interviews of SSM/Vs (Creswell & Plano Clark, 2018) to answer our research questions and to provide the kind of comprehensive, triangulated investigation of recent military-focused student service data currently missing in the literature.

Sampling

Data were collected across four public, 4-year universities, institutions which a plurality of SSM/Vs attend in the U.S. (Cate et al., 2017; SVA, 2021). Referred to here as "University 1,"

"University 2," etc., universities were chosen because of their enrollment and geographic diversity and because they had veteran services directors who were willing to act as local gatekeepers. Data collection was performed in spring 2023 after clearance from relevant institutional review boards.

University 1, the largest university in the group, is in the Southwestern U.S. in an area with a significant military presence. It's a Hispanic Serving Institution (HSI) with a majority-minority student body and undergraduate enrollment of about 30,000 students. University 1 holds the "Doctoral University: Very High Research Activity" Carnegie designation and has a large, nationally recognized VRC that in 2023 had 10 full-time employees and 15 student workers. University 1's VRC also hosts Department of Veteran Affairs (VA) counselors who serve the institution's SSM/V community. At the time of the study, University 1 served 946 SSM/Vs. University 2 is in the South. It is a predominantly white institution (PWI), with an undergraduate enrollment of about 19,000 students, and holds a "Doctoral University: High Research Activity" Carnegie designation. University 2 also has a large, well-known, and well-funded VRC with a suite of services. The University 2 VRC's nine full-time employees, one VA counselor, two part-time certifying officials, and four student workers were serving 558 SSM/Vs during data collection. University 3, situated in the Mountain West, is an HSI. It has a majority-minority student population, enrolls approximately 16,000 students, and has the "Doctoral University: Very High Research Activity" Carnegie designation. In 2023, University 3's VRC, which offers students a variety of resources, had five full-time employees, a VA resource officer, and several student workers who served 430 SSM/Vs. University 4, situated by an active military base in the Midwest, is a regional PWI enrolling 7,000 undergraduate students. In 2023, University 4 had a remodeled VRC offering student services complete with an SSM/V lounge and study space. At that time two full-time employees and one student worker served 272 SSM/Vs. University 4 is designated a "Doctoral University: High Research Activity."

We employed a purposeful, nonprobability procedure to recruit SSM/V survey participants, defined as currently enrolled undergraduate students who were retired or discharged veterans, on active U.S. military duty, and/or in the Reserves or National Guard (e.g., Barry et al., 2014). This process began by asking veteran service directors to email all identified SSM/Vs study information and an online survey link. Survey recruitment elicited 531 survey responses (24% response rate), with each participant receiving a $20 electronic gift card. A subset of survey participants self-reporting science, technology, engineering, mathematics, and medical academic majors were asked to volunteer for one-hour Zoom interviews. Fifty-nine SSM/Vs ultimately participated. Interviewees received an additional $30 gift card. Sample information is displayed in Table 1.

Table 1. **Descriptive statistics for SSM/V survey and interview sample**

Measure	Survey participants (*n*=531)		Interview participants (*n*=59)	
	N	**%**	**N**	**%**
Gender				

Female	145	27.4	18	31.0
Male	377	71.1	37	63.8
Transgender	5	0.9	0	0.0
Nonbinary	3	0.6	3	5.2
Race/Ethnicity				
American Indian or Alaska Native	29	5.5	4	6.9
Asian or Asian American	27	5.1	3	5.1
Black or African American	56	10.6	5	8.6
Hispanic or Latina/o	168	31.7	23	39.7
Native Hawaiian or Pacific Islander	5	0.9	0	0.0
White or Caucasian	316	59.6	30	51.7
Enrollment Status				
First-Year or Freshman	50	9.4	11	18.6
Second Year or Sophomore	93	17.5	10	16.9
Third Year or Junior	153	28.8	15	25.4
Fourth Year or Senior	192	36.2	20	33.9
Fifth Year or Higher	43	8.1	3	5.1
Transfer Students	419	78.9	49	83.1
Service Status				
Discharged or Retired Veteran	371	69.9	36	61.0
In Reserves or National Guard	128	24.1	18	30.5
Active Duty	51	9.6	8	13.6
Military Branch				
Air Force	130	24.5	11	18.6
Army	248	46.7	25	42.4
Coast Guard	7	1.3	1	1.7
Marine Corps	68	12.8	12	20.3
Navy	88	16.6	11	18.6
Space Force	1	0.2	0	0.0
First-Generation Students[2]	259	49.8	29	49.2
Impaired Students	186	35.0	28	47.5
Institution				
University 1	283	53.3	30	50.8
University 2	106	20.0	12	20.3
University 3	67	12.6	6	10.2
University 4	75	14.1	11	18.6
Mean Age	32.1 (SD = 8.7)		30.8 (SD = 8.1)	

Surveys

Quantitative data were gathered through online Qualtrics surveys designed by the researchers. The survey included sections collecting information on SSM/V military-focused student service engagement (our focal independent variables), institution and demographic characteristics (control variables), and campus belonging and institutional satisfaction (dependent variables). After initial design, we piloted the online survey to SSM/Vs (n=42) at a large, eastern, public university before administering to our 4-institution sample.

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[2] "First Generation" students are those reporting that their parents/guardians have not obtained any kind of college degree.

Military-Focused Student Services Engagement

This section contained original survey questions, modeled after Pascarella and Terenzini's (1980) seminal Institutional Integration Scale, asking participants to indicate how often they engaged with specific facets of military-focused services at their universities. To begin, we created one item for each of several service facets that were prominent in the literature, all of which were offered at all four participating institutions, and asked eight veteran service practitioners to provide feedback on the content and face validity of the items. After making suggested changes, we gave the refined items to three scholars with expertise in higher education and SSM/Vs to further gauge content validity. After incorporating these scholars' changes, we piloted the scale items. Based on a factor analysis of pilot responses, we paired back the scale for administration.

The final scale, which began with the prompt, "How often have you done the following since entering college?" asked students to indicate their level of engagement with five military-focused service facets on a 5-point scale from 1=Never to 5=Very often. The focal service facets included spending time in college student veteran lounges (Yeager & Rennie, 2021), visiting military-focused service offices and/or centers (Kirchner, 2015), participating in student military-focused service campus events and programs (McBain et al., 2012), interacting with college student veteran coordinators (Griffin & Gilbert, 2015), and interacting with university certifying officials (Hodges et al., 2022). Exploratory factor analysis (EFA) of completed responses to the final 5-item scale support a one factor model with moderate internal consistency ($\alpha =.82$). The composite variable was calculated as the means of five focal service facets, ignoring missing values (i.e., egen, rowmean in Stata 18).

Student Institution and Demographics

Several measures controlled for demographic factors shown to influence campus belonging and institutional satisfaction. Survey questions asked for characteristics including gender, race/ethnicity, first-year college GPA, year in college, and academic major as STEM or non-STEM (Crisp et al., 2009; Norman et al., 2015; Pascarella & Terenzini, 2005). Items also collected age, first-generation status, impairment status, and full- or part-time enrollment status because of these attributes' salience with adult students (Bean & Metzner, 1985; Dill & Henley, 1998). Student institution, whether University 1, 2, etc., was also included as a control variable.

Campus Belonging and Institutional Satisfaction

Data measuring SSM/V campus belonging, defined as a student's cognitive assessment of their identification, affiliation, and membership in their campus community, were collected with a seminal 3-item battery (Hurtado & Carter,1997). Using a 5-point Likert scale, participants were asked to express their level of agreement with three statements: "I see myself as part of the campus community," "I feel that I am a member of the campus community," and "I feel a sense of belonging to the campus community." We used the average score of these responses as a continuous dependent variable to represent campus belonging-oriented social capital returns (Lin, 2001). Items showed strong internal consistency ($\alpha =.94$).

Data measuring institutional satisfaction, defined as a student's degree of satisfaction and commitment with their university, come from a scale of three items: "How confident are you that this is the right university for you?" (Davidson et al., 2009), "Please rate your level of satisfaction with your overall experience at this university?" and "Please rate your level of satisfaction with the education you have received at this university?" (Boyd et al., 2022). The first item asked students to indicate their confidence on a 5-point scale with 1=Not at all confident and 5=Very confident. The latter two asked for indications of satisfaction on a 5-point scale from 1=Very dissatisfied to 5=Very satisfied. We used the average score of these responses to represent institutional satisfaction-oriented social capital returns (Lin, 2001). Items showed moderate internal consistency (α =.85).

Interviews

Using literature focused on SSM/Vs, military-focused student services, and higher education student engagement, we designed a semi-structured interview protocol to gather qualitative data on SSM/V social capital accessibility, mobilization, and returns (Lin, 2001). We began by asking SSM/Vs about their experiences with their university's military-focused services and personnel: "Have you been involved with the student service member and veteran community on your campus?" Follow-up questions addressed SSM/V engagement with specific facets of military-focused services—including interactions with certification and coordination staff, visits to the veteran resource center or student veteran lounge, and participation in campus events or programs—and how, if at all, this engagement influenced their feelings of belonging and institutional satisfaction. We administered the final protocol through Zoom. Interviews, which took about an hour, were audio recorded, transcribed, and loaded into NVivo 12 for analysis.

Analysis

Survey Data

Online survey data were uploaded to Stata and used, first, to develop descriptive statistics showing levels of student engagement with the five facets of military-focused services as well as an overall engagement score across all five service facets. These results, displayed in Figure II, were used to answer *RQ1*. To examine the association between veteran service engagement and our belonging and institutional satisfaction dependent variables, we estimated the Ordinary Least Squares (OLS) regression model of participants' sense of campus belonging and institutional satisfaction on veteran service engagement measures with covariates. Regression results, displayed in Figure III, are interpreted to answer *RQ2*.

Interview Data

We began qualitative analysis by using NVivo 12 to delineate and segment all interview statements in which SSM/Vs described their institution's military-focused services and/or their participation in these services. After collecting these segments, we went line-by-line through each, developing open codes representing different facets of interviewee experiences and perspectives on military-focused services linked to their sense of belonging on campus and satisfaction with their institutions (Saldaña, 2015). We then combined open codes by similarity

into larger, more extensive code categories, naming each category after the newly merged ideas from which it was constructed (Glaser & Strauss, 1967), ending with a list of 22 code categories which, after being formally defined, became the study's qualitative codebook. We then applied the code categories in NVivo to all segmented SSM/V statements.

After studying the organization and patterns within the coded data, we further reorganized and combined the code categories into much larger, semi-discrete categories to develop six major themes. We then formally defined these six themes, counted how many interviewees spoke to each, and developed a table reporting theme names, definitions, and counts. Table II, along with detailed descriptions of four of the six themes, is displayed to answer *RQ3*.

Limitations

Findings should be interpreted with several limitations in mind. University 1 participants represent over half the survey sample because of the institution's size and large SSM/V population, and thus its context and participant perspectives may have undue influence on the overall results. Also, the study's external validity may be limited by the sample's self-selected nature—student participants opted in, and only institutions with veteran service directors who were able to invest their time were included. Further, the cross-sectional and correlational nature of this study, along with the study's response rate and sample size, means that the statistical analyses here are associational and not causal. Results therefore cannot definitively tell us if the dependent variables were a result of the independent variables.

<div align="center">

Findings

</div>

RQ1. SSM/V Engagement with Military-Focused Services

Figure 2 reports how often sampled SSM/Vs used the five military-focused services that we conceive as building accessibility to and mobilizing social capital (Lin, 2001). Overall, SSM/Vs reported "rarely" using the five services (2.07 on a 1-5 scale), though students engaged with certain services more often than others. SSM/Vs most often visited veteran service offices (often or very often: 20%; means: 2.56). Interactions with veteran service coordinators and certifying officials occurred somewhat less often (often or very often: 15%, 14%; means: 2.29, 2.16, respectively). SSM/Vs reported hanging out in veteran lounge spaces and participating in SSM/V campus programs or events more rarely (never or rarely: 75%, 83%; means: 1.84, 1.52, respectively).

Figure 2. **Descriptive statistics on military-focused service engagement items**
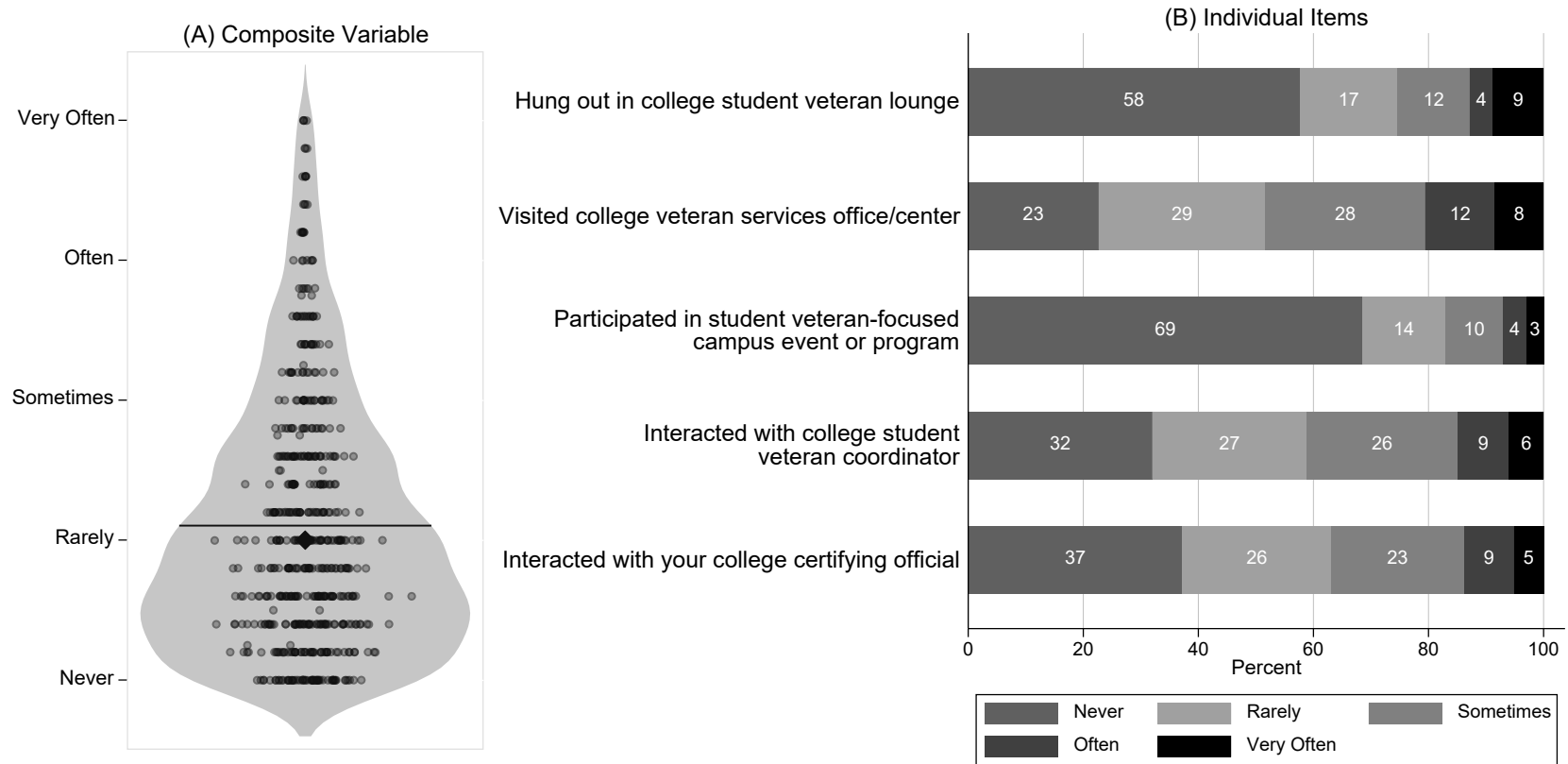
Note: *Military-focused service engagement is measured on a 5-point scale with 1=Never and 5=Very often. Overall veteran service engagement (composite variable) is the means of five items, ignoring missing values (see egen, rowmean in Stata 18). (A) indicates the violin plot of the overall veteran service engagement, along with the means (2.07, horizontal line) and median (1.8, diamond), showing a density plot in which the width of the plot indicates how frequently that value occurs in the dataset. The means (median) of individual items in (B) are 1.84 (1.00), 2.56 (2.00), 1.51 (1.00), 2.29 (2.00), and 2.16 (2.00) (taken in order), respectively.*

RQ2. Association of Military-Focused Services Engagement with Campus Belonging and Institutional Satisfaction

Figure 3 (A) reports associations between facets of veteran service engagement and campus belonging, a social capital return which is particularly important to the college success of marginalized students (Lin, 2001; Strayhorn, 2018). Summary findings indicate that SSM/Vs who more often engaged with each of the five veteran service facets, as well military-focused services overall, reported significantly higher feelings of campus belonging (p<.001; see full regression results in Appendix Table I).

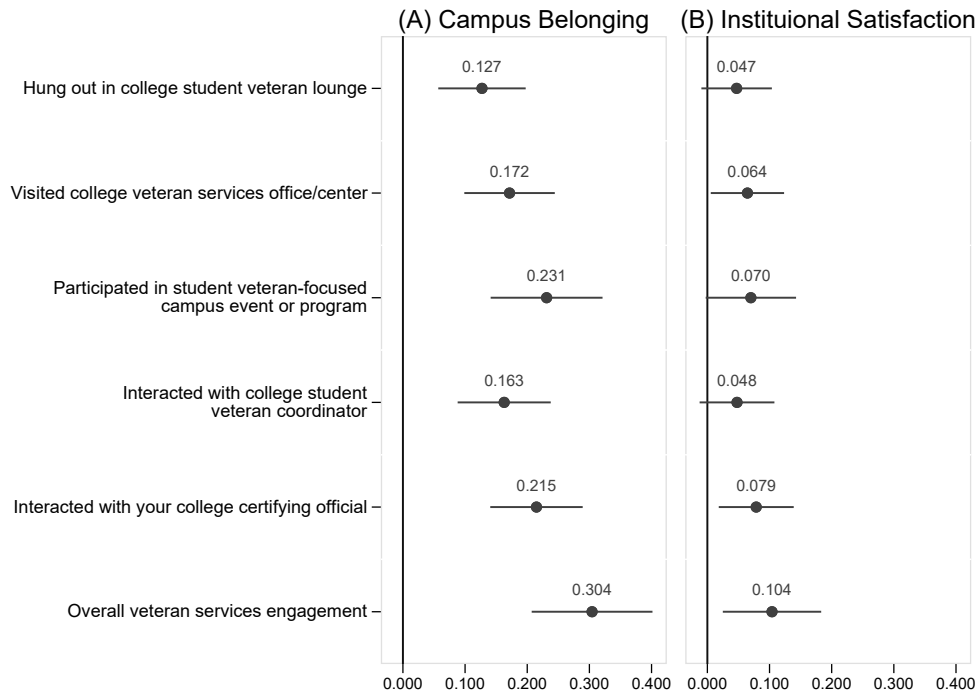**Figure 3. Summary of regression results for campus belonging and institutional satisfaction**

Note: Military-focused service engagement is measured on a 5-point scale with 1=Never and 5=Very often. Overall veteran service engagement is the means of five items, ignoring missing values (see egen, rowmean in Stata 18). Each service engagement item is estimated separately in each regression model. The figure presents only the coefficient of service engagement item for each regression. Covariates include gender, race/ethnicity, first-generation status, first-year college GPA, full-time/part-time status, enrollment status, impairment status, STEM/non-STEM major, age, and institution.

Figure 3 (B) also reports associations between veteran service engagement and institutional satisfaction, a social capital return important to adult student retention (Bean & Metzner, 1985; Lin, 2001). The summary of regression results show that SSM/Vs who more often engaged with military-focused services had significantly higher feelings of institutional satisfaction ($p<.05$). Engagement with individual service facets, however, differently correlated with institutional satisfaction. SSM/V visits to college military-focused services offices/centers and interactions with certifying officials significantly correlated with institutional satisfaction ($p<.05$). Time spent hanging out in veteran lounges, participating in events, and interacting with veteran coordinators each positively correlate with institutional satisfaction, but these associations were not statistically significant (see full regression results in Appendix Table II).

RQ3. SSM/V Descriptions of Engagement with Military-Focused Student Services and Influences of Engagement on Campus Belonging and Institutional Satisfaction

Student perspectives help better understand how military-focused services engagement connects with important feelings of belonging and institutional satisfaction. Six themes from inductive analysis of SSM/V interviews are displayed in Table 2. We detail four themes that speak closely to our quantitative results and social capital frame.

Table 2. **Military-focused service engagement themes reported by SSM/V interviewees (*n=59*)**

Theme	N	Description
Process fidelity	31	Informed, efficient, and dependable support—focused on multiple, complex bureaucratic processes SSM/Vs need to attend university—including military credit transfer, deployment assistance, and GI education benefit certification
Veteran/service member spaces	23	VRCs or veteran and service member lounges and/or study rooms offering safe, familiar, comfortable, and military-friendly spaces for SSM/Vs on campus where they can unwind, get information, study, and connect with others with whom they can relate
Community building	22	Coordination of social events recognizing and bringing together SSM/Vs to connect, particularly by encouraging military student and educator fellowship, supporting SSM/V organizations and activities, and working in the university and local community to foster increased understanding of SSM/V culture and experiences
Indifference and alienation	21	Disinterest in, or disillusion with, SSM/V campus community based on educational perspective (e.g., college is just a job), community or family involvement off campus, inconvenience of participating in events, feeling of separation from the SSM/V community, and/or desire to put military service behind them

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Moral support	20	Interactions showing that military-focused services staff understand SSM/V experiences, will have their back during difficult moments, and can be trusted—represented by consistent and reliable staff availability, authenticity, encouragement, advocacy, and concern
Guided orientation and navigation	16	Military-focused services as a hub for local guidance that offers SSM/Vs a foothold on campus, orientation to university procedures, academic and career assistance and resources, educational and professional networking, and clarity on the information with which SSM/Vs are inundated in university

Process Fidelity

Thirty-one SSM/Vs spoke to the theme process fidelity when discussing how interactions with military-focused services helped them feel like satisfied members of their college communities. This theme refers to the importance of office staff's experience, know-how, and reliability with the numerous and complex SSM/V-specific administrative processes students are required to complete in college. According to interviewees, staff guidance was crucial when it came to facilitating military training credit transfers, withdrawing during mid-semester activations or deployments, and, importantly, applying for and certifying GI education benefits. SSM/V interviewees told us that veteran service staff proficiency in this regard, as well as their streamlined instructions, cut-and-dried online platforms, and friendly but persistent reminders, not only made college life less hectic but also endeared them to campus veteran staff and, sometimes, their institution. Here, students often pointed to the importance of social connections with office staff. "If I have a question, I can usually shoot it over and get a response pretty quickly," one University 3 SSM/V told us. "Someone will always have an answer or tell me what's going on…[specific staff member] has been amazing."

Moral Support

While the information and technical expertise provided was valuable, administrative relationships provided other kinds of support as well. Twenty SSM/Vs told us that the moral support they received from veteran office staff helped acclimate them to the university. This was especially true for those SSM/Vs who had just arrived in college. As students reported, their administrative experiences outside of the university, often centered in large, byzantine organizations (e.g., Veteran Affairs), were typically circuitous, illogical, and devoid of warm, human exchange. In the university environment, SSM/Vs told us it was easier to act on available resources when veteran service staff met students where they were with authentic, honest interactions; provided students with important SSM/V-specific information and opportunities without expectations; and treated students not with empty reverence, as civilians often do, but as experienced, independent adults. Such moral support invited trust, respect, and a greater sense from SSM/Vs that they were in the right institution. In essence, SSM/Vs benefited when veteran support staff proved themselves to be straightforward, understanding, and personally supportive. In describing his university's military-focused services staff, one University 1 SSM/V said, "They are always in your corner."

Community-Building

Aside from directly providing informational and emotional support themselves, SSM/V service administrators also could act as social brokers to help connect SSM/Vs to broader social groups. Twenty-two SSM/Vs talked about the importance of *community-building* activities, or the work veteran service office staff undertake to foster SSM/V community. SSM/Vs told us that the organized activities they had taken part in—including, for example, sporting events or get-togethers with fellow SSM/Vs and veteran staff over food and drink—gave them access to a wide social network of like-minded students and staff offering advice, people to hang out with, and, more generally, support that helped them feel like more satisfied members of the campus community. Interactions with other students with similar experiences, especially, could offer the kind of fellowship and camaraderie that many SSM/Vs often report is missing in university. "I would say it's more than the education benefit processing," a University 4 student explained about her university's military-focused services office. "In case you're struggling with something, you can just get in a nice environment of other members who are similar to you. So maybe you meet somebody you can start talking to, maybe share a story or two."

Indifference and Separation

Not all SSM/Vs partook of these opportunities, however. Twenty-one interviewees spoke about the indifference and/or separation they felt toward their university's military-focused services and broader community. Many students we interviewed said they were unable to attend SSM/V events because of scheduling conflicts with class, work, family, their commute, and/or the inconvenience of military-focused services' location on campus. The general stress of juggling multiple responsibilities was an important factor in not participating as well. Some students told us they were not interested in SSM/V-oriented activities because, as one said, school was for "taking care of business" and not for socializing. SSM/Vs were sometimes more likely to feel this way if they already had families or other communities off campus and were not looking for a social outlet. Others felt alienated from the SSM/V community on campus because they had had negative experiences in the military. "Sometimes I think a part of me just wants to distance myself from being in the Army and the military," a University 3 student explained when asked about her reticence to visiting military-focused services. "I think I just want to put that behind myself…not everything I experienced in the Army was great. I mean, there was a lot of tough times and yeah, I just don't want to go there."

Discussion

Using a social capital theoretical frame, this study examines how often contemporary SSM/Vs in 4-year universities engage in military-focused student services, whether engagement associates with student feelings of campus belonging and institutional satisfaction, and how students describe their engagement and its influences on belonging and satisfaction. Findings show, in general, that SSM/Vs never or rarely engaged in prominent facets of their universities' military-focused student services. Higher levels of SSM/V engagement, however, were significantly associated with increased feelings of belonging and institutional satisfaction. Veteran service staff, as well as VRCs, also offered dedicated events and spaces for building

community with fellow SSM/Vs. Some interviewees described their indifference or alienation toward military-focused services as it represented an investment in time they did not have or in which they were not interested.

Veteran Service Engagement Low, but Predictive

Results confirm and extend existing research findings. Though no studies to our knowledge have empirically measured university military-focused service engagement among a multi-institutional SSM/V sample, previous research has suggested SSM/V participation may be low, as findings here indicate. Indeed, studies indicate adult students engage less often in extracurricular activities and services (e.g., Wyatt, 2011) not only because they have less time, but also because they are less interested (Bean & Metzner, 1985). Research has also suggested that SSM/Vs are often seeking to meet their degree requirements as efficiently as possible—what Kappell and colleagues (2017) referred to as "mission orientation" (also see DiRamio et al., 2008, p. 95)—to the detriment of out-of-class engagement. Vest and colleagues (2024), further note that some SSM/Vs either are not aware of military-focused services or feel alienated towards their university's veteran community because of past experiences. The qualitative portion of this study, specifically regarding our theme of "Indifference and separation," provides further evidence for this reasoning.

Regression analyses showing significant positive associations between military-focused service utilization and campus belonging and institutional satisfaction confirm years of research linking campus engagement and interaction to student outcomes (e.g., Kuh et al., 2008; Pascarella & Terenzini, 2005). We expand this literature to recently developed student services designed for SSM/Vs. With research indicating SSM/Vs feel lower levels of social support and affiliation than civilian students (Barry et al., 2021; Whiteman et al., 2013), strong correlations between military-focused services engagement and campus belonging indicate the possible efficacy of these services in helping SSM/Vs who want a stronger sense of institutional membership. While this may in part reflect reverse causality—whereby SSM/Vs' sense of campus belonging influences their openness to engaging with military-focused services—interviewee reports suggest that seeking required certification assistance acted as an antecedent to several supports ("Moral support" and "Community building" in particular) that made students feel more like a part of their university community. All in all, though classroom interactions will continue to be crucial to adult student higher educational experiences (e.g., Deil-Amen, 2011), recent studies have indicated that this perspective holds real educational value for SSM/Vs (e.g., Benbow & Lee, 2022; Barmak et al., 2023).

Satisfaction and confidence with one's institution, of course, entails a different student outlook. Results show that military-focused services engagement significantly associates with institutional satisfaction, but the correlational pattern is not as consistent across various services as it was for belonging. Here, quantitative results suggest that veteran socially-oriented service facets—hanging out in the veteran lounge, participating in campus events, and interacting with veteran service coordinators—may be less conducive to SSM/V institutional satisfaction than facets that are instrumental (VRC and certifying official visits). This suggests that SSM/V

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institutional approval may depend more on campus navigation and policy assistance than social support, though further testing is needed. Again, "Indifference and separation" interview statements give some credence to this explanation (e.g., Kappell et al., 2017).

Highlighting Military Student Service-Based Social Capital

It is important to point out that interviewees are not describing military-focused service engagement—even purely instrumental engagement—as interactions with inert offices or inanimate institutions. Instead, interviewees describe exchanges with *people*, usually veteran service staff, who offer direct help and support. "Process fidelity" and "Guided orientation and navigation" interview themes are both illustrated with examples of positive social interactions with military-focused services staff, like prior research (Barmak et al., 2023). In many cases, though, staff members not only proved themselves knowledgeable, reliable, and well-connected, but also offered affective understanding and commiseration. This commiseration, which we call "Moral support," has been noted in previous studies (e.g., Griffin & Gilbert, 2015, pp. 81-84), though it has not often been emphasized. Considering the prevalence of social support and camaraderie in the literature (Benbow &, 2022; Eakman et al., 2019; Whiteman et al., 2013), it is significant that interviewee descriptions of these administrative interactions seem to dovetail with the more obvious social-oriented facets of military-focused services reflected in our qualitative results as "Veteran/service member spaces" and "Community building."

Here, though, we believe our use of social capital theory proves useful in further distinguishing this study from previous research, particularly in identifying the ways military-focused service contexts, individual positions and agency, and interactions connect to help SSM/Vs socially accrue resources that can enhance their college experiences (Lin, 2001). Quantitatively, this framing is straightforward: when controlling for institution and individual characteristics, results indicate a significant correlation between SSM/Vs' involvement in various facets of military-focused services—which we frame conceptually as "accessibility and mobilization" defined as the use of available social connections (Lin, 2001)—and feelings of campus belonging and institutional satisfaction, framed as (affective) social capital "returns."

Interviews, however, help us further contextualize results, illustrating how specific facets of veteran service interaction and support can foster social capital returns. Using Lin's (2001) model as a heuristic (Figure I), we can imagine how university "structures" create environments offering varying levels of opportunity in which, for example, certain military-focused student services are offered or not. Individual SSM/Vs, depending on their "positional" characteristics including their age, past military or academic experiences, or current off-campus responsibilities, choose a certain level of engagement with military-focused services, or a level of "accessibility and mobilization" with which they are comfortable. Those with negative military experiences, or those with social communities off campus, may choose not to be involved with the VRC at all ("Indifference or separation"). Still, even in these cases, the dependability of veteran service certification is important and may lead to satisfaction with one's university ("Process fidelity"). Engagement may not by itself, however, offer additional affective resources.

Younger SSM/Vs, on the other hand, or SSM/Vs who want to try to recreate the camaraderie of the military, may choose to spend more time interacting with veteran coordinators or certifying officials ("Guided orientation and navigation" or "Moral support"), hanging out in VRC or veteran lounge ("Veteran/service member spaces"), or participating in social events or programs to meet fellow SSM/Vs ("Community building"). These SSM/Vs demonstrate a qualitatively different level of "accessibility and mobilization." Such interactions and relationships—in university spaces and with veteran coordinators, certifying officials, and fellow SSM/Vs representing their university—lead many interviewees to have "returns" feelings of membership and affiliation on campus and satisfaction with the institution that created these opportunities. Previous studies have spoken to the social benefits of military-focused services engagement (Barmak et al., 2023; Benbow & Lee, 2022; Oswald et al., 2019; Southwell et al., 2018), though not, in most cases, with this kind of theoretically-ground specificity.

Implications and Conclusion

There are several implications here for university educators and scholars. Practically speaking, this study provides further empirical evidence of the efficacy of university investments in military-focused student services. While not all universities have the enrollment environment or capacity to offer the service facets measured here, institutions interested in providing new services may choose to take an incremental approach, one both emphasizing continued administrative reliability but also incrementally adding valuable social support elements. This could include expanding from standalone GI benefit certification services to the provision of an SSM/V-focused lounge space or part-time military-focused services coordinator, in the case of lower capacity institutions, or the consolidation of existing supports into a one-stop VRC offering organized social events at institutions that already have developed services.

Because results suggest SSM/Vs rarely use these services, however, educators also should think creatively about how to increase student engagement above and beyond GI benefit certification. Initial efforts may involve better informing SSM/Vs about services (Vest et al., 2024) through direct, person-to-person outreach; more concise email and/or text communications; or mandatory information sessions for newly enrolled SSM/Vs (e.g., Semer & Harmening, 2015). Once students are more aware, educators can use different strategies to increase engagement, including more flexible SSM/V advising options. Alternatives may include offering counseling, tutoring, and other programming on evenings, weekends, or through virtual platforms.

Increasing interest in community building and social programming is also a potentially valuable way to improve student outcomes. Those hoping to draw more students may decide to integrate more academic- or career-oriented elements into these efforts, which may garner more involvement from SSM/Vs who—like other adult students—are typically less interested in purely social campus events (e.g., Bean & Metzner, 1985; Kappell et al., 2017). Educators can also point SSM/Vs to local community-based peer support groups, which can offer students the opportunity to replenish or expand social connections, engage in prosocial behavior, and obtain pragmatic information on their transitions into civilian life (e.g., Drebing et al., 2018).

Results from this study also suggest opportunities for further research. Studies utilizing random institutional and student sampling would provide stronger external validity and offer findings on a more diverse array of institutions—specifically those that do not offer the service facets on which we focused here. Larger, more representative samples would also allow for more robust testing of whether different variations in student military status (e.g., years served, combat experience, military branch, etc.) correlate with military-focused service engagement or the influence of engagement on university outcomes. Future research could also further explore the question of whether military-focused services have an impact because they focus specifically on SSM/V characteristics, needs, and communities, or, alternatively, because they help these students socially engage on campus. Finally, especially considering the importance of social support in the SSM/V literature, additional research could more closely focus on the social support network impacts of military-focused student service engagement, as well as on how SSM/V outcomes relate to veteran-service influenced network development.

SSM/Vs continue to be an adult population whose higher educational success diversifies universities, fulfills taxpayer GI bill investments, and delivers on the promise of upward economic mobility for a new generation of students. While previous studies have demonstrated the importance of military-focused services for SSM/Vs, little scholarship has comprehensively focused on contemporary SSM/V engagement, how this engagement may correlate with important outcomes, or how students explain engagement's impact across multiple and diverse university contexts. Results not only add to previous empirical evidence suggesting military-focused services can be beneficial, but also show how these services can harness the relational power and affective returns of interactions with veteran service staff and fellow SSM/Vs.

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Appendix Table 1. Regression results for campus belonging

	Campus Belonging (b/se)					
Military-focused service engagement						
1. Hung out in college student veteran lounge	0.127***					
	(0.036)					
2. Visited college veteran services office/center		0.172***				
		(0.037)				
3. Participated in student veteran-focused campus event or program			0.231***			
			(0.046)			
4. Interacted with college student veteran coordinator				0.163***		
				(0.038)		
5. Interacted with college certifying official					0.215***	
					(0.038)	
6. Overall veteran services engagement						0.304***
						(0.049)
Male	0.032	-0.017	0.004	0.030	-0.012	-0.021
	(0.097)	(0.097)	(0.097)	(0.098)	(0.097)	(0.095)
White	-0.078	-0.085	-0.035	-0.067	-0.021	-0.039
	(0.096)	(0.095)	(0.096)	(0.096)	(0.096)	(0.094)
First-generation status	0.054	0.049	0.074	0.067	0.095	0.067
	(0.092)	(0.091)	(0.092)	(0.093)	(0.092)	(0.090)
First-year college GPA	0.050	0.047	0.039	0.044	0.037	0.051
	(0.035)	(0.035)	(0.035)	(0.035)	(0.035)	(0.034)
Full-time status	-0.153	-0.158	-0.141	-0.137	-0.123	-0.164
	(0.118)	(0.117)	(0.117)	(0.118)	(0.116)	(0.115)
Enrollment Status	-0.037	-0.053	-0.053	-0.039	-0.066	-0.047
	(0.042)	(0.042)	(0.042)	(0.042)	(0.042)	(0.041)
Age (log)	0.341	0.295	0.350	0.246	0.334	0.294
	(0.197)	(0.195)	(0.198)	(0.199)	(0.195)	(0.194)
Impairment status	-0.053	-0.063	-0.088	-0.098	-0.100	-0.106
	(0.093)	(0.092)	(0.093)	(0.094)	(0.092)	(0.092)
STEM major	-0.094	-0.106	-0.098	-0.104	-0.091	-0.096
	(0.089)	(0.088)	(0.089)	(0.089)	(0.088)	(0.087)
Institution						
University 2	0.013	-0.006	0.043	-0.027	0.013	-0.004
	(0.119)	(0.118)	(0.118)	(0.120)	(0.119)	(0.117)
University 3	0.185	0.091	0.190	0.094	0.037	0.085
	(0.139)	(0.141)	(0.138)	(0.140)	(0.139)	(0.137)
University 4	-0.036	-0.007	-0.006	-0.093	-0.038	-0.106
	(0.136)	(0.133)	(0.133)	(0.138)	(0.133)	(0.134)
N	514	515	514	514	512	517

*Note: * p<0.05, ** p<0.01, *** p<0.001. Military-focused service engagement is measured on a 5-point scale with 1=Never and 5=Very often. The overall veteran service engagement is the means of five items, ignoring missing values (see egen, rowmean in Stata 18). Covariates include gender, race/ethnicity, first-generation status, first-year college GPA, full-time/part-time status, enrollment status, impairment status, STEM/non-STEM major, age, and institution.*

Appendix Table II. Regression results for institutional satisfaction

	Institutional satisfaction (b/se)					
Military-focused service engagement						
1. Hung out in college student veteran lounge	0.047					
	(0.029)					
2. Visited college veteran services office/center		0.064*				
		(0.030)				
3. Participated in student veteran-focused campus event or program			0.070			
			(0.037)			
4. Interacted with college student veteran coordinator				0.048		
				(0.031)		
5. Interacted with college certifying official					0.079*	
					(0.031)	
6. Overall veteran services engagement						0.104*
						(0.040)
Male	-0.115	-0.135	-0.124	-0.109	-0.134	-0.131
	(0.078)	(0.079)	(0.078)	(0.078)	(0.078)	(0.078)
White	-0.084	-0.085	-0.072	-0.080	-0.066	-0.074
	(0.077)	(0.077)	(0.077)	(0.077)	(0.078)	(0.077)
First-generation status	0.063	0.063	0.068	0.063	0.074	0.064
	(0.074)	(0.074)	(0.074)	(0.074)	(0.074)	(0.074)
First-year college GPA	0.038	0.039	0.034	0.036	0.031	0.039
	(0.028)	(0.028)	(0.028)	(0.028)	(0.028)	(0.028)
Full-time status	-0.054	-0.055	-0.041	-0.045	-0.041	-0.053
	(0.095)	(0.094)	(0.095)	(0.094)	(0.094)	(0.094)
Enrollment status	-0.034	-0.038	-0.040	-0.038	-0.042	-0.038
	(0.034)	(0.034)	(0.034)	(0.034)	(0.034)	(0.034)
Age (log)	0.478**	0.473**	0.475**	0.449**	0.503**	0.468**
	(0.159)	(0.158)	(0.160)	(0.159)	(0.158)	(0.158)
Impairment status	-0.094	-0.100	-0.102	-0.104	-0.103	-0.106
	(0.075)	(0.075)	(0.075)	(0.075)	(0.075)	(0.075)
STEM major	-0.142*	-0.139	-0.143*	-0.147*	-0.138	-0.141*
	(0.072)	(0.071)	(0.072)	(0.072)	(0.071)	(0.071)
Institution						
University 2	0.194*	0.182	0.204*	0.177	0.195*	0.186
	(0.096)	(0.096)	(0.095)	(0.097)	(0.096)	(0.095)
University 3	0.186	0.128	0.185	0.153	0.133	0.147
	(0.112)	(0.114)	(0.112)	(0.112)	(0.112)	(0.111)
University 4	-0.189	-0.184	-0.175	-0.205	-0.184	-0.212
	(0.109)	(0.108)	(0.108)	(0.111)	(0.108)	(0.109)
N	514	515	514	514	512	517

*Note: * $p<0.05$, ** $p<0.01$, *** $p<0.001$. Military-focused service engagement is measured on a 5-point scale with 1=Never and 5=Very often. The overall veteran service engagement is the means of five items, ignoring missing values (see egen, rowmean in Stata 18). Covariates include gender, race/ethnicity, first-generation status, first-year college GPA, full-time/part-time status, enrollment status, impairment status, STEM/non-STEM major, age, and institution.*