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Experiences and Challenges of Students with a Military Background at an Academic Medical Center

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Limited information exists regarding Students with Military Backgrounds (SMB) enrolled in academic medical settings, although there is extensive research focused on SMB attending community colleges and undergraduate universities. This study documents SMB experiences at an academic medical center related to (a) relations with peers and faculty, (b) learning experiences, and (c) navigating campus services. These SMB reported interpersonal experiences differing from those common to community colleges and undergraduate universities. Our cohort of SMB tended to be older than those enrolled at post-secondary institutions, with life experiences supporting the experiential learning and team health care practices increasingly emphasized in academic medical settings. SMBs reported the academic medical setting shares cultural elements with some military settings, suggesting accommodation strategies that leverage these features may enhance personal satisfaction, academic success, and career preparation for these students.

Introduction

With approximately 3.7 million potential students with a military background (SMB) more than 90,000 of them are studying health care as an academic major (Cate, 2014; National Center for Veterans Analysis and Statistics, 2015). This fast-growing population has garnered attention of university administrators who are questioning whether the needs of SMB are being met adequately (Jenner, 2019). Current academic studies have focused on SMB experiences of students in community colleges and four-year universities with less attention directed toward SMB experiences while attending health career programs at academic medical centers to earn advanced, terminal, or professional degrees (Plach & Sells, 2013; Rudd, Goulding & Bryan, 2011). This literature suggests military personnel and veterans attending such curricula in an academic medical center may experience this specialized academic environment differently than those attending classes at community colleges or four-year universities. The advanced curricular content, specialized knowledge, practical experiential components, and heightened interpersonal skills required by interactions with patients, caregivers, and peers on the healthcare team combine to present challenges in the academic medical center educational environment beyond those present in many undergraduate or technical settings (University of Kansas Medical Center, 2019).

Current studies exploring academic endeavors have used a variety of different terms to capture similar experiences of SMB at community colleges and four-year universities (Barry, Whiteman, & MacDermid Wadsworth, 2014; Ford & Vignare, 2015; Morris, Albanesi, & Cassidy, 2019). We have narrowed these to represent three general categories identified by SMB as critical for success at an academic medical center in the areas of medicine, nursing, other health professions, and in graduate school: (a) relations with peers and faculty, (b) the learning experience, and (c) navigating campus services.

SMB experiences relating with peers and faculty

This area of study focuses on relationship dynamics of the SMB experience with civilian students, instructors, and campus administration. SMB in higher education identify the success of their academic programming partly through their satisfaction with integration among other students and with faculty (Barry et al., 2014; Eakman, Kinney, & Reinhardt, 2019). Differences in age, maturity, military life experience, and responsibilities outside of academic demands are most often identified as presenting barriers between SMB and peers in other academic settings (Barry, Whiteman, MacDermid Wadsworth, 2012; Shellenbarger & Decker, 2019).

Some of the SMB share concerns about being identified as having a military background, and expressed uncertainty

about disclosing their veteran status and risking being stereotyped as a combatant and/or negatively judged for their military affiliation (McAndrew et al., 2019). Pronounced and polarized views on Post-911 military service exist in America (Stanley & Larsen, 2019; Tomar & Stoffel, 2014) and evidence indicates a perception of such social differences is more pronounced for SMB who self-report symptoms of post-traumatic stress (Eakman, Schelly, & Henry, 2016). By contrast, SMB who acclimatize to campus life tend to report a higher sense of belonging on campus (Durdella & Kim, 2012). In addition to successful integration, SMB identify effective learning also contributes to their overall successful academic experiences.

SMB learning experiences

Learning experiences refer to the general practices of the SMB in actively attending classes, acquiring new knowledge, and demonstrating and applying this new knowledge in an academic format. While most students in higher education experience learning challenges, some SMB may encounter challenges beyond those typically encountered by other students (Jenner, 2019).

SMB learning experiences can be influenced by factors such as service-related injuries, strategies for learning/relearning academic skills, and balancing academic work with responsibilities such as family life or further deployments (Barry et al., 2012). Traumatic brain injury (TBI), post-traumatic stress (PTS), sensory impairments (hearing loss or visual impairments), and physical impairments are the most common service-related injuries discussed in SMB research (Eakman et al., 2016; Rudd, Goulding, & Bryan, 2011). PTS has been linked to academic difficulties including memory skills, organizing study habits, completing homework, and attending class. Service-related physical limitations present challenges navigating the campus (Morris et al., 2019; Morissette et al., 2019) or accessing course content. Sensory impairments in particular present difficulties with following in-class lectures, interpreting visual aids used during lectures, and completing reading assignments.

An inconsistent application of universal design principles for course content makes access to these materials difficult despite academic accommodations required by the American Disability Act (Hornik, personal communication, 2014). This situation further is complicated with SMB characteristically being less likely to seek help, preferring privacy, and having unmet needs in order to avoid service-related stigma (DiRamio, Jarvis, Iverson, Seher, & Anderson, 2015; Kastle, Scott, Olliff, & Carlton, 2019).

SMB experiences navigating campus services

With a more broad meaning than simply physical access, navigating campus services refers to SMB being successful in applying to programs, registering for classes, obtaining financial aid, and to any other administrative service necessary for participating in and completing training programs. SMB report challenges processing their financial aid, receiving credit for military experience, meeting school and military demands, documenting insurance requirements, and accessing student services (Elliott, Gonzalez, & Larsen, 2011; Tomar & Stoffel, 2014; Vacchi, 2012). While improvements with the Post-9/11 GI Bill have reduced the amount of time it takes to process new applicants, students continue to experience delayed tuition payments routinely (Elliott et al., 2011). University campuses struggle to coordinate financial aid with the VA Education Department and with maintaining administrative staff knowledgeable about veteran education benefits (Elliott et al., 2011; Voelpel, Escallier, Fullerton, & Rodriguez, 2018). As a result, SMB often report experiencing difficulty in processing their paperwork, and benefits regularly have been cancelled due to administrative lapses (Ford & Vignare, 2015; Jenner, 2019; Rumann & Hamrick, 2010).

A variety of administrative hurdles challenge SMB in academic settings, including a need for (a) flexibility in registering for classes, (b) timely completion of veteran certification forms and financial reimbursement, (c) having required courses offered more frequently, (d) facilitating transfer of credits between institutions, (e) receiving credit for military experience, (f) accommodations for mid-semester deployments, and (g) health insurance credit for VA coverage (Elliott et al., 2011; Ford & Vignare, 2015; Vacchi, 2012).

This exploratory pilot study was conducted to explore experiences of students with a military background enrolled in professional and graduate programs at an academic medical center, to contrast these experiences with prior reports of SMB studying at community colleges and four-year universities, and to identify factors that may underlie similarities and differences in these experiences.

Methods
Setting

This study took place at an Academic Medical Center (AMC) with a primary campus located in a large midwestern city and having two smaller satellite campuses in rural settings. This AMC offers undergraduate- and graduate-level healthcare programs as well as basic science graduate programs. Although administratively associated with a liberal arts undergraduate campus, the AMC campus is geographically separate. It is comprised of three Schools (Medicine, Nursing, and Health Professions) together offering 43 degree programs. This AMC is integrated with the surrounding communities through free clinics and many other outreach activities, and with a large health system having a 1,000-bed hospital on campus and a statewide network of clinics and training sites.

Design, inclusion criteria, and details on recruitment

Participants were recruited using purposive sampling. At the time of this study there were 3,695 students enrolled at this academic medical center, with 60 students taking advantage of the GI benefit plan annually, and 40 (1%) declaring a military background at the time of this survey. The students

with a military background (SMB) were identified through the Office of Military and Veteran Affairs and invited to complete the online survey anonymously. Respondents were included as participants if they were at least 18 years old, a veteran or in an active military role, and were enrolled at this academic medical center as a part- or full-time student. The study received prior approval by the AMC's Institutional Review Board (protocol #003645).

Instrument

Staff from the Registrar's office and the Office of Student Life, faculty members, and graduate students developed the survey collaboratively. Student veterans, civilian and veteran doctoral students, non-student veterans employed by the university, and faculty members were invited to review the survey for face validity (Portney & Watkins, 2015).

The survey questions centered on the participants' demographics, military background and experience, program application process, admissions process, educational funding, the participant's support system, and interactions with other members of the campus community. Participants were instructed that participating in the study was voluntary and anonymous, and choosing to answer questions was optional. The final version of the survey included questions related to demographics, to military background and, in the final section of the survey, to the SMB's role as a student, perception of a military-friendly atmosphere offered by the campus, and extent of support for veterans provided university administration. **Table 1** describes items in the final section of the survey and measurement scales used; the entire survey is included in the Appendix.

Data collection

The survey was administered online, after initially delivering an invitation to participate to each SMB using a veteran's email group internal to the medical center. The invitation was distributed twice over a two-week period, with the second release phrased as a reminder of the opportunity to participate. The invitation included an outline of the study goals and an embedded hyperlink to access the survey for those choosing to take part; participants were assured their information would be collected anonymously and stored securely, with informed consent indicated by choosing to submit their survey responses.

Study data were collected and managed securely using the Research Electronic Data Capture (REDCap) electronic data tool hosted by the institution. REDCap is a secure, web-based environment designed to support data capture for research studies, providing: (a) an intuitive interface for validated data entry; (b) audit trails for tracking data manipulation and export procedures; (c) automated export procedures for seamless data downloads to common statistical packages; and (d) procedures for importing data from external sources (Harris et al., 2009). The survey required approximately 10 minutes to complete. Participants had the option to complete the survey in one session or to save their responses and return later to complete and submit the survey.

Data analysis

We used descriptive statistics to compare and summarize information on demographics and experiences. Survey questions were divided according to their relevance with the three topics of (a) relating to peers and faculty, (b) learning experiences, and (c) navigating the campus services. Some of the survey questions pertained to more than one topic. For example, responses to the item, "I am more serious as a result of being in the military," were used to assess both peer/faculty relations and learning experiences. Overall and subgroup frequencies were calculated for each item. Cross tabulations, frequencies, and filtering were used to make initial comparisons between characteristics (e.g., gender, age, military status, academic degree) and responses.

Open-ended questions were explored using qualitative thematic analysis (Vaismoradi, Turunen, & Bondas, 2013). First responses from the participants were read over. Responses were read multiple times until themes began to emerge. Responses were color-coded into themes according to the context and tone of their statements. One of the statements ("Many professors are 'offended' by blunt talk…") was set to the side until the overall theme of this statement emerged along with the theme of other similar statements.

Results
Participants

Twenty students with military backgrounds (SMB) agreed to participate between February 2015 and April 2015. Two participants did not complete the survey and one additional participant did not meet inclusion criteria. A total of 17 SMB

Table 1: Categories measured.

# of items	Items Measured	Measurement Scale (0 to 5)
11	· Student experiences applying to university · Student experience navigating the university · Students experience obtaining financial assistance	very easy _to_ very challenging
7	· Students experience with peers and faculty	strongly disagree _to_ strongly agree
14	· Students impressions of university culture related to military service	false _to_ true
8	· Ways to improve university setting	very unhelpful _to_ very helpful

completed the survey. Eight participants were women (47%) and nine were male (53%), ages ranged from 18 to 46 years old. A total of 16 (94%) participants identified as white and one (5%) as Hispanic or Latino. Participants were pursuing a post-graduate certificate program (1), bachelor's degrees (5), master's degree (1), and doctoral degrees (12). Some participants selected more than one of these choices.

All branches of the military were represented: Air Force (8), Army (6), Coast Guard (1), Marine Corps (2), and Navy (2). The participants reported a range of 1 to 22 years of military service (7.84 ± 6.16 s.d.), with two participants (11%) on active duty, 11 (58%) in the Guard/Reserve, and six (32%) who had retired or had completed their service. All of these SMB stated they were using or planning to use education funding through the Veterans Administration (VA), similar education benefits, or military scholarships. Three SMB (16%) identified as a first-generation college student.

Relating to other students and faculty at the academic medical center

The first category of survey questions explored SMB experiences with faculty and with peer interactions (**Table 2**). Most participants *strongly agreed* they had a positive relationship with their faculty (71%) and with peers (59%). All 17 participants *agreed* on feeling welcome and fitting in on campus; however, there were mixed responses on *fitting into the university culture and social climate,* and *finding meaningful activities or groups in which they can become involved.*

Finding peers and friends with whom the participants could relate was rated overall as *challenging* (24%) and *as expected* (47%). Most SMB (82%) believed there was a difference between those who had served in the military and those who had not, and over 50% of SMB thought they had more in common with others who had served in the military. The SMB had mixed responses to being stereotyped by their military service. Those who have deployed (33%; all male) believed colleagues and faculty were more likely to assume they experienced post- traumatic stress after disclosing they had been deployed to a war zone. Sixty-six percent of the male responses were ambivalent to strangers' saying "thank you for your service." By contrast, women (63% *somewhat true*, 25% *true*) appreciated the comment.

Learning experiences at the academic medical center

The second category of survey questions explored items related to SMB learning experiences at the academic medical center. Being in a new academic setting and having different expectations and demands was found overall to be *easy* by 30% of the participants, *as expected* by 35%, and *challenging* by 24%. Eighty-two percent of the participants reported seeking assistance when needed, but only 71% knew where to go for assistance, while 29% overall responded *neither agree nor disagree*. When asked if they believe they may be eligible for support through academic accommodations 24% were *unsure* (2 respondents, both doctorate students), 12% believed they were eligible, and 65% responded *not eligible*.

A majority of respondents (83%) believed most people have a superficial or stereotyped view of veterans and people serving in the military. University administration was viewed as helpful and understanding by 70% of respondents, with the highest frequency response being generated by the males (56% *strongly agreed*). Participants reported they were more self-disciplined (76%) and more of a team player (82%) than peers as a result of being in the military. All participants attributed their leadership skills to prior military experience, while 65% believed they also developed a more serious demeanor because of their military background.

Navigating campus services at the academic medical center

The final set of survey questions examined the items related to navigating the campus admissions and administration systems at the academic medical center. The majority (82%) of participants believed this academic medical center to be a military friendly institution. Twenty-nine percent of the participants thought applying to school was *easy* and 47% responded it was *as expected*. Fifty-three percent agreed it would be helpful if the university was more active in promoting information about education credits for military service, as well as establishing a mechanism for a mentoring program by faculty. Although 70% felt the university administration was helpful and understanding, only 24% reported knowing where to go for assistance. The challenges associated with paying for education were ranked *as expected* by 53% of the participants and *challenging* by 30%. More specifically, 30% of the participants found "navigating the system of VA benefits" *to be challenging* (41% *as*

Table 2: Social experiences of students with military backgrounds on campus.

Survey Items	Response Frequencies					
	Very challenging	Challenging	As expected	Easy	Very easy	N/A
Fitting into the university culture and social climate	6%	24%	47%	12%	6%	6%
Finding meaningful activities or groups in which they can become involved	0%	24%	24%	24%	6%	24%

expected), and 47% found "understanding how to maximize VA benefits" as challenging. Survey participants ranked a list of potential supports based on how helpful they thought the item would be. **Table 3** reports the top five items ranked by SMB as the most helpful supports.

Qualitative data

Participants had the option to provide narrative feedback for the item statement, "I believe my university is a milit-ary friendly institution." SMB responses were categorized into three principal themes; related to (a) being accommodated, (b) respected, and (c) connecting with other SMB. Out of the 17 participants, 10 provided feedback for this item (**Table 4**).

The second qualitative question provided a narrative opportunity for participants to offer ideas encouraging SMB to participate in social interactions on campus. Three themes emerged: (a) improving communication, both between the

Table 3: Top Five Support Items Ranked in Order of Most to Least Helpful.

Survey Items	Response Frequency					
	Unhelpful	Not necessary	Occasionally helpful	Regularly helpful	Very helpful	N/A
Identify and promote a central point of contact for student veterans	0%	6%	0%	29%	**65%**	0%
Consolidate information specific to veterans on the university website	0%	0%	24%	18%	**53%**	6%
Establish a student veteran interest group	0%	6%	29%	24%	41%	0%
Dedicate a space for veterans to connect with other veterans and to have veteran-related questions answered	0%	18%	35%	18%	35%	0%
Develop and promote a faculty-mentoring program for student veterans	0%	18%	24%	18%	35%	6%

Note: **boldface** = Response frequencies > 50%.

Table 4: Final coding on item "*I believe my university is a military friendly institution.*"

Theme	Illustrative Quotation(s)
Being accommodated	· "Not a lot of help but nothing negative either as far as resources for military students." · "When applying for my program, [university name] SON "School of Nursing" offered me early acceptance into their program to allow me to fit the requirements of my Navy Commissioning Program. This was all through the help of [faculty name]." · "[University name] have made great strides in the past few years in improving military relations…While attending [university name] other veterans would tell me that they believed their professors were not always military friendly. We also fought to include short term military exercises as excused absences at [university name]. This is a good first step." · "Always someone to help if needed." · "I have never reached out to anyone regarding military things, and no one has reached out to me."
Respect	· "Many professors are "offended" by blunt talk and administration talks about wanting diversity but what they mean is diversity of skin color so they can check a box on a federal form; they do not appreciate diversity of ideas or straight talk. Peers have been great…" · "The university and its faculty have always been respectful of my services." · "During orientation last summer, our program faculty were very supportive of my and other veteran's service and acknowledged it briefly but graciously. I get regular emails from Office of Student Affairs that includes military students' information. Overall, I feel no different from other students and am welcomed on campus."
Connecting with other SMB	· "There is not enough collaboration between military members. Awareness needs to be spread regarding meetings, etc. to become acquainted and learn from one another." · "The only thing I would say is that [university name] doesn't have many veterans enrolled, I think there are only 3 of us in our class. I'm not sure why this is the case! It just feels like there aren't many of us. That being said, I feel like I fit in just fine here and I'm very comfortable."

university and SMB individually and among peers within the SMB group itself; (b) establishing a consistent central point of contact for SMBs within the administrative structure of the institution; and (c) improving academic support for SMBs outside of disability-related accommodations. More specifically, survey respondents suggested implementing a student-faculty mentoring and networking system, a student veteran volunteer program, and a student veteran recognition ceremony at graduation.

Discussion
Relations with peers and faculty
This study evaluated experiences of SMB at an academic medical center, where most students were enrolled in graduate training in health-related programs, clinical practice doctorates, or entry-level professional degrees in healthcare careers. Our participants highlighted both similarities and some differences relative to those reported in other studies of SMB in community colleges or four-year universities. In particular, differences were noted in more satisfaction in relations with student peers and faculty, in learning experiences, and in navigating campus services.

Unlike the SMB in many community colleges and four-year universities (Barry et al., 2012; Shellenbarger & Decker, 2019), the participants in our study strongly agreed they had a positive relationship with faculty and with other students. Prior studies have documented experiential curricula in medical settings forge a close interactive relationship among students and faculty (Yardley, Teunissen, & Dornan, 2012; Zaidi, Awad, Hammad, & Qasam, 2017). This stands in contrast to pre-baccalaureate settings where interactions tend to be didactic, general academic advisors are common, and there is less direct interaction across programmatic and administrative segments of the academic community (Lattuca, 2003). A further factor contributing to the high rate of positive faculty regard reported in our study may be the respect for hierarchy and authority shared as common traits among veterans (Strom et al., 2012).

All participants in our study felt they fit well into the academic medical center's community and all reported engagement in campus activities. A heightened participation rate relative to that reported by Durdella and Kim (2012) among California undergraduates may stem from an intentional institutional focus at our academic medical center, leading to curricula where all students are expected to engage in many clinical practice, research, and health projects in neighboring communities. We note a measure of *overall* time spent on campus activities *vs.* curricular activities may therefore yield different estimates of an SMB's sense of belonging. The curricula at this particular institution also are weighted toward team-based and goal-focused activities, features that may not be densely-represented components in curricula of community colleges or at undergraduate campuses.

Unlike numerically calculated performance evaluations (e.g., GPA) common in undergraduate settings, modern clinical practice involves inter-professional health teams where performance is evaluated on less quantitative measures such as interpersonal, interviewing, and teamwork skills. This holistic approach to performance in team-focused and group-goal activities may substitute for the *espirit de corps* lost when a service member separates from the military and rejoins civilian society (Vacchi, 2012). One of our participants emphasized this team element: "Being veterans it is normal for us to want to help others and be involved so it's been really hard being here with no family and not knowing any other veterans that are here." The implications of these findings may be of interest on campuses experiencing declines in retention rates of SMB, particularly if declines occur during the first two years of enrollment in higher education (Morris et al., 2019). Finding ways to incorporate a team approach and projects into the curricula may offer both SMB and civilian students opportunities to acclimate to the campus (Williams-Klotz & Gansemer-Topf, 2017).

Similar to concerns expressed by SMB in previous studies (McAndrew et al., 2019; Tomar & Stoffel, 2014), our participants reported feeling their civilian peers assumed SMBs experienced combat-related PTS, and this applied more often to male SMB than to females. This assumption may stem from past gender roles in military service, with males historically assigned to combat units, and may be more prevalent among older civilians (e.g., faculty & administrators). The prevalence of this attitude may gradually become less potent as more civilians become aware of current military practices and policies, such as the role of women service members as truck drivers and medical staff during Operation Iraqi Freedom/Operation Enduring Freedom where they were exposed to combat situations (Strom et al., 2012), or wider public awareness the policy excluding women from combat being lifted in 2012 (Raphel, 2014). Recent studies nevertheless have documented a persistent public perception that PTS is tied exclusively to combat experiences (Morales, Narayan, Atienza, 2019; Schreger & Kimball, 2016), despite PTS also being associated with extreme distress in other situations and experiences, including military sexual trauma (Wolff & Mills, 2016).

The public's inaccurate understanding of sources for PTS and the perception of civilians' views held by the SMB together highlight fertile ground for improving the SMB experience in any academic setting. Enhancing educational opportunities offered by an AMC by including comprehensive mental health content, thoughtful discussions about sources of distress, recognizing emerging pathology, and the importance of identifying beneficial strategies and behaviors are all well suited to healthcare curricula and research programs. In addition, offering the option of a medical history curriculum that highlights medical advances inspired by the military (Goodwin et al., 2019) will demonstrate the institution's tangible awareness of contributions by the military to healthcare (Gibbs, Lee, & Ghanbari, 2019).

Our SMB participants and those in previous studies (Barry et al., 2012; Shellenbarger & Decker, 2019) agree their

life- and military-experiences differentiated them from student peers. An overall sense of belonging to our academic medical community was not diminished for our SMB because of this difference in experience however. A maturity of behaviors common to adult learners might account for some of the differences between younger SMB at other academic settings and those enrolled in the advanced programs of study at this academic medical center. Civilian students and SMB enrolled at this academic medical center tend to have less disparity in age, to share behaviors common to adult learners, to share maturity in academic focus and career goals, and to have work and family responsibilities in addition to their activities on campus.

Learning experiences

Demonstrating effective learning of advanced curricular content, acquisition of professional skills, and clinical accomplishments all contribute to the perception of successful academic experiences at an AMC. This further includes the learning and practice of advanced practical skills related to patient health, including such skills as personal interactions and interview techniques, technical skills related to specific careers, interpreting literature to support practice, and effective teamwork behaviors. Similar to SMB at other campuses (Cox, 2019; Ford & Vignare, 2015) our SMB shared reports their military background served them well with a foundation of time management, stress management, and leadership skills in team-management situations. In addition, academic counseling and other supports are available to facilitate student success, and all students actively are encouraged to access these supports. At this AMC, psychological counseling and psychiatric services are provided at no cost to students in addition to typical academic supports (e.g. writing skills, study habits, test-taking, time management).

Findings in this study may be applicable to populations of students beyond those of the student veterans. For example, campuses across the United States have experienced high rates of suicide among the civilian university students; it is the second leading cause of death for individuals between the ages of 18 and 34 (CDC, 2015; Gruttadaro, 2015). It is suggested civilian students are uncomfortable reaching out for help. Placing a focus on faculty-student relationship development at the community colleges and four-year universities, not only provides opportunities for further academic achievement, but also an environment where the student may feel more comfortable reaching out to faculty for mental health support.

No information on disabilities was collected from the participants; therefore it was difficult to compare specifics from this study with previous literature. Participants were, however, asked if they qualified for accommodations through student services and most stated they were unsure if they qualified.

Contrary to findings of other studies (Jenner, 2019), and perhaps attributable to maturity in focus and self-awareness,

a majority of our participants agreed they would seek assistance if needed and also knew where to go to obtain these academic supports. Other articles presented a pervasive expectation that the SMB would seek help on their own accord if resources were available (Cox, 2019; Shellenberger & Decker, 2019; Williams-Klotz & Gansemer-Topf, 2017). Similar to other studies our SMB indicated they preferred to seek help from faculty with whom they were familiar and also indicated interest in developing a faculty-mentoring program for student veterans (Morris et al., 2019; Williams-Klotz & Gansemer-Topf, 2017). These findings suggest these SMB have an overall positive relationship with faculty in the learning environment of this academic medical center campus.

Navigating campus services

Although a majority of SMB in our study agreed the university administration was helpful and supportive, only a few reported they knew how to address campus administrative issues; this discrepancy may be related to surrounding survey items receiving lower ratings. For example, items related to processing VA paperwork and paying for education received lower ratings, a finding also reported by other studies (Ford & Vignare, 2015). Several narrative responses by our SMB expressed continuity of the staff member in the Student Veteran Coordinator role was an essential support; these statements directly are attributable to staff turnovers in this Registrar's office in the year prior to the survey. These narrative responses suggest veterans wish to develop trusting relations with staff members who are experienced and stable in the support role, rather than relying upon transient staff or on staff new to this important and complex role. One participant stated:

> Maintain a person that helps with the GI Bill/other veteran concerns and please try to keep them! It is very difficult to work with a new person every semester. The person filling this role in August 2015 left abruptly, leaving us all in the lurch for about a month with no help regarding our benefits.

Another participant stated: "My biggest concern as a veteran is making sure my VA payments are working correctly with the school. Having a central point of contact that works well with us to get our paper work processed is very important."

In the last few years, federal government has made additional efforts to protect and improve the student veterans' academic experiences. Effective August 1, 2019, School Certifying Officials at colleges and universities supporting 20 or more student veterans/dependents using Veteran's Educational Assistance are required to register with the Veterans Benefits Administration and complete an annual online training before being allowed to certify student veteran enrollments (U.S. Department of Veteran Affairs, 2019). In addition, the Forever GI Bill signed into law August 17, 2017, eliminates the 15-year limit placed on

recipients of the Post-9/11 GI Bill and aims to protect student veterans who have been affected by school closures and programs that falsely claimed to be a covered educational institution (U.S. Department of Veteran Affairs, 2018). Efforts by the federal government in conjunction with colleges and universities to streamline services provided to student veterans, is anticipated to address the many concerns expressed by student veterans in a variety of educational settings.

Study Limitations and Future Research
Generalizability of findings
The sample in this study was limited both in size and in the ratio of women to men. While we are confident our purposive sampling yielded participants with characteristics and needs representative of SMB in this specific academic medical setting, any generalizations to other settings must be made cautiously (Portney & Watkins, 2015). The sex distribution of our SMB (47% women vs. 53% men) was notably dissimilar from that in the United States military, where women account for 15% of the active duty service members (Parker, Cilluffo, & Stepler, 2017). This difference suggests the possible influence of two factors raised by other reports in the literature: (a) women SMB may be more likely than male counterparts to pursue higher education in health care (Boyd, Slate, & Barnes, 2019) and (b) men may be less likely to pursue higher education in health care, perhaps instead seeking other careers requiring fewer years of schooling and incurring less fiscal burden (National Center for Veterans Analysis and Statistics, 2015).

Heterogeneity of samples
The proportion of SMB in our sample with a deployment history (<60%) was below the average of 94% reported in prior studies. This study did not compare perspectives of SMB based upon deployments abroad vs. stateside assignments. This study also included SMB who had not experienced the personal impact of deployment and/or warfare. A future study might find this offers an important characteristic within the military population.

Vague response option
Participants were asked to rate a variety of statements related to "Being in a new setting with different expectations and demands." One of the response options *as expected* was selected often (overall 35% of the time). In retrospect, this option does not allow differentiation of the experience being an expected positive or expected negative experience. Removing this option or asking for the participant to expand on this response will clarify response meaning and strengthen data validity.

Conclusion
Research on students with military backgrounds addresses an important segment of society, being a unique subgroup at institutions of higher education. The findings reported by previous studies led us to examine SMBs pursuing advanced and professional degrees at an academic medical center. These SMB were older, already possessed undergraduate degrees, and were enrolled in post-graduate education, graduate coursework, and professional training or certification programs for healthcare careers. Our findings indicate that there are some important and pervasive differences in this SMB experience relative to those of SMB enrolled at other post-secondary institutions.

Patterns of behavior and expectations related to military culture and to being an adult learner emerged as characteristics of these SMB, and defined how these individuals integrate successfully in a healthcare campus setting. The curricula featured this AMC emphasizing experiential and inter-professional learning and were cited as offering positive supports for the SMB. These findings suggest avenues to further enhance academic and professional experiences offered to the SMB through opportunities to engage in teamwork and peer-supported activities.

Forming a series of focus groups to acquire more in-depth perspectives on the insights gained through this preliminary study will be beneficial for further identifying and addressing the needs of this SMB population. While some elements of the SMB experience may be specific for academic medical centers, other elements may be common among SMB attending other academic settings, and possibly also applicable to students generally. Insights and shared strategies for maintaining stability in the institution's key staff roles, such as the Student Veteran Coordinator, will be of critical importance for recruiting and retaining effective and invested personnel in this and other key administrative positions.

Competing Interests
The authors have no competing interests to declare.

Author Contributions
Vanessa Dudley-Miller was responsible for developing survey, gathering data, analyzing data, developing manuscript, and editing. Jeff Radel was the PI responsible for developing the survey, supervising and overseeing gathering of data, analyzing data, and editing the manuscript.

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