Measuring Self-Advocacy Skills Among Student Veterans with Disabilities: Implications for Success in Postsecondary Education

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Abstract

Veterans of Operation Enduring Freedom, Operation Iraqi Freedom, and Operation New Dawn enrolled in postsecondary education may experience disabilities that impact their successful participation in the academic environment. Accommodations are made available to college students with disabilities to provide opportunities for success in this environment, but in order to receive these accommodations it is essential that the student discloses their disability and informs the institution of their needs. Therefore, it is critical to understand the self-advocacy skills of student veterans with disabilities as a factor that may influence their academic success. The Student Veteran Self-Advocacy Skills Assessment (SV-SASA) is an assessment of self-advocacy skills among student veterans with disabilities. Regression analysis was conducted on a sample of 49 participants in a supported education program for student veterans with disabilities to investigate factors that explain their self-advocacy skills and academic performance, and to evaluate the psychometric properties of the SV-SASA. Results indicated that first-generation status, extent of exposure to a supported education program for student veterans, number of credits attempted, and number of self-reported health conditions explain the self-advocacy skills of student veterans with disabilities. Results also indicated that student veterans with greater self-advocacy skills achieved a higher grade point average. The SV-SASA demonstrated adequate psychometric properties as an assessment of self-advocacy skills in the sample. Implications for service providers in the postsecondary education setting working with this population and suggestions for future research are discussed.

Keywords: Self-advocacy; veterans; disabilities; postsecondary education; academic accommodations; supported education

Veterans of Operation Enduring Freedom, Operation Iraqi Freedom, and Operation New Dawn are taking advantage of educational benefits provided by the Post 9/11 Veterans Educational Assistance Act of 2008 (Post 9/11 GI Bill) and are enrolling in postsecondary institutions at increased rates (Bryan, Bryan, Hinkson, Bichrest, & Ahern, 2014; Madaus, Miller II, & Vance, 2009; Shackelford, 2009). These student veterans are twice as likely as non-veteran students to experience a disability (National Survey of Student Engagement [NSSE], 2010), due in part to impairments associated with the "signature" service-related injuries of these conflicts: post-traumatic stress disorder (PTSD), traumatic brain injury (TBI), spinal cord injury, and amputation (Bilmes, 2007). Student

veterans demonstrate elevated rates of mental health symptoms (e.g., posttraumatic stress and depression) and physical symptoms such as pain and fatigue compared to non-veteran peers (Eakman, Schelly, & Henry, 2016; Rudd, Goulding, & Bryan, 2011). Furthermore, TBI and mental health challenges such as PTSD and depression have been associated with cognitive and emotional impairments that contribute to maladaptive academic behaviors such as poor organizational skills, poor attention, and poor class attendance (Barry, Whiteman, & Wadsworth, 2014; Bryan et al., 2014; Church, 2009). These factors help to explain why student veterans experience lower levels of academic performance when compared to their non-veteran peers (Bryan et al., 2014; Durdella & Kim, 2012).

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Veterans enrolled in postsecondary education can benefit from academic accommodations when experiencing impairments that negatively impact their academic performance (Church, 2009; Equal Employment Opportunity Commission [EEOC], n.d., Kraus & Rattray, 2013; Shackelford, 2009). These accommodations are to be made available to college students with disabilities due to federal legislation such as Section 504 of the Rehabilitation Act (Section 504), the Americans with Disabilities Act (ADA), and the ADA Amendments Act of 2008 (ADAAA; Pub. L. No. 101-336, 104 Stat. 328; 34 C.F.R. Part 104.4). In order to acquire these supports, however, students with disabilities must disclose their disability and inform the postsecondary institution of their needs (Lynch & Gussel, 1996). Given the fact that student veterans with disabilities need to play an active role in acquiring and utilizing academic supports, it is imperative that they develop into effective self-advocates.

Self-Advocacy Skills

Self-advocacy has been defined as the ability to communicate one's needs and make informed decisions about the supports necessary to meet those needs (Stodden, Conway, & Chang, 2003). Self-advocacy skills are often discussed in the context of postsecondary students with disabilities initiating the acquisition of academic accommodations, and these skills are widely considered critical to these students achieving academic success (Brinckerhoff, 1993, 1994; Foley, 2006; Lock & Layton, 2001). Test, Fowler, Wood, Brewer, and Eddy (2005) present a frequently cited conceptual framework that provides an understanding of the various components underlying self-advocacy skills. This framework posits that self-advocacy consists of 4 components: knowledge of self, knowledge of rights, communication, and leadership.

Despite the importance of developing self-advocacy skills among student veterans with disabilities, there is no research available that seeks to improve the understanding of these skills among this population. A critical step in advancing the understanding of self-advocacy skills among student veterans with disabilities is to develop a valid assessment of these skills. Such an assessment must be grounded in existing theory related to self-advocacy skills among non-veteran students with disabilities, but must also take into account the unique aspects of the veteran population in the postsecondary environment. Such an assessment of self-advocacy skills will allow academic service providers to develop a more informed understanding of the student veteran's self-advocacy skills and the ability to measure self-advocacy as an outcome of service provision. A valid assessment of these skills among student veterans with disabilities will also provide researchers the means to understand the influence of self-advocacy skills upon academic performance. The theoretical foundation for an assessment of self-advocacy skills among student veterans with disabilities follows.

Self-Advocacy Skills among Student Veterans

Knowledge of self. An understanding of personal strengths, support needs, and disability characteristics is a foundational component of developing effective self-advocacy skills (Test et al., 2005). Student veterans with disabilities may not initiate the process of acquiring supports (e.g., disclosing their disability) until they understand that they are experiencing challenges in the classroom and would benefit from supports. In order to effectively use supports student veterans with disabilities must understand the impairments they are experiencing, and how those impairments interact with demands of classroom activities or environmental characteristics to create barriers to academic success. An enhanced understanding of their strengths and needs will allow student veterans to identify supports that facilitate success in the classroom (Summers, White, Zhang, & Gordon, 2014; Test et al., 2005).

This component of self-advocacy must be better understood among student veterans with disabilities, as they are less likely to acknowledge their impairments and disclose their disability when compared to non-veteran students with disabilities (Church, 2009; Kraus & Rattray, 2013; Shackelford, 2009). While the reasons for this reluctance to disclose is not completely understood, some suggest that it may be influenced by their experience in the military. During their time in the military, student veterans may have developed a belief that disclosure of an impairment is associated with an inability to fulfill job duties or achieve career goals (Kraus & Rattray). In addition, many student veterans may be experiencing injuries that are newly acquired and therefore they may be in the process of developing an understanding of how their impairments impact their ability to succeed in the postsecondary environment.

Knowledge of rights. Prior to the acquisition of needed supports, student veterans with disabilities

must first understand what supports are available on campus, and that they have a right to use them. An understanding of what supports are available to college students with disabilities under current law (e.g., academic accommodations) and what steps must be taken to acquire those supports are foundational components of self-advocacy (Test et al., 2005). The nature and frequency of supports provided to students with disabilities varies according to the institution, however (Stodden, Whelley, Chang, & Harding, 2001; Tagayuna, Stodden, Chang, Zeleznik, & Whelley, 2005). This suggests that student veterans with disabilities cannot take for granted that the institution will provide the supports that they need to succeed. Furthermore, in order to take advantage of supports in an effective manner, student veterans must understand their responsibilities in acquiring needed supports according to institution-specific guidelines (e.g., providing necessary documentation to disability support services).

Further complicating the acquisition of academic supports is the fact that student veterans have had limited exposure to disability-related policy, and may be unaware of available supports and the processes that govern the provision of those supports (Kraus & Rattray, 2013). Student veterans with disabilities can develop this important knowledge if given the opportunity. Studies of college students with disabilities have shown that an understanding of their rights and responsibilities can be improved given access to education on this critical topic (Palmer & Roessler, 2000; White, Summers, Zhang, & Renault, 2014; White & Vo, 2006).

Communication. Once a student veteran is aware of his or her needs and the supports available to meet those needs, the ability to acquire these supports depends heavily on an ability to communicate effectively with faculty members or institutional representatives (Test et al., 2005). In order to acquire supports in the postsecondary environment, a student with a disability must play an active role by informing the institution of his/her needs (Lynch & Gussel, 1996). This involves clearly articulating one's needs to those who provide academic supports (i.e. faculty members, disability services staff). As previously mentioned, the nature and frequency of supports provided to students with disabilities may vary according to the institution (Stodden et al., 2001; Tagayuna et al., 2005), and some institutions offer considerably less education to faculty members regarding the provision of academic

accommodations (Sharpe & Johnson, 2001). Accordingly, those that seek to promote self-advocacy skills among students with disabilities consider the preparation of students for an initial refusal of the accommodation request an important component of self-advocacy (Palmer & Roessler, 2000; Summers et al., 2014; White & Vo, 2006). Preparation for this potential refusal requires that the student veteran develops social skills such as assertive communication, negotiation, and persuasion in order to effectively and appropriately resolve conflicts (Test et al., 2005).

Communication skills warrant particularly close attention when attempting to enhance self-advocacy skills among student veterans with disabilities. Student veterans may experience impairments in emotional and cognitive functioning associated with TBI, PTSD and depression (Kraus & Rattray, 2013; Tanielian & Jaycox, 2008). These conditions are often co-morbid (i.e., two or more co-occurring), producing a mutually exacerbating effect that results in more severe symptoms and a diminished ability to interact with others and sustain healthy relationships (Brenner, Vanderploeg, & Terrio, 2009; Tanielian & Jaycox, 2008). Limited communication skills may negatively impact student veterans' ability to sustain relationships with members of the institution that are responsible for providing needed supports. Student veterans with disabilities can develop the communication skills necessary to successfully acquire supports if given the opportunity. Studies have demonstrated that these skills can be developed among students with disabilities if they are educated on their importance and given the opportunity to practice them in role-play scenarios (Palmer & Roessler, 2000; Walker & Test, 2011; White & Vo, 2006; White et al., 2014).

This review of self-advocacy skills among student veterans with disabilities allows for a framework to measure these skills. Furthermore, a measure of self-advocacy skills could be used to investigate factors capable of influencing the development of those skills (e.g., first-generation status) and to study how those skills relate to academic outcomes. A review of relationships between self-advocacy skills, first-generation status, and academic success follows.

First-Generation Student Veterans

First-generation students are defined as college students with parents that have no postsecondary experience (Engle, 2007; Wurster, Rinaldi, Woods, & Liu, 2013). By some estimates, 66% of veterans en-

rolled in a postsecondary institution are considered first-generation students (NSSE, 2010). Literature suggests that first-generation students have weaker academic preparation (Engle, 2007), fewer informational resources (Stephens, Fryberg, Markus, Johnson, & Covarrubias, 2012), and are overall less prepared for a more rigorous postsecondary curriculum when compared to continuing-generation students (Wurster et al., 2013).

These first-generation student characteristics likely impact the development of self-advocacy skills (i.e., knowledge of self, knowledge of rights) in student veterans. First-generation student veterans with disabilities who possess limited knowledge of how to navigate the academic environment (Stephens et al., 2012) may be less prepared for a postsecondary curriculum, and therefore will be less likely to understand how their impairments impact their classroom performance (i.e., knowledge of self). Furthermore, these same characteristics may mean that the student veteran is at risk of having limited knowledge regarding the processes that dictate the provision of academic supports (i.e., knowledge of rights). These characteristics establish first-generation status as a factor capable of influencing the development of self-advocacy skills in student veterans with disabilities.

Self-Advocacy Skills and Academic Performance

Self-advocacy skills are often associated with the presence of behaviors needed to effectively acquire academic accommodations (Palmer & Roessler, 2000; Walker & Test, 2011; White & Vo, 2006; White et al., 2014). These academic accommodations may, in turn, promote the successful participation of student veterans who are experiencing cognitive, emotional, or physical impairments by altering aspects of the classroom activity or classroom environment (Church, 2009; EEOC, n.d., Kraus & Rattray, 2013; Shackelford, 2009). Indeed, these academic accommodations have been linked to improved academic performance among non-veteran students with disabilities (Keim, 1996; Trammel, 2003).

Given the fact that self-advocacy skills have been associated with behaviors needed to acquire academic accommodations, it is no surprise that self-advocacy skills have been identified as a critical factor in promoting the academic success of students with disabilities (Brinckerhoff, 1993, 1994; Foley, 2006; Lock & Layton, 2001). Self-advocacy skills have been linked to higher grade point averages ([GPA]; Lombardi, Gerdes, & Murray, 2011) and improved ability to

adjust to the postsecondary environment (Adams & Proctor, 2010; Murray, Lombardi, & Kosty, 2014). Furthermore, students with disabilities have identified self-advocacy as a critical factor in their academic success (Getzel & Thoma, 2008; Hadley, 2006). The existing evidence establishes self-advocacy skills as critical factors influencing academic success among student veterans with disabilities, as it empowers the veteran to acquire supports that have been associated with academic success among college students with disabilities.

Given this review, we hypothesized that student veterans' exposure to clinical services targeting self-advocacy skill development will be associated with greater self-advocacy skills, and first-generation status will be associated with lower self-advocacy skills. We further hypothesized that self-advocacy skills in student veterans will be positively associated with academic success as assessed by end of semester GPA.

Method

Design and Participants

This study used a nonexperimental, explanatory cross-sectional design. All participants were student veterans with service-related injuries enrolled in the New Start for Student Veterans (NSSV) program housed in the occupational therapy department of Colorado State University (Eakman et al., 2016). NSSV is a supported education program for veterans with disabilities providing social support (e.g., therapeutic relationship building); education on how to effectively navigate the academic environment (e.g., study skills and college application assistance); connection to resources on campus and in the community (e.g., tutoring and resources offered by Veterans Affairs [VA]); strategies to improve their mental and physical health; and strategies to enhance their ability to participate in the classroom and the larger community (e.g., using a planner to organize classroom assignments and doctor appointments).

A foundational component of the NSSV program is self-advocacy skills training. This includes fostering self-awareness of the student veterans' strengths and weaknesses, educating student veterans on available supports and the processes dictating the provision of those supports, and supporting their communication with faculty or other members of the campus community (e.g., disability services) in order to acquire needed supports.

This study received approval by the University's institutional review board, and informed consent was received from each participant. The NSSV practitioner providing services to each participant completed an online survey that rated participants' self-advocacy skills in December 2015. A total of forty-nine participants were included in the sample for analysis. Participants were included in this study if they were receiving NSSV services in the fall 2015 semester.

The majority of the participants in the sample were male (n = 41), and ranged in age from 23 to 54 years (mean \pm standard deviation [SD] = 30.39 \pm 6.5). A total of 21 participants (42.9%) were first-generation students, and 24 participants (49.0%) received academic accommodations in the fall 2015 semester through the campus disability services office. Table 1 provides additional information on the NSSV participants. The most common self-reported injuries upon intake were PTSD (n = 26), TBI (n = 22), orthopedic injuries (n = 17), and sensory impairments (e.g., hearing or vision deficits; n = 10). Table 2 provides a list of conditions reported by the NSSV participants.

Measures

Self-advocacy skills. Self-advocacy skills were measured using the Student Veteran Self-Advocacy Skills Assessment (SV-SASA). The SV-SASA is a seven-item assessment that was developed by the NSSV clinical and research teams to measure the self-advocacy skills of student veterans with disabilities. It requires a practitioner with a thorough understanding of the participants to rate them on items that represent skills related to their self-understanding, communication and conflict resolution skills, and ability to initiate and effectively use available supports (e.g., NSSV supports or accommodations through disability services). Scores on the scale range from one to four, using half-point increments, and represent a continuum of practitioner support needed to achieve each skill; lower scores indicate participants need more practitioner support and higher scores indicate the need for less support. Please see Appendix for text of all item stems. Practitioners were instructed to omit responses to items that represented a skill they had not observed. A participant's composite score was obtained by calculating the mean score of the items completed, with higher scores representing more effective self-advocacy skills.

The SV-SASA was adapted from the five-item Self-Advocacy Skills Assessment (SASA) (Falk et al.,

2013), which was developed for an internal university report and has not been tested for its psychometric properties (J. Falk, personal communication, March 3, 2016). Development of the SV-SASA included discussion of interventions used to promote self-advocacy skills typically delivered by the NSSV clinical team. This collaboration between the NSSV clinical and research teams resulted in the alteration of the SASA to more accurately reflect the unique services and needs of student veterans participating in NSSV (e.g., "utilizes university supports" became "utilizes NSSV supports"). Based upon feedback from the NSSV clinical team, two additional items relating to participants' communication skills (i.e., assertiveness skills) and conflict resolution skills were added given their importance to the development of self-advocacy.

Academic measures. Academic performance was measured using participants' fall 2015 grade point average (GPA). One participant's GPA data was excluded from analysis as they took only one class pass-fail in fall 2015, which prevented their GPA from being obtained. Participants' fall 2015 GPA, number of credits attempted in fall 2015 and first-generation status (i.e., whether or not the participant was a first-generation student) was obtained from university records.

Demographic characteristics. The age and gender of the participants were obtained from information provided during the intake process.

Disability-related measures. Upon intake into NSSV, participants were asked to disclose any diagnoses (e.g. PTSD, TBI) they were experiencing. The number of diagnoses that the participants disclosed was obtained from their intake form to calculate the number of conditions reported. Data regarding whether or not the student sought access to an academic accommodation in fall 2015 was obtained from the University's disability services office to determine his or her disability services status.

Exposure to NSSV services. The total number of hours that participants spent in-person with a NSSV practitioner during the fall 2015 semester was obtained from clinical records to calculate duration of in-person meetings in fall 2015 (in hours). This variable measured the extent to which participants were exposed to NSSV services within that semester. Support delivered through electronic communication (e.g., email or phone call) was excluded, because interventions that have been demonstrated to improve the self-advocacy skills of college students with disabilities have been delivered in person (Palmer &

Roessler, 2000; Walker & Test, 2011; White & Vo, 2006; White et al., 2014). The length of time receiving NSSV services (in weeks) was calculated by determining the difference (in weeks) between the dates that participants completed their intake to the NSSV program and December 2015.

Data Analysis

Cronbach's alpha of the seven-item SV-SASA was established as a measure of internal consistency. Zero-order correlations were calculated between all variables related to our research hypotheses. Descriptive analysis of these variables was also conducted to determine their distribution and central tendency. Multiple linear regression analysis was employed to explore our hypotheses. To address the first two hypotheses, we regressed the SV-SASA score on age, gender (0 = not male, 1 = male), first-generation status (0 = continuing-generation student, 1 = first-generation student), duration of in-person meetings, length of time receiving NSSV services, number of credits attempted, number of self-reported health conditions, and disability services status (0 = did not seek accessto academic accommodations, 1 = sought access to academic accommodations). To address the third hypothesis, we regressed end of semester GPA on the same variables as above, and added the SV-SASA score to the model. Multicollinearity diagnostic tests were evaluated for each model and studentized residuals were calculated to determine the presence of outliers that may impact the fit of the model. All analyses were conducted using IBM SPSS Statistics (Version 22; IBM Corporation, Armonk, NY).

Results

The SV-SASA was found to have good internal consistency reliability ($\alpha = .88$) within a portion of this sample (n = 25). Data for all seven items were unavailable for 24 participants because practitioners completing the assessment omitted responses to items that related to a skill that was not directly observed. Composite scores on the SV-SASA ranged from 1 to 3.64 (mean \pm standard deviation [SD] = 2.61 \pm .64).

Factors Explaining Self-Advocacy Skills

Zero-order correlations revealed statistically significant positive associations between the SV-SASA and length of time receiving NSSV services (r = .40, p < .01) and number of credits attempted (r = .46, p

< .01). There was a statistically significant negative correlation between the SV-SASA and first-generation status (r = -.34, p < .05). A statistically significant positive correlation between disability services status and duration of in-person meetings in the fall 2015 semester (r = .37, p < .01) was revealed, and the positive correlation between age and number of conditions reported was also statistically significant (r = .35, p < .05). Descriptive statistics and zero-order correlations can be found in Table 3.

The linear regression model was found to explain a significant proportion of the variance in SV-SASA scores ($R^2 = .46$, F(8, 40) = 4.18, p = .001); see Table 4. First-generation status was negatively associated with the SV-SASA ($\beta = -.25$, t = -1.98, p = .055). Statistically significant positive associations were found between the SV-SASA and length of time receiving NSSV services ($\beta = .26$, t = 2.07, p = .045), number of credits attempted in fall 2015 (β = .34, t = 2.76, p= .009), and number of conditions reported by participants upon intake ($\beta = .27, t = 2.08, p = .044$). The results also revealed a positive association that was trending toward statistical significance between the SV-SASA and the number of hours participants spent in-person with a NSSV practitioner in fall 2015 (β = .22, t = 1.73, p = .092).

Factors Explaining Academic Performance

Zero-order correlation results revealed a statistically significant positive association between fall 2015 GPA and the SV-SASA (r = .51, p < .01). Results also revealed a statistically significant positive association between fall 2015 GPA and number of credits attempted (r = .44, p < .01); see Table 3.

The model containing all explanatory variables was found to explain a significant proportion of the variance in fall 2015 GPA ($R^2 = .37$, F(9, 38) = 2.45, p = .026); see Table 5. The model's ability to explain fall 2015 GPA was primarily attributed to the SV-SA-SA ($\beta = .49$, t = 2.79, p = .008), indicating students with higher SV-SASA scores had higher fall 2015 GPAs. The results also revealed a positive association that was trending toward statistical significance between the number of credits attempted in fall 2015 and fall 2015 GPA ($\beta = .24$, t = 1.58, p = .122).

A review of zero-order correlations and results of the full regression model suggested that the SV-SA-SA may have mediated the relationship between credits attempted and GPA. There were statistically significant correlations between the number of credits attempted in fall 2015 and the SV-SASA (r = .46, p < .01), and between the SV-SASA and fall 2015 GPA (r = .51, p < .01). However, the relationship between number of credits attempted and fall 2015 GPA was not significant within the full regression model given the presence of the SV-SASA (β = .24, t = 1.58, p = .122). Given these results, the presence of a mediating relationship was investigated using the Sobel test, and results indicated that the SV-SASA mediated the relationship between number of credits attempted in fall 2015 and fall 2015 GPA (t = 2.19, p = .029).

Multicollinearity was not a concern for variables within either regression model (Tolerance < .40; Allison, 1999). A review of studentized residuals found no outliers (≥ | 3 | ; Agresti & Finlay, 2009).

Discussion

Factors Explaining Academic Performance

This is the first study that sought to understand self-advocacy skills among student veterans with disabilities, and how these skills relate to their academic performance. The regression model explaining academic performance explained a significant amount of variance in fall 2015 GPA ($R^2 = .37$), with the SV-SASA score being the only statistically significant explanatory variable in the model. The positive relationship between the SV-SASA and fall 2015 GPA confirms our initial hypothesis and suggests that student veterans with greater self-advocacy skills tend to experience higher academic performance. Previous research has found that lower academic performance in student veterans is associated with depression symptoms, male gender, maladaptive academic behaviors, and younger age (Bryan et al., 2014). Our results contribute to this knowledge and indicate that self-advocacy skills may promote academic performance in this population.

A better understanding of the factors that promote academic performance in student veterans could inform efforts aimed at improving their rates of retention and degree completion. Improving student veterans' ability to complete their degree enhances their economic prospects, as individuals with disabilities are more likely to find employment with a college degree (Summers et al., 2014), and college degrees lead to higher wages (Bureau of Labor Statistics, 2016). Improved economic prospects may, in turn, assist student veterans' ability to reintegrate into the community, as veterans have identified that finding a job

and financial difficulties are significant barriers to the transition into civilian life (Zoli, Maury, & Fay, 2015).

These results also align with previous research that has established a relationship between self-advocacy skills and academic success among non-veteran students with disabilities. Self-advocacy skills have been associated with behaviors needed to successfully acquire academic accommodations (Palmer & Roessler, 2000; Walker & Test, 2011; White & Vo, 2006; White et al., 2014), and these accommodations have been demonstrated to benefit the academic performance of students with disabilities (Keim, 1996; Trammel, 2003). Our results indicate that student veterans with greater self-advocacy skills may be more likely to acquire and effectively use academic supports. The use of academic supports may have promoted their success in the classroom.

A mediation analysis demonstrated that the SV-SASA mediated the relationship between number of credits attempted and GPA. This may suggest that students who take more credits may be more confident in their ability to satisfy academic requirements due to their acquisition of academic supports (facilitated by effective self-advocacy skills), and these same students tend to demonstrate greater academic success. One may expect that a student veteran with a more difficult course load would have to distribute their time and effort across a greater number of courses, resulting in a diminished ability to achieve academic success. However, previous research aligns with our results, finding a positive relationship between academic performance and difficulty of course load, even while controlling for academic ability (Duby & Schartman, 1997; Szafran, 2001).

Demographic characteristics (i.e., age and gender) did not explain academic performance in our sample, which contradicts findings from a previous study that found that male gender and younger age negatively impacted semester GPA in student veterans (Bryan et al., 2014). These contradictory findings may be due to sampling differences, but they nonetheless highlight the need for further investigation into the impact that demographic characteristics have on the academic performance of student veterans. The extent to which student veterans in our sample were exposed to NSSV services did not explain academic performance. Academic performance also did not vary with respect to first-generation status, which contradicts previous research which found that GPA is lower among first-generation college students with

disabilities (Lombardi, Murray, & Gerdes, 2012). The body of research relating to first-generation college students with disabilities is scant, however, and these contradictory findings highlight the need for research that explains the unique and combined effects of characteristics associated with first-generation students, student veterans, and college students with a disability. Specifically, understanding how these unique and combined effects may influence academic performance would be of particular interest.

Factors Explaining Self-Advocacy Skills

Participants with higher SV-SASA scores met in person with a NSSV practitioner for more hours within fall 2015, and were receiving NSSV services for a longer period of time. Given this finding it is feasible to suggest that participants' self-advocacy skills benefitted from NSSV's supported education services, though the cross-sectional design limits our assertion of causality. Nonetheless, this result affirms our initial hypothesis and supports the convergent validity of the SV-SASA by aligning with previous research which indicated that self-advocacy skills may be amenable to targeted intervention among college students with disabilities (Palmer & Roessler, 2000; Walker & Test, 2011; White & Vo, 2006; White et al., 2014). Furthermore, our findings provide an impetus for future research exploring the effect of interventions targeting the development of self-advocacy skills among this population.

As theoretically expected, our results indicated first-generation student veterans had lower SV-SASA scores. This finding was evident while controlling for variables associated with exposure to NSSV services, demographic characteristics, utilization of on-campus disability services, and number of disabling health conditions. Our findings are consistent with research which has indicated that first-generation students may have weaker academic preparation (Engle, 2007) and fewer informational resources (Stephens et al., 2012). These characteristics have negative implications for self-advocacy skill development (i.e. knowledge of self, knowledge of rights), because first-generation student veterans with disabilities may have less knowledge of how their disability interacts with postsecondary academic expectations or the processes that dictate the provision of needed supports (Test et al., 2005).

Our results highlight the need for additional research investigating how the unique experiences of student veterans might intersect with characteristics associated with first-generation students and students with disabilities in terms of developing self-advocacy skills. Characteristics associated with veteran status likely have negative implications for self-advocacy skills, given that disabled student veterans may have limited experience with disability-related policy (Kraus & Rattray, 2013) and may be less willing to acknowledge and disclose their disability relative to non-veteran students with disabilities (Church, 2009; Kraus & Rattray; Shackelford, 2009).

Our results also revealed that student veterans with higher SV-SASA scores tended to report more disabling health conditions (e.g., PTSD, TBI). While the number of conditions was originally intended to quantify the severity of impairments, this finding may indicate that this variable reflected an aspect of the student veterans' self-advocacy skills. The conceptual framework of self-advocacy posited by Test et al. (2005) suggests that a foundational component of self-advocacy is an awareness of how one's disability impacts their daily life. Student veterans with greater self-advocacy skills may have an increased awareness of their impairments and may therefore be more likely to disclose these disabling health conditions to university service providers. Nonetheless, further research is warranted to study relationships between student veterans' self-awareness, the extent to which they self-report disabilities, and the development of self-advocacy skills.

Psychometric Properties of the SV-SASA

This study presents preliminary evidence that the SV-SASA has adequate psychometric properties as a measure of self-advocacy skills among student veterans with disabilities. Good internal consistency reliability was established among a subset of our sample, which suggests that the seven items on the SV-SASA are consistent in their ability to measure the intended construct of self-advocacy skills. The relationships found between SV-SASA score and exposure to NSSV services, GPA, and first-generation status operated as theoretically expected and support the convergent validity of the assessment.

Content validity for the seven items in the assessment is established through theoretical support from the conceptual framework by Test et al. (2005). Several items relate to the student veteran's ability to communicate and resolve conflicts with others within the context of building relationships necessary to acquire and effectively use academic supports (i.e.,

communication). There is an item related to the student veteran's self-awareness (i.e., knowledge of self), and additional items relate to the student veteran's knowledge of their needs (i.e., knowledge of self) and available supports (i.e., knowledge of rights) in the context of initiating the effective use of academic supports.

Expert validity also lends support to the construct validity of the SV-SASA. The SV-SASA has a similar structure to that of a measure developed by staff within the DePaul's Center for Students with Disabilities (Falk et al., 2013), who possess expertise in working with college students with disabilities. Items were altered and added based on a collaborative process with NSSV practitioners, who have expertise in promoting self-advocacy skills within student veterans with disabilities. This collaborative process included discussion of interventions that promote self-advocacy skills typically delivered, and opportunities for the clinical team to provide input on the SV-SASA items and scoring.

The establishment of the SV-SASA as a valid measure of self-advocacy skills in student veterans with disabilities has important implications for both service providers and researchers working with this population. Much of the research investigating interventions that promote self-advocacy skills among college students with disabilities measure the outcomes of these interventions by monitoring the presence of behaviors needed to successfully acquire an accommodation before and after the intervention (Palmer & Roessler, 2000; Walker & Test, 2011; White & Vo, 2006; White et al., 2014). While this design reflects the immediate impact of such an intervention, it does not allow for continued evaluation of the self-advocacy skills of the student. The structure of the SV-SA-SA allows for the longitudinal tracking of the development of self-advocacy skills by using a scale that represents the extent to which the student requires practitioner support. This allows service providers to measure the development of these skills over time and to identify specific components of self-advocacy that may require further development.

The establishment of the SV-SASA as a valid measure of self-advocacy skills in this population will also provide researchers with a valuable tool for investigating factors capable of influencing the development of self-advocacy skills. Researchers may also use this tool as a means of investigating the outcomes of intervention that seeks to promote the self-advoca-

cy skills of this population, or as a means of exploring the relationship between self-advocacy skills and indicators of academic or employment success.

Limitations and Future Research

The results of this study should be considered in the context of the study's limitations. Internal consistency reliability was obtained for only a subset of the sample (n = 25), as NSSV practitioners were unable to answer one or more items on the SV-SASA for some participants. Completion of all items on the SV-SA-SA requires a thorough knowledge of the student veteran's self-advocacy skills. In the present sample for example, approximately half of the participants did not utilize campus disability services in fall 2015 and therefore NSSV staff were unable to provide scores on related SV-SASA items for those participants. Results of a regression analysis (not reported here) indicated that students who spent more time in-person with a NSSV practitioner had more items on the SV-SASA completed. To enable completion of the SV-SASA, practitioners should therefore be educated on the importance of meeting in-person with the student to ensure a full understanding of their self-advocacy skills. Furthermore, inter-rater reliability for the SV-SASA must be established; this effort can be supported by the development of a systematic method for training the administrators of the assessment.

This study focused on three components of self-advocacy within the conceptual framework proposed by Test et al. (2005; i.e., knowledge of self, knowledge of rights, communication), and the SV-SASA included items pertaining to only these components. Future research relating to the development of the SV-SA-SA should consider the inclusion of an item relating to the fourth component of self-advocacy: leadership skills. Leadership in the context of self-advocacy skills refers to the ability to function within a group to advocate for others and impact change on an institutional level (Test et al., 2005). This may be particularly relevant for student veterans, as many veterans cite improved leadership skills as a result of their service (Zoli et al., 2015). Promoting the self-advocacy skills of student veterans should include harnessing these leadership skills in order to empower them to enact positive policy change that benefits both veteran and non-veteran students with disabilities.

This study includes limitations that are inherent in any cross-sectional study design. Causal relationships cannot be tested in a study that includes data at only one point in time. Furthermore, the generalizability of the results are limited by the small sample size. Future research should consider the use of longitudinal and experimental designs to determine the impact of targeted intervention on the self-advocacy skills and academic performance of student veterans with disabilities. In addition, high school GPA should be included in analyses to determine if pre-existing academic ability influences observed outcomes.

Future research should also explore the use of this instrument among non-veteran students with disabilities. Not only will this lead to further understanding of self-advocacy skills among non-veteran students with disabilities, but a comparison of scores on the SV-SASA between veteran and non-veteran students with disabilities will facilitate enhanced understanding of how self-advocacy skills compare between these groups. This would enhance interventions that target self-advocacy skills among student veterans with disabilities by delineating how student veterans experience their disability uniquely, and what implications this unique experience has on their ability to advocate for supports that enhance their academic performance.

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Table 1

Demographic Characteristics of NSSV Participants

Characteristic	n (%) (N = 49)
Age, yr, $M \pm SD$ (range)	$30.39 \pm 6.5 (23-54)$
Gender	
Male	41 (83.7)
Female	7 (14.3)
Other	1 (2.0)
First generation status	
First generation student	21 (42.9)
Not a first generation student	28 (57.1)
Enrollment Status	
Enrolled at CSU	44 (89.8)
Enrolled at FRCC	5 (10.2)
Disability Services (DS) status	
Receiving DS	24 (49.0)
Not receiving DS	25 (51.0)

Note. M = mean; SD = standard deviation; CSU = Colorado State University; FRCC = Front Range Community College.

Table 2
Summary of Self-Reported Conditions of NSSV Participants

Self-reported condition	n (%) (N = 49)
PTSD	26 (53.1)
TBI	22 (44.9)
Physical/Orthopedic Injuries	17 (34.7)
Sensory Impairments	10 (20.4)
Anxiety	7 (14.3)
Other Physical Conditions	6 (12.2)
Depression	5 (10.2)
Other Psychological Conditions	5 (10.2)
Cognitive Impairments	4 (8.2)
LD, dyslexia, or ADD	4 (8.2)

Note. PTSD = post-traumatic stress disorder; TBI = traumatic brain injury; LD = learning disability; ADD = attention deficit disorder; sensory impairments = hearing loss, visual deficits, auditory processing disorder, tinnitus; other physical conditions = leukemia, spinal cord injury, transient ischemic attack, asthma, insomnia; other psychological conditions = bipolar disorder, military sexual trauma, bulimia nervosa.

Table 3

Zero-Order Correlations Between Variables Explaining Fall 2015 GPA and SV-SASA Score (N = 48)

Variable	1	2	3	4	5	6	7	8	9
1. Fall 2015 GPA									
2. Average SV-SASA									
score	.506**								
3. Age	.122	.041							
4. Gender	.021	142	.095						
5. First Generation									
Status	045	343*	084	.159					
6. Total duration of in-person meetings	113	.147	002	.010	128	_			
7. Length of time receiving NSSV services	.125	.400**	081	070	211	.004			
8. Credits attempted	.437**	.455**	072	051	096	123	.275		
9. Number of conditions reported10. Disability services	.181	.217	.346*	038	.065	070	142	.087	_
status	110	075	.226	009	106	.368**	188	133	.126
$Mean \pm SD$	$2.57 \pm$	$2.61 \pm$	$30.39 \pm$			$4.73 \pm$	50.34 ±	$12.37 \pm$	2.16 ±
	1.13	0.64	06.5	_		7.48	34.5	3.36	1.01

Note. NSSV = New Start for Student Veterans; SV-SASA = Student Veteran Self-Advocacy Skills Assessment; SD = standard deviation; *p<.05, **p<.01

Table 4

Linear Regression Model Explaining Average SV-SASA Score (N = 49)

R	R^2	Variable	B	SE B	β	p
.675	.455	Age	.001	.013	.009	.947
		Gender	104	.204	061	.612
		First-generation status	313	.158	245	.055
		Total duration of in-person meetings	.019	.011	.221	.092
		Length of time receiving NSSV services	.005	.002	.264	.045
		Credits attempted	.065	.024	.344	.009
		Number of conditions reported	.169	.081	.267	.044
		Disability services status	156	.168	124	.358

Note. B = unstandardized regression coefficient; SEB = standard error of the unstandardized regression coefficient; $\beta =$ standardized regression coefficient; NSSV = New Start for Student Veterans; SV-SASA = Student Veteran Self-Advocacy Skills Assessment.

Table 5

Linear Regression Model Explaining Fall 2015 GPA (N = 48)

R	R^2	Variable	В	SE B	β	p
.606	.367	Age	.020	.025	.114	.431
		Gender	.198	.399	.066	.623
		First-generation status	.201	.327	.088	.542
		Total duration of in-person meetings	019	.022	127	.394
		Length of time receiving NSSV services	003	.005	100	.502
		Credits attempted	.086	.054	.240	.122
		Number of conditions reported	.005	.170	.004	.979
		Disability services status	020	.332	009	.953
		Average SV-SASA score	.868	.311	.489	.008

Note. B = unstandardized regression coefficient; SEB = standard error of the unstandardized regression coefficient; β = standardized regression coefficient; SEB = New Start for Student Veterans; SV-SASA = Student Veteran Self-Advocacy Skills Assessment.

Appendix

Item Stems for Student Veteran Self-Advocacy Skills Assessment (SV-SASA)

- 1. Demonstrates self-understanding: Demonstrates an understanding of personal strengths and challenges that contribute to academic progress
- 2. Utilizes New Start for Student Veteran supports: Proactively seeks and utilizes assistance from New Start's Student Veteran Coordinator (SVC).
- 3. Communicates clearly with course instructors: Communicates with university faculty to clarify academic expectations.
- 4. Utilizes RDS services: Effectively utilizes RDS academic accommodations to support academic progress.
- 5. Demonstrates initiative: Requests/ informs university faculty of RDS accommodations.
- 6. Demonstrates effective communication and assertiveness skills: Demonstrates the communication and assertiveness skills needed to foster healthy interpersonal relationships.
- 7. Demonstrates effective conflict resolution and emotional (e.g. anxiety, anger, sadness) management skills: Demonstrates the conflict resolution and emotional management skills needed to foster healthy interpersonal relationships.

Note. Student Veteran Coordinator = NSSV practitioner providing services to student veteran; RDS = CSU's campus disability services office, Resources for Disabled Students.