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## The Effects of Mattering and Combat Deployment on Student Service Members/Veterans' College Adjustment: A Psychosociocultural Approach

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### Abstract

This study examined college adjustment for 157 student service members/veterans' (SSM/V) college adjustment using a psychosociocultural framework to explore psychological (stress), social (connectedness and mattering), and cultural (view of self in school given military experience) dimensions. A series of mediation analyses revealed that mattering fully mediated the relationships of social and campus connectedness and negative view of self in school with college adjustment, respectively. Mattering also partially-mediated the relationship of positive view of self in school and college adjustment. Although those SSM/V who had been deployed to a combat zone held more negative views of self in school and reported decreased social connectedness than those who had not, deployment to a combat zone did not moderate the relationships of social (social and campus connectedness) and cultural (view of self in school) variables with college adjustment. The study's findings direct student service personnel to provide emic support and programming to support SSM/V educational experiences and college adjustment.

**Keywords:** Student Service Members/Veterans (SSM/V), mattering, college adjustment

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### Introduction

On college and university campuses across the nation, student service members or students who are veterans (SSM/V) are a growing student population with unique needs (Radford, 2009), and the research to better understand and serve this student group continues to evolve. Barry, Whiteman, and Wadsworth (2014), identified SSM/V to include former (veteran) and current (active duty, reserve, and National Guard) service members. The Department of Veterans Administration (2016) predicts a Post-9/11 veteran population of almost 3.5 million by 2019, and over one million military-affiliated individuals are applying the GI Bill to access higher education (Department of Veteran Affairs, 2013). Although these educational benefits are helpful, there is question as to whether finances alone are adequate for educational adjustment and/or success if SSM/V are unable or inadequately supported in other ways (Bailey, Drury, & Randall, 2017). As such, the need to further explore the educational experiences of SSM/V, particularly those who have been deployed (Hoglund & Schwartz, 2014), is warranted.

One of the most difficult challenges and largest sources of stress for SSM/V is the transition and adjustment to the world of academia (Cook & Kim, 2009; Hoge, 2010). A whole (Canon, 1996) or integrated (Jones, 2013) approach is most appropriate to best explore the different influences of SSM/V transition and adjustment within higher education. In order to examine the multidimensionality of SSM/Vs' adjustment, this study applied a psychosociocultural (PSC) framework (Gloria & Rodriguez, 2000) that emphasizes three interconnected dimensions (i.e., psychological, social, and cultural) within the university context to understand students' educational experiences and persistence processes (Gloria & Rodriguez, 2000). Originally developed for Latinx college students, the PSC framework has also operationalized the experiences of other underserved and underrepresented student populations (e.g., first-generation college students; Gloria & Castellanos, 2012; community college students, Edman & Brazil, 2007; Latino male undergraduates, Gloria, Castellanos, Scull, & Villegas, 2009). The three core non-cognitive dimensions address self-

beliefs and intrapersonal affect, social connections and relationships, and cultural values and processes within the environmental context of the university setting as they influence students' adjustment, educational well-being, and academic persistence decisions (Castellanos & Gloria, 2007; Gloria & Rodriguez, 2000). The model allows for a dimensionalized and contextual understanding of students' educational processes and experiences. For this study, the psychological dimension considered stress, the social dimension assessed mattering and relational connectedness, and the cultural dimension explored one's perceptions of being a SSM/V within the university setting to address college adjustment comprehensively and contextually. [See Borsari et al. (2017) and Jenner (2017) for comprehensive reviews of transitional processes experienced by SSM/V on campus.]

### *Psychological Dimension—Stress*

In addition to the stressors that SSM/V often experience as a result of their military service (Glover-Graf, Miller, & Freeman, 2010), they have unique educational stressors relative to their service member/veteran status. For example, despite the financial support that many receive through the Post-9/11 GI Bill, many still work full- or part-time to manage their financial responsibilities (Kim & Cole, 2013). It is estimated that the Bill covers only 73% of four-year public institution costs and 31% of private college costs (Field, 2008). As SSM/V are often first in their families to go to college and have more responsibilities outside of academia, they often spend more time working off-campus than their civilian student counterparts (Kim & Cole, 2013). Most (85%) SSM/V also receive financial aid to pay for their educational expenses (Molina, 2014). Although newer research indicates that increased access to funding (i.e., GI Bill) did not affect academic performance for two cohorts of veterans attending college (Bailey et al., 2017), others indicate that finances are the most significant factor affecting SSM/V persistence in higher education (Ackerman, DiRamio, & Garza Mitchell, 2009; Jenner, 2017). As such, the degree to which financial stress influences SSM/V college adjustment warrants further study.

Academic stress is another factor that affects SSM/V transition from military to civilian life (Ackerman et al., 2009; Cooper, Caddick, Godier, Cooper, & Fossey, 2018). From difficulties sitting in classes for extended time periods to challenges focusing on academics, Ackerman et al. (2009), described how many SSM/V have to relearn study skills and (re)acquire the culture of higher education. Also, SSM/V often experience stress as they move from a highly structured military environment that requires standardization of identity (Cooper et al., 2018 Dunivin, 1994) to higher education where students are expected to express themselves freely and challenge or question authority (Ackerman et al., 2009). Some SSM/V report that their military experience can add interpersonal tension and stress with classmates (Rumann & Hamrick, 2010).

### *Social Dimension—Sense of Mattering and Connectedness*

Mattering is the perception that “we are a significant part of the world around us” (Elliot, Kao, & Grant, 2004, p. 339). That individuals matter to others influences their sense of self and how they perceive that others are interested or concerned about them (Elliot et al., 2004; Tovar, Simon, & Lee, 2009). Mattering within the context of higher education has been connected to an individual's perception of feeling connected with and belonging to one's contiguous peer group (Dueñas & Gloria, 2017; France & Finney, 2010; Schlossberg, 1989), social connections (Elliot et al., 2004), and adjustment within the proximate environment (Garriott et al., 2010).

Connecting with and having a sense of affiliation within a peer group is central to the psychological and academic adjustment of undergraduates, in particular to underserved student populations who have increased educational challenges in higher education (e.g., first-generation college students, Latino undergraduates) (Gloria et al., 2009). The implications of connection and

peer-group effects are also evidenced in armed forces processes (e.g., unit cohesion, military culture) as well (Cooper et al., 2018; Siebold, 2007). However, SSM/V reported a lower sense of belonging, less campus connection, and less campus engagement than their non-SSM/V peers (Durdella & Kim, 2012; Kim & Cole, 2013; Radford, 2011).

In particular, the SSM/V population has unique considerations that are influenced by the level of connection with a peer group (DiRamio, Ackerman, & Mitchell, 2008), and finding connection with other SSM/V is a key component for mediating stress and promoting academic success (DiRamio et al., 2008; Rumann & Hamrick, 2010). For example, Ingala, Softas-Nall, and Peters (2013) found that unit and post-deployment support uniquely explained SSM/V adjustment to college. Also, SSM/V were more likely to seek support from other SSM/V than non-SSM/V, as they felt most comfortable with those with similar military and combat experience (Livingston, Havice, Cawthon, & Fleming, 2011). The influence of peer connection, sense of belonging, and adjustment to college however has not been fully studied with SSM/V.

### *Cultural Dimension—Congruity of Values*

An integrated identity is an individual's need to assimilate and produce various facets of themselves (Syed, 2010), and is a relevant construct for many SSM/V as they come from diverse backgrounds with many different inter-woven identities (Jones, 2013). Having a military background adds increased complexity to a population with already many intersecting identities (Bachman, Segal, Freedman-Doan & O'Malley, 2000). As SSM/V are enculturated into and grow accustomed to military culture (Jones, 2013; Siebold, 2007), the personal and social contexts that define identity are constricted such that the “dominant values dictate norms and expectations” (Torres et al., 2009, p. 577). However, the socially-constructed sense of identity involves societal norms, expectations of others, and the integration of multiple identities (Torres, Jones & Renn, 2009). Although social identities of gender, sex, socioeconomic status, age, race, disability, college-generation status as well as other military- and veteran-specific demographics (e.g., enlisted rank, combat experience, years of service) differentially affect student veterans' transition into academia (Jones, 2013), it is the deeper-structure meaning and inherent value of one's military identity that is this study's focus.

The integration of identities that were effective in the military will inevitably need to be reframed, expanded or constricted, and adjusted as SSM/V face multiple intersecting and different domains in the college environment (Abes, Jones, & McEwen, 2007) that are often major sources of stress. For example, Livingston et al. (2011), indicated that SSM/V “downplayed or hid” their service status from members of the campus community, rendering their previous military status as “invisible” in order to “blend in” (p. 315). As a result of concealing their service status, SSM/V were also less likely to ask for support or help.

Another aspect of identity is the implicit notion of self (i.e., self-efficacy, self-concept, and self-belief). For example, DiRamio et al. (2008), reported that SSM/Vs' years of military service and time between academic pursuits resulted in stress and diminished academic skills and competency, which in turn negatively informed their notion of self as a service member or veteran. Many service members and veterans struggle to adjust to a civilian lifestyle when exiting from the military and are challenged to subscribe to new social norms (i.e., college norms; Ackerman et al., 2009). For example, DiRamio et al. (2008), indicated that many SSM/V do not use writing or math in the military, and as a result, their abilities in a college environment might inaccurately be judged as unskilled or uneducated. Similarly, service members are trained into pre-assigned identities that are highly valued within the military (Jones, 2013), but these emic values and/or identities may have little relationship or even perceived value in their new role as students. Indeed, how SSM/V perceive

the cultural fit of their military service values and identity is of considerable importance to their overall experience of cultural congruity (i.e., match of personal and university values; Gloria & Robinson Kurpius, 1996).

### *College Adjustment*

The process of adjusting from military to civilian life, particularly in the context of higher education, is difficult. In a study of 15 re-enrolled male student veterans, transitioning from the structure of military life to the unstructured setting of higher education was challenging (Livingston et al., 2011). Similarly, Ackerman et al. (2009), identified that SSM/V experiences, in particular the experience of deployment to a combat zone, made for a difficult return and focus in college. In interviews with 25 combat veterans who transitioned to college, they reported salient challenges to manage relational stress, post-traumatic stress, and general mental health. Indeed, the transition from military (command and control) to civilian/ higher education (open and unstructured) life is identified as one of the most difficult adjustments for SSM/V (Ackerman et al., 2009; Alexander, 2014; Brown & Gross, 2011). To that end, Gregg, Howell, and Shordike (2016) found phenomenological themes of repurposing military experiences to student life, reconstructing identities, and navigating contexts and interactions as SSM/V transitioned to higher education. Kato, Jinkerson, Holland, and Soper (2016) also identified similar themes of college adjustment for SSM/V, including the need for social support and belonging.

It is also helpful to draw from the general educational literature to conceptualize this study. College adjustment has been viewed as students' ability to perceive oneself as fitting in with the college environment academically, socially, and emotionally (Johnson, Gans, Kerr, & LaValle, 2010). Likewise, perceived stress, living and campus environments, and parental education are environmental variables that contribute to a students' college adjustment (Gan, Hu, & Zhang, 2010). Further, research (Garriott et al., 2010; Love et al., 2009) has found that more secure peer and institutional connections predict greater psychological, emotional, and academic adjustment.

### *Study's Purpose and Research Questions*

By applying the PSC framework, we used a holistic student approach to explore factors that influence and inform SSM/Vs' college adjustment. First, we assessed group mean differences between those deployed and not deployed to a combat zone, and hypothesized that those who were not deployed to a combat zone would have a higher sense of mattering, connection, view of self, and college adjustment than those who had been deployed to a combat zone. Next, the extent to which each of the psychosociocultural dimensions (Gloria & Rodriguez, 2000) individually and collectively accounted for variance of college adjustment was explored. We anticipated that the social dimension would be most predictive of college adjustment given the importance of connections for SSM/V (Livingston et al., 2011). To examine the processes more fully, we posed a series of mediator questions. Given the importance of mattering (social) within the university setting and its relationship to persistence and educational wellness (Durdella & Kim, 2012), we anticipated that mattering would mediate the relationships of (1) social and campus connectedness (social); and (2) notions of self in school (positive and negative) (cultural) with college adjustment, respectively.

Finally, we explored whether deployment to a combat zone moderated the relationships of (1) social (mattering, social and campus connectedness) and (2) cultural (notions of self in school-positive, notions of self in school-negative) variables with college adjustment, respectively. We hypothesized that those who had been deployed to a combat zone would have (1) decreased sense of mattering and connectedness and (2) fewer positive and more negative notions of self than those who had not been deployed to a combat zone.

## Methods

### *Study Setting and Procedures*

We conducted the study in a higher educational system in the Midwestern U.S. that included large and small universities and community and/or technical colleges. The inclusion criteria for this study were full- or part-time undergraduates who were 18 years of age or older and service members/veterans (defined as anyone who had served or was currently serving in the U.S. Armed Forces: Marine Corps, Navy, Army, Air Force, Coast Guard, Army National Guard, Air National Guard, Navy Reserve, Army Reserve). After IRB approval, participants were recruited via email, posted announcements (flyer) on social networking sites, student organizations, and by in-person announcements to the targeted group of students (e.g., student organization for SSM/V). Because of the approach to recruitment, a response rate cannot be determined with certainty. Participants completed a 35-45-minute online survey and had the option to enter a raffle to win one of five Target \$20-dollar gift cards.

### *Participants*

A total of 171 students participated. However, the study's focus was on SSM/V who were enlisted personnel (i.e., below the rank of a commissioned officer), which yielded a total of 157 participants who met the study's criteria. Participants represented each military branch and enlisted rank; almost half of the sample was Army-affiliated (49.7%,  $n = 78$ ) and three-quarters held an enlisted rank of E-4 (38.9%,  $n = 61$ ) or E-5 (35.0%,  $n = 55$ ). Participants indicated that they joined the armed forces between the ages of 17 and 30 ( $M = 19.28$ ,  $SD = 2.68$ ). Just over half the sample joined at 18 years of age or younger (51.3%). Length of service ranged from 5 to 288 months ( $M = 71.82$ ,  $SD = 55.81$ ). More than a quarter (28.2%,  $n = 44$ ) of the students indicated that they were still serving. One participant did not respond to this question. The majority of the sample (66.7%,  $n = 104$ ) had been deployed to a combat zone.

The SSM/V ranged in age from 19 to 59 ( $M = 30.90$ ,  $SD = 8.98$ ). Participants primarily self-identified as male (73.2%,  $n = 115$ ), and there were 40 (25.8%) females and two participants who did not respond to this question. By class standing, there were 48 lower division (11 first-years and 37 sophomores), 90 upper division (27 juniors, 42 seniors, 21 fifth-year seniors), and 17 graduate (16 master's and 1 doctoral) students. Two students did not report class standing.

More than half the sample were transfer students (52.2%,  $n = 82$ ) and had stopped out of school at some point in their educational career (56.1%,  $n = 88$ ) because they were deployed, had basic and advanced individual training, or decided to join the armed forces instead. Participants were most frequently enrolled in humanities/natural, physical, biological and social sciences (41.3%,  $n = 64$ ), followed by business (24.5%,  $n = 38$ ) and education (11.0%,  $n = 17$ ). Most of the SSM/V indicated that they were using GI benefits to fund their education (92.9%,  $n = 114$ ) as well as working part- (41.3%,  $n = 64$ ) or full-time (16.1%,  $n = 25$ ). Self-reported grade point averages ranged from 1.89 to 4.00 ( $M = 3.25$ ,  $SD = .51$ ). Finally, almost half of the sample indicated that they were first-generation college students (41.3%,  $n = 64$ ).

### *Instrumentation*

Study participants completed a demographic form, four counter-balanced standardized instruments, and one researcher-developed scale. Each scale was selected to represent a particular dimension of the PSC framework to gain a "whole student" understanding (Gloria & Rodriguez, 2000) of SSM/Vs' college adjustment.

**Demographic Form.** The demographic items assessed descriptive (e.g., age, sex, employment, veteran status, service branch, rank, age they joined service, combat experience) and educational

(e.g., type of institution currently attending, class standing, grade point average, continuity of enrollment, use of VA benefits, major, familial education) factors.

**Stress (Psychological).** Two subscales of the College Stress Inventory (Muñoz, 1985) were used to measure perceived academic (8 items) and financial (8 items) stress. Originally-developed for Latinx undergraduates, the scale consists of four domains of stressors. For this study, only the academic and financial subscales. For example, sample items included, “being obligated to repay student loans” (financial) and “taking a test” (academic). Participants responded on a Likert-type scale from 1 (*not at all stressful*) to 5 (*highly stressful*). Higher scores indicated more perceived academic or financial stress, respectively. The academic and financial subscales (eight items each) have been used with a Latinx undergraduate sample with adequate internal consistency (i.e., .74 and .84) and predictive validity of persistence decisions (Gloria, Castellanos, Lopez, & Rosales, 2005).

**Mattering (Social).** A 29-item scale, the College Mattering Inventory (Tovar et al., 2009) assessed perceived sense of belonging in academic environment. Participants indicated the extent to which statements represented their experience on a Likert-type scale from 1 (*not at all*) to 5 (*very much*). Sample items include: “other students rely on me for support” and “I often feel socially inadequate in college.” Higher scores indicate a more positive perceived sense of belonging to the academic environment (10 items were reverse-coded). In a large multi-staged validity study of the scale with a diverse sample of 3,139 community college and university students (including masters-level graduate students), Tovar et al. (2009), reported predictive validity and reliability (.91) of the total score.

**Connectedness (Social).** The Social Connectedness Scale (Lee & Robbins, 1995) is a 34-item scale that measured perceived sense of belonging in participant’s overall social environment and campus environment. Participants indicate their level of agreement with each statement by responding to 20 items pertaining to social connectedness (SCS) using a Likert-type scale from 1 (*strongly disagree*) to 6 (*strongly agree*), and 14 items relating to campus connectedness (CCS) using a Likert-type scale from 1 (*strongly disagree*) to 5 (*strongly agree*).

Ten items for social connectedness and eight items for campus connectedness were reverse-coded. Sample items are, “I am able to connect with other people” (social connectedness) and “other students make me feel at home on campus” (campus connectedness). Higher scores indicate a more positive sense of belonging in their social and campus environments. Adequate reliability and convergent and discriminant validity have been reported for the scales when used to examine 227 undergraduates’ self-esteem and depression (.92, Armstrong & Oomen-Early, 2009), and 400 Taiwanese college students’ loneliness (.91, Chen & Chung, 2007).

**Emic View of Self (Cultural).** The Veterans Returning to College: Notion of Self Scale (researcher-developed) was created to assess SSM/V’s perceived sense of self in school given one’s military experience. Important to scale development was consideration of the role and emphasis of being a veteran and the salience of these values and behaviors to understand oneself as a student returning to college. Scale items were developed from the literature on SSM/V’s noted skills and strengths and educational concerns and challenges. The scale included two 10-item subscales that assessed positive and negative self-perception in school because of military service. A positive item is, “given my previous military service my discipline to follow through on tasks will allow me to do well in school,” whereas a negative or challenge item is, “given the time I have provided in military service I feel that I am uncertain about current academic norms.” Participants indicated their level of item agreement on a Likert-type scale from 1 (*strongly disagree*) to 7 (*strongly agree*). Higher scores reflected a more positive or negative perceived notion of self in school. Ten items were reversed-scored.

A principal axis factor analysis was conducted on the scales 20 items, yielding a 4-factor solution, each with eigenvalues over 1.0. The first factor included the 10 positive items and accounted for a

third of the variance (33.62%), with each item loading at .73 and above (eigen = 7.05). The next three factors included the challenge items, which in total accounted for 26.43%. The three factors addressed managing experienced trauma of the military within the academic setting (18.92%, eigen= 4.22), academic challenges (4.13%, eigen= 1.30), and not being valued given one's previous military experiences (3.39%, eigen value = 1.12). Each of the negative items had loadings of .55 and above and one item loaded across two factors. Given these initial findings, the positive and challenge scales were used as two separate scales.

**College Adjustment.** The Adjustment Scale (Kaya & Weber, 2003) consists of 28 items that measures perceived level of social, academic, institutional, and personal adjustment of college students. Items are based on a Likert-type scale from 1 (*strongly disagree*) to 7 (*strongly agree*). Eleven items are reverse-coded, where higher scores indicated more positive perceived college adjustment. Sample items include "I regularly attend classes" and "most students at this university have values and attitudes different from my own." Used with a stratified sample of 200 Midwestern and 208 Turkish undergraduates to assess privacy regulation and college adjustment, Kaya and Weber (2003) reported a total scale internal consistency of .83.

### Results

Prior to analyses, we set a *p*-value of .05 and an effect size of .20. An 80% mean scale score (i.e., proportional scale mean based on items answered) was used to address missing data. The scales' descriptives met distribution normalcy (i.e., skew and kurtosis within standard range of +/-2, with exception of the emic positive view of self, which has a negatively skewed distribution of -2.72). The study's scales had adequate internal consistency ranging from .79 to .95. See Table 1 for the scales' descriptives and correlations. To examine variable relationships, we conducted Pearson's bivariate correlations (See Table 1). Findings revealed that a higher sense of mattering, social and campus connections, and positive notion of self in school given military background was significantly related to an increased sense of college adjustment. More negative self-perception in school was related to decreased college adjustment.

Table 1. *Variable Descriptives and Correlations*

Variable	<i>M</i>	<i>SD</i>	$\alpha$	2	3	4	5	6	7	8
1. Academic Stress	2.56	0.80	.80		-	-.14	-.09	-.01	.20	-.10
2. Financial Stress	2.59	1.04	.88	.68 <sup>***</sup>	.19 <sup>°</sup>	.07	-.03	.07	.04	-.05
3. Mattering	3.17	0.76	.93		-				-	.56 <sup>***</sup>
4. Social Connectedness	3.82	0.90	.95			.61 <sup>***</sup>	.73 <sup>***</sup>	.22 <sup>**</sup>	.53 <sup>***</sup>	
5. Campus Connectedness	3.56	0.81	.94				.74 <sup>***</sup>	.14	.64 <sup>***</sup>	.36 <sup>***</sup>
6. Notion of Self-Positive	5.96	1.08	.94					.28 <sup>**</sup>	.60 <sup>***</sup>	.39 <sup>***</sup>
7. Notion of Self-Negative	3.98	1.20	.85					-	-.16 <sup>°</sup>	.26 <sup>**</sup>
8. College Adjustment	4.72	0.60	.79							-.34 <sup>***</sup>

Note. <sup>°</sup> *p* ≤ .05; <sup>\*\*</sup> *p* ≤ .01, <sup>\*\*\*</sup> *p* ≤ .001.

*Preliminary analyses.* Given the heterogeneity of the study's demographics (e.g., students standing, military branch, rank, transfer, generation in college, major, sex), a series of group mean difference tests (i.e., *t*-tests and ANOVAs) assessed whether the sample could be used as a total group. Non-significant differences emerged for these preliminary analyses using a Bonferonni corrected critical *p*-value of .003 (.05 divided by 15) and thus the total sample was used.

*Question 1—Were there differences by deployment to a combat zone for the study's variables?* A short-series of *t*-tests was conducted to address group mean differences for the study's variables by deployment to a combat zone. Two significant group differences emerged. First, SSM/V who had not been deployed to a combat zone ( $M = 4.04$ ,  $SD = .80$ ) had higher social connectedness ( $t = -2.22$ ,  $df = 149$ ,  $p = .028$ , Cohen's  $d = .39$ ) than those who had been deployed to a combat zone ( $M = 3.70$ ,  $SD = .92$ ). Second, SSM/V who had been deployed to a combat zone ( $M = 3.70$ ,  $SD = .92$ ) reported more negative views of self in school given their military experience ( $t = 3.60$ ,  $df = 150$ ,  $p = .000$ , Cohen's  $d = .20$ ) than those who had not been deployed to a combat zone ( $M = 3.50$ ,  $SD = 1.04$ ).

*Question 2—To what extent do the psychological, social, and cultural dimensions individually and collectively predict college adjustment?* A three-step hierarchical regression was conducted to determine the individual and collective variance accounted for by each of the psychosociocultural dimensions of college adjustment. A total of 34% of the variance of college adjustment was accounted [ $F(7, 130) = 9.01$ ,  $p = .000$ ]. The psychological [Step 1;  $\Delta r^2 = .01$ ,  $\Delta F(2, 128) = .69$ ,  $p = .505$ ] and cultural [Step 3;  $\Delta r^2 = .03$ ,  $\Delta F(2, 123) = 2.50$ ,  $p = .086$ ] dimensions were not significant. The social dimension, entered as the second step, accounting for 30% of the variance [ $\Delta F(3, 125) = 18.26$ ,  $p = .000$ , Cohen's  $f^2 = .41$ ] of college adjustment, where mattering was the only significant predictor ( $\beta = .57$ ,  $t = 5.14$ ,  $p = .000$ ).

*Question 3—Does mattering mediate the relationships of 1) social (social and campus connectedness) and 2) cultural (notion of self-positive and notion of self-negative) variables with college adjustment, respectively?* We conducted a series of mediation analyses to determine the effect of mattering on the relationships of social (social and campus connectedness) and cultural (notion of self – positive and negative) variables with college adjustment, respectively (See Table 2). Applying the approach to mediation analysis by Baron and Kenny (1986) and Kenny, Kashy, and Bolger (1998), the steps require the independent variable to significantly predict the mediator, path a, (mattering) and the mediator to predict significantly the dependent variable, path b (college adjustment). When the independent and mediator variable is simultaneously entered into the equation in prediction of the dependent variable, path c, only the mediator remains significant, indicating a full mediation. The analyses met the requirements such that mattering fully mediated the relationships of (1) social and campus connectedness and (2) negative view of self in school because of military service, respectively (See Table 2, next page). Mattering partially-mediated the relationship of positive view of self in school and college adjustment.

Table 2. Hierarchical regression of college adjustment with mattering as a mediator variable on connectedness and notion of self in school

Variable	B	$\beta$	SE ( $\beta$ )	CI 95%
<i>Mediator Model 1</i>				
Social Connectedness	.029	.043	.092	[-0.136, 0.223]
Mattering	.412**	.529**	.092	[0.337, 0.719]
<i>Mediator Model 2</i>				
Campus Connectedness	-.022	-.030	.108	[-0.241, 0.180]
Mattering	.450**	.577**	.108	[0.354, 0.798]
<i>Mediator Model 3</i>				
Notion of Self-Positive	.081°	.151°	.074	[0.004, 0.297]
Mattering	.408**	.523**	.074	[0.364, 0.681]
<i>Mediator Model 4</i>				
Notion of Self-Negative	-.031	-.062	.086	[-0.231, 0.108]
Mattering	.408**	.523**	.086	[0.341, 0.702]

Note. Model 1:  $R^2 = .31$  and  $F = 28.63$ ,  $p = .000$ ; Model 2:  $R^2 = .31$  and  $F = 28.53$ ,  $p = .000$ ; Model 3:  $R^2 = .33$  and  $F = 31.47$ ,  $p = .000$ ; Model 4:  $R^2 = .31$  and  $F = 28.84$ ,  $p = .000$ . °  $p \leq .05$ , \*\*  $p \leq .001$ .

*Question 4—Does deployment to a combat zone moderate the relationship of 1) social and 2) cultural variables with college adjustment, respectively?* Through a series of simple regressions, we assessed whether deployment to a combat zone moderated the relationships of social (social and campus connectedness) and cultural (notion of self-positive and notion of self-negative) variables with college adjustment, respectively. We created an interaction variable of deployment to a combat zone (1 = yes, 0 = no) x mattering. The predictor variables were centered (i.e., means were set to zero prior to computing the interaction term to decrease nonessential collinearity) and the interaction variable (deployment x mattering) were simultaneously added to the regression. The interaction variable evidenced non-significance for each of the regressions, indicating that deployment to a combat zone did not moderate the relationships of connectedness (social,  $p = .15$  and campus,  $p = .06$ ) and notion of self (positive,  $p = .56$  and negative,  $p = .28$ ) with college adjustment, respectively.

### Discussion

As the number of students who are service members or have veteran status in higher education continues to grow (Department of Veteran Affairs, 2013), there is an even greater need to explore their college adjustment (Barry et al., 2014). For this study, we explored the differences in and relationships of stress, mattering, connectedness, and view of self in relationship to college adjustment. The study included 157 SSM/V of whom the majority were male, first-generation college, Army-affiliated, and had been deployed to a combat zone. The study's hypotheses were generally supported in assessing a whole student understanding of SSM/V college adjustment. Using a psychosociocultural approach (Gloria & Rodriguez, 2000), the study revealed the role of connectedness and mattering to SSM/V college adjustment. The results underscore the need to understand SSM/V educational processes.

Consistent with the literature (Barry et al., 2014), those students who had previous deployment to a combat zone held more negative views of self in school given their military experience than those who had not been deployed. Likewise, those who had not been deployed to a combat zone reported a

greater sense of social connectedness with others. These findings are consistent with previous research that suggests that veterans with combat experience may have additional barriers to academic success. For example, Holland, Mallot, and Currier (2014) reported that SSM/V's with combat exposure have higher instances of mental health concerns, alcohol and/or drug abuse, and a decreased perception of social support. Also, SSM/V's with deployment experience feel less connected on campuses with civilian peers and perceive lower social connectedness with others (Alfred, Hammer, & Good, 2014). Yet, for this study, deployment to a combat zone did not moderate the relationship of social and campus connection and view of self with college adjustment. As this study takes a relational approach to SSM/V educational processes, additional research is needed to support or refute these findings.

Emphasizing the interrelationship elements of SSM/V college adjustment, our integrated or whole student approach (Gloria & Rodriguez, 2000) is an important consideration for SSM/V (Jones, 2013). Although the model in combination significantly accounted for college adjustment, it was the social dimension that accounted for the model's variance. In particular, mattering emerged as the strongest predictor of college adjustment, a finding consistent with Tovar et al.'s (2009), study where mattering was as an important factor in both academic retention and positive student experiences. Moreover, a sense of mattering has been linked with supportive academic environments, such as counselors, instructors, and student-centered programs (Huerta & Fishman, 2014).

Within the military, each soldier holds a collective identity, an important role within the process and success of a unit's mission, and operates under a command-based structure (Ackerman et al., 2009; Brown & Gross, 2011; Siebold, 2007). Likewise, how SSM/V perceived their sense of mattering within the university setting was critical in understanding the relationships of the connection (social and campus) and emic view of self (positive and negative) with college adjustment. More specifically, mattering mediated the relationships of the social (campus and social connectedness) and cultural (emic view of self—positive and negative) dimensions in predicting college adjustment. It was how students felt that they mattered that influenced the relationship of their connections with college adjustment.

Importantly, SSM/V may be connected, but the extent that they matter in these connections ultimately influences their college adjustment. Similarly, mattering served a key role in the association of positive and negative view of self in school given their military experience with college adjustment. Mattering fully mediated the relationship of negative view of self in school and college adjustment, whereas a positive sense of self in school and college adjustment was partially mediated by mattering. That SSM/V felt they mattered influenced how they perceived their strengths and challenges in higher education as individuals with military backgrounds. Ultimately, the experience of mattering to achieve success within a military unit is the exact emic process and integration of self that needs to be reinforced for success within a college setting as well (Jones, 2013).

### *Study Limitations and Future Research*

There are several limitations that warrant discussion. First, study recruitment occurred in a university system with different size institutions (e.g., large and small four-year schools). The institution size may have influenced the SSM/Vs' perceptions of the education setting in ways that were not fully evidenced in the findings. For example, at a small institution the role of a student veteran office may have been more prominent and increased SSM/Vs' sense of mattering. Similarly, while it might be assumed that use of GI benefits to pay for school indicated some connection with the campus' student veterans office, the study did not explore if the participants were involved and/or connected with the campus office. Knowing the perceived role of such offices and/or spaces of

connection for SSM/V could assist to ensure a welcoming environment that is consistent and congruent to their needs and concerns (Radford, 2011).

The study's participants were primarily male (74.2%), and varied in length of military service and deployment period. Although no significant differences emerged for the study's variables by sex, it should not be assumed that the nuances of educational experiences for male and female SSM/V are the same nor that those with differing lengths of deployment or service can be addressed similarly (Rumann & Hamrick, 2010). For example, female-identified Post-9/11 veterans are more likely to be enrolled in college, and also more likely to obtain a college degree (21.9%) than male-identified veterans (16.9%) (Department of Veteran Affairs, 2016). Although they may share a common affiliation and commitment to the armed forces, as well as post-service re-integration into civilian life, SSM/V experiences based on sex, length of service (Ackerman et al., 2009; Alexander, 2014), and student status (Radford, 2011) are clearly different. Differences may not have emerged given the unequal sample size or quantitative approach applied in this study. Likewise, socioeconomic status and race were not a focus of the study, but additional qualitative studies that examine college generational status, gender- or race-informed educational experiences, financial and work-related concerns, undergraduate or graduate status, and length of deployment or service are needed to better understand college adjustment and to ensure that university services are emically-valid and meaningful.

Next, the study did not ask the participants' about their combat experience but instead nominally asked about previous deployment to a combat zone. Given the study's methodological approach, specific information about whether individuals had seen and/or engaged in combat was not addressed. Further, we did not ask about PTSD symptomatology and thus it is unclear as to how such experiences might have influenced the study's variables (e.g., stress, perceptions of self in school). Likewise, service-related injury and disability was not addressed and may have further informed their sense of mattering, connection, or perceived adjustment (ACE, 2010). Instead, we intentionally posed questions about self-perception, regardless of emotional or physical concern or (dis)ability. As the SSM/V literature base continues to expand, the dimension of physicality as it relates to self-perceptions and college student development processes are additional areas for future study.

Finally, as SSM/V increasingly attend and/or return to colleges and universities across the nation, many of whom have had emotional and/or physical injuries or trauma-related experiences (Jones, 2013), further development and implementation of student services programming as well as culturally-specific scales for research purposes are needed. This study's researcher-developed scale evidenced initial factor structure, adequate reliability, and utility, but continued study is essential for further validation and to support or refute the study's findings. Young's (2017) development of the Veterans Adjustment to College Scale also shows promise for its culturally-specific application.

#### *Implications for Student Affairs Professionals University Personnel*

As students with military backgrounds increasingly enter higher education, the need for colleges and universities to most-effectively prepare and to support SSM/V is critical (Cole, 2013; Jones, 2013). Given the role of mattering in the study's findings, university personnel must concertedly reach out and connect SSM/V to persons, cohorts, resources, services, and programming that are specific to their experiences and consistent with their needs (ACE 2012; Cole, 2013). As SSM/V are less likely to engage or participate in campus activities due to time constraints of work, family obligations, or commute time to class, which in turn affects their integration on campus (ACE, 2012; Durdella & Kim, 2012; Kim & Cole, 2013), finding ways to connect them and increase their sense of mattering is critical.

For example, developing online or blended courses can help connect those SSM/V who have other responsibilities in addition to school. Developing SSM/V first-year interest groups that allow students to complete general studies, transition (McMenamin & Kurzynski, 2016), or core courses as a cohort can allow them to build community with those who have similar service or veteran experience. To that end, Blackwell-Starnes (2018) found that peer groups helped SSM/V develop a sense of belonging on campus and in the classroom. Also, having SSM/V mentor new or returning SSM/V on campuses can address the need to connect, honor their experiences and have students' feel that they matter (Ackerman et al., 2009; Barry et al., 2014). As military culture is based on teamwork and camaraderie among its ranks (Cooper et al., 2018), such connections could be implemented in classrooms and addressed within advising contexts.

As part of academic advising and personal counseling, identifying previous military service as a strength is recommended as a key element to assist academic success. Some SSM/V may choose not to reveal (Ackerman et al., 2009; Alexander, 2014), or hide their military history (Livingston et al., 2011). The study's findings suggest that SSM/V with combat experience felt that they mattered less/did not belong on campus and held more negative views of self about school. This may shed light on combat veterans feeling disconnected from their civilian peers. Thus, it may be important to determine learning opportunities that allow SSM/V to integrate different elements of their identity into a collective environment, in order to feel a stronger sense of belonging. For example, emphasizing emic strengths and positive self-perceptions of military experience likely increases students' sense of mattering. Helping SSM/V to integrate their different identities may require them to explain the meaning and importance of their service member/veteran status.

Clearly, providing personal and academic support services for all SSM/V is essential to help them process how they are psychologically, socially, and culturally affected by deployment or combat experience. For example, Cole (2013) suggested that academic advisors get to know SSM/V holistically to gain a sense of how their approaches and expectations within the academic setting have been shaped by their military experiences. Further, the increasing need for advisors and counselors to gain additional training to work with students who are experiencing PTSD, service-related disabilities, or other life-altering circumstances is suggested (Borsari et al., 2017; Cole, 2013; Spencer, 2016). For example, Schonfeld et al. (2015), found that almost 30% of SSM/V identified difficulties in adjusting to college, and were more likely to report a history of mental health concerns during and after their military experiences. Providing support for SSM/V organizations as important resources to promote social connections for SSM/V on college campuses is also recommended (Summerlot, Green, & Parker, 2009). For example, Kirchner (2015) described the many benefits provided by campus-based veteran resource centers and the Student Veterans of America, a nationwide network of university chapters/organizations for SSM/V. However, only 62% of institutions of higher education offered programs and services specifically for SSM/V (McBain, Kim, Cook, & Snead, 2012).

Universities should also consider how they can create an administratively-supportive climate for SSM/V who need to withdraw mid-semester due to deployment or health considerations without penalty of loss of scholarship, finances, or course credit (ACE, 2012; Ackerman et al., 2009; Brown & Gross, 2011). Although this study did not ask SSM/V about their experiences with enrollment discontinuation and on their academic experience, future studies could explore the influence on mattering and subsequent return to their studies. This proposed direction is couched within the study's context that more than half of the study's participants reported having stopped out due to service-related matters (e.g., deployment, training). Ultimately, implementing high-impact processes that help SSM/V feel a sense of connection and mattering on campus can assist their college adjustment and educational success.

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