Do Community Colleges' Military-Friendly Designations Make a Difference?
A Propensity Score Adjustment Analysis

Judie A. Heineman
San Diego State University

The term military-friendly is used increasingly to describe colleges that embrace practices that recognize the unique needs of student-veterans. Through the use of two-way analysis of variance (factorial ANOVA), this exploratory study examined if there were differences between students (non-veteran and veteran) and colleges' designation (registered or not-registered as military-friendly) on students' perceptions of validation, welcomeness, and belonging from faculty in the community college. Using data from the Community College Survey of Men (CCSM©), this study found that students reported lower scores for faculty validation at military-friendly community colleges. Moreover, faculty belonging scores were significantly lower for student-veterans despite the colleges' military-friendly designation. Findings suggest that more can be done by community college leaders to assist student-veterans in their academic success. As such, this exploratory study offers recommendations to achieve this objective.

INTRODUCTION

Almost two million U.S. soldiers, sailors, airmen, and Marines have returned home from wartime service looking for new opportunities (Lighthall, 2012; O'Herrin, 2011). Many returning veterans will turn to higher education to enhance their employment prospects, expand their knowledge and skill sets, and achieve their career goals (McBain, Kim, Cook, & Snead, 2012). Scholars have estimated that 43% of students who served in the military and who decide to attend college will do so at public two-year institutions (often referred to as community colleges) (Radford, 2011; Wheeler, 2012). These veterans have joined the student body using the most comprehensive educational package provided by the U.S. government since the original GI Bill of 1944 (McBain et al., 2012; O'Herrin, 2011; Rumann, Rivera, & Hernandez, 2011). As such, community colleges are gearing up to handle this resulting influx of nontraditional students – the student-veteran (DiRamio & Jarvis, 2011; O'Herrin, 2011; Rumann & Hamrick, 2009; Rumann et al., 2011). By establishing a welcoming environment and providing a strong system

of support, college leaders can have a positive effect on the integration and overall collegiate experience of these students (Kim & Cole, 2013).

A Contextual Understanding of Veteran Students

The National Center for Education Statistics (NCES) has noted that multiple student groups are encompassed among those classified as non-traditional students (Hamrick & Rumann, 2013). Veterans are among those students typically classified as 'non-traditional' students. They are likely to be male, non-white, over the age of 24, married, financially independent, and have delayed entry into college (Hamrick & Rumann, 2013; McBain et al., 2012; Radford, 2009; Wheeler, 2012; Wirt & Jaeger, 2014). In addition, many veterans are considered transfer students because they often bring with them academic credit earned through their military service (O'Herrin, 2011).

Understanding that the student-veteran population can have different needs than other adult learners (e.g., combat related mental and physical health issues, stress management and social adjustment issues, a strong sense of independence and self-reliance, and transition coping challenges), scholars have suggested that colleges require a commitment to assist student-veterans as well as a dedicated approach to serving them (DiRamio, Ackerman, & Mitchell, 2008; DiRamio & Jarvis, 2011; O'Herrin, 2011; Persky & Oliver, 2010; Rumann et al., 2011; Wheeler, 2012). Despite this recognition, McBain, Kim, Cook, and Snead (2012) reported that only 37 percent of postsecondary institutions serving student-veterans provide transition assistance. Moreover, only 47 percent of institutions that serve student-veterans provide training opportunities for both faculty and staff to better enable them to assist veterans with transition issues (McBain et al., 2012).

Faculty members play a key role in how student-veterans perceive the campus environment (Rumann et al., 2011; Wheeler, 2012). Specifically, student-veterans in two studies reported that faculty members were a key source of support, especially if the faculty had ties to the military either through their own service or that of a family member (Rumann, 2010; Rumann et al., 2011). However, some faculty can be perceived as less supportive and, in some instances, be viewed as disrespectful if they have made anti-war comments in class (DiRamio et al., 2008; Persky & Oliver, 2010; Rumann et al., 2011). Additionally, faculty-student interaction has been connected to enriching students' academic experiences in college and enhancing their success (Wirt & Jaeger, 2014). Thus, supportive, positive student-faculty relationships are key to promoting veteran success at military-friendly community colleges.

The term military-friendly is used to describe colleges that embrace practices that recognize the unique needs and characteristics of student-veterans. President Obama, through Executive order 13607, sought to codify specific ways colleges can support veterans as they pursue higher educational goals (Obama, 2012; U.S. Department of Education, 2013). Building upon this effort, the Departments of Veterans Affairs and Education created a joint program called the "8 Keys to Veterans' Success." This program allows college leaders to register their campuses with a 'military-friendly' designation with the Department of Education if they commit to implementing programs to:

1. Create a culture of trust and connectedness across the campus community to promote well-being and success for veterans.
2. Ensure consistent and sustained support from campus leadership

3. Implement an early alert system to ensure all veterans receive academic, career, and financial advice before challenges become overwhelming

4. Coordinate and centralize campus efforts for all veterans, together with the creation of a designated space (even if the space is limited in size).

5. Collaborate with local communities and organizations, including government agencies, to align and coordinate various services for veterans.

6. Utilize a uniform set of data tools to collect and track information on veterans, including demographics, retention and degree completion.

7. Provide comprehensive professional development for faculty and staff on issues and challenges unique to veterans.

8. Develop systems that ensure sustainability of effective practices for veterans. (U.S. Department of Education, 2013, p. 1).

According to Brown and Gross (2011), being designated as a military-friendly institution is an honor that speaks to student-centered practices and service-oriented commitment. By creating a culture of trust, providing sensitivity training to faculty, and developing sustainable effective practices, college leaders can enhance the campus climate making it more welcoming to student-veterans (Wheeler, 2012). There is an expectation that the military friendly designation will make a difference for student-veterans; however, research is needed to corroborate this expectation.

Bearing the aforementioned in mind, this exploratory study examined if there were differences between students (non-veterans and veterans) and their perceptions of faculty welcomeness, validation, and belonging in consideration of the college's military-friendly designation (registered and not-registered as military-friendly). This research also examined interactions between the students' veteran status and the community colleges' military-friendly designation. Understanding that colleges are making efforts to welcome veterans, it is hypothesized that there will be greater perceptions of faculty welcomeness, validation, and belonging for student-veterans attending community colleges which are registered as military-friendly. This would be reflected in greater scores for these three outcomes.

METHODS

Data for this exploratory study were derived from the Community College Survey of Men (CCSM©). The CCSM© is a survey designed by the Minority Male Community College Collaborative (M2C3) as a comprehensive needs assessment tool for evaluating male student success in community colleges focusing on men who have been historically underrepresented and underserved in higher education ("About the Community College Survey of Men," n.d.). Although the CCSM© has been completed by over 7,000 men at 40 community colleges across the country (Wood & Harris III, 2013), this study's dataset was restricted to a subset of urban men (N=206). Half of the respondents self-identified as military veterans with the remaining respondents noting no prior military service.

The outcome variables employed in this study were faculty belonging, faculty welcomeness, and faculty validation. *Faculty belonging* assessed students' agreement that faculty communicated that students belonged in class and at the institution and that faculty valued student interactions and their success (five items, $a = .96$). *Faculty welcomeness* measured the degree to which faculty members welcomed students' engagement in attending

office hours, ascertaining their coursework progress, and asking and answering questions in class (four items, $a = .84$). *Faculty validation* evaluated students' perceptions about the degree to which faculty members communicated the students' ability: to do the work; to succeed in college; and the degree to which students belong at the institution (three items, $a = .92$). The two independent variables employed in this study were student-veteran status and college designation. The student-veteran status factor had two levels, veteran and non-veteran, as did the factor for college designation (registered with the Department of Education as military-friendly or not registered).

Each student-veteran in the sample population was matched with a non-veteran student using propensity scores. Propensity scores were generated using respondent's age, annual income, number of dependents, enrollment status (part-time/full-time), number of stressful life events in the past two years, high school GPA, college GPA, and the number of college credits completed (see Appendix). The propensity score was also used as a covariate in subsequent analyses to adjust for potential effects of concomitant effects on the model (Austin, 2011; Rubin & Neal, 2000). Data were analyzed using 2 X 2 two-way analyses of variance (factorial ANOVA). Three models were generated to assess the perceptions of faculty welcomeness (FWELCOME), faculty validation (FVALID), and faculty belonging (FBELONGING) for the student populations. Effect sizes were interpreted using partial eta squared (partial n^2) with partial n^2 effect sizes of .01, .06, and .14 interpreted as small, medium, and large, respectively (Green & Salkind, 2011). Exploratory data analyses were conducted to ensure that ANOVA (e.g., normality, homogeneity) assumptions were met.

The primary limitation of this study was its focus solely on male (veteran and non-veteran) students. Female veterans were not included in the dataset due to the nature of the CCSM©. This is a significant limitation because women comprised nine percent of the total veteran population in the United States in 2009 (1.5 million women). Moreover, the Department of Veterans Affairs projects that by 2035, women will account for over 15 percent of the veteran population (National Center for Veterans Analysis and Statistics, 2011). Additionally, this study did not address perceptions of students attending colleges in suburban or rural areas. The smaller sample size and the propensity score matching resulted in a limited number of students attending colleges registered as military-friendly campuses.

RESULTS

The first analysis examined if there was a greater sense of faculty welcomeness (FWELCOME) by students' veteran status, *military-friendly* college designation status, and the interaction of these factors. The main effects for student-veteran status (F = .840, p= n.s.), registration status (F = .199, p= n.s.), and the interaction effect for veteran status and college designation (F = .008, p= n.s.) were not significant. Thus, student-veterans and non-veterans had a similar sense of welcomeness from the faculty. Designation as a military-friendly campus did not have a statistically significant impact on student perceptions of welcomeness.

Next, the second analysis explored if there was a greater sense of validation by the faculty (FVALID). The main effect for registration status was significant, F = 5.847, p< .05. The partial eta squared indicated that the registration status accounted for 3% of the variance in the outcome. This was a small-to-medium effect size. Bonferroni pairwise comparisons for registration status showed that military-friendly registered colleges had lower mean scores (by 1.58 points) than non-registered colleges; this difference was significant, p< .05. As such, a

military-friendly college designation appeared to have a negative impact on student perceptions of faculty validation. The profile plot is shown in Figure 1.

Finally, the third analysis explored students' perceptions of sense of belonging by the faculty (FBELONGING). The main effect for student-veteran status was statistically significant, $F = 8.621$, $p < .01$. The partial eta squared indicated that the student's veteran status accounted for 4% of the variance in the outcome, a small-to-medium effect. Bonferroni pairwise comparisons for veteran status indicated significant differences showing that student-veterans had lower mean scores (by 2.12 points) than non-student-veterans ($p < .01$). This difference is depicted in Figure 2.
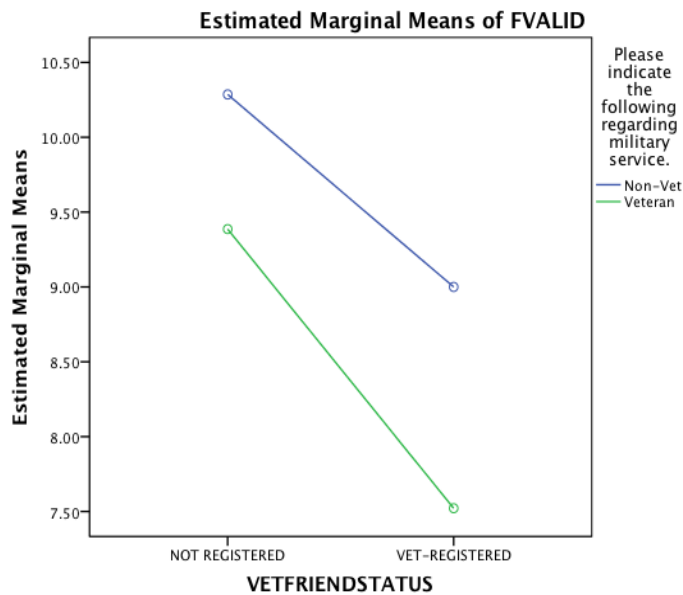

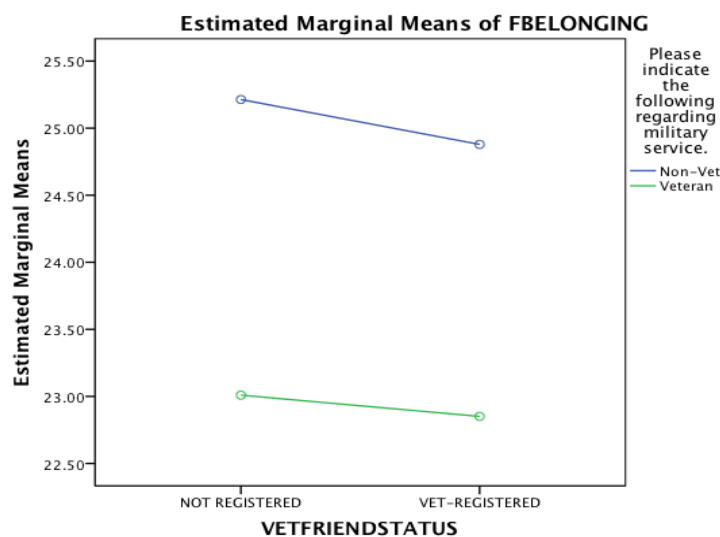*Figure 1*: Profile plot showing student perceptions of faculty validation

Figure 2: Profile plot showing student perceptions of faculty belonging

In summary, this exploratory study found lower scores for faculty validation at schools registered as military-friendly. Additionally, it found that student-veterans reported lower scores than non-veteran for their sense of belonging with faculty. No differences for faculty welcomeness were identified by military status or designation.

DISCUSSION

As previously mentioned, this study sought to examine if there were statistically significant differences between students (non-veteran and veteran) and the colleges' designation status (registered or not-registered as military-friendly) on students' sense of faculty welcomeness, validation, and belonging. Both veterans and non-veteran students attending non-registered and military-friendly colleges indicated a similar sense of welcomeness from the community college faculty. Further, it was hypothesized that there would be a greater sense of validation and belonging for student-veterans at military-friendly colleges. Two of the analyses indicated statistical significance for faculty validation and belonging. The model for validation showed that at colleges registered as military-friendly, there was a *lower* sense of validation from faculty among student-veterans. This suggests that student-veterans do not sense that faculty regularly communicate that the student-veterans have the ability to do the work or to succeed in college, at least in comparison to their non-veteran peers. In addition, the model for faculty belonging showed that student-veterans sensed a *lower* feeling of belonging. This indicated that student-veterans did not feel that faculty perceived that they belonged at the community college, despite the college's military-friendly designation. All of these results contradict the expectations that student-veterans attending a military-friendly community would feel a greater sense of welcomeness, validation, and belonging from the faculty.

IMPLICATIONS AND CONCLUSION

The findings from this study indicated that community colleges with the military-friendly designation have more to do to ensure student-veterans feel an enhanced sense of welcomeness, belonging, and validation. As previously mentioned, faculty members play a key role in how student-veterans perceive the campus environment, and positive perceptions of faculty have been directly connected to enriching students' academic experiences in college and enhancing their success (Rumann et al., 2011; Wheeler, 2012; Wirt & Jaeger, 2014). The military-friendly designation was created to enable student veterans to make informed college selection decisions, but also serves as a marketing tool for colleges. Military-friendly community colleges could provide enhanced professional development training for faculty to include fostering positive and affirming campus climates. This training could address and alleviate many of the faculty-centric issues discussed in this exploratory study. Additionally, campus-wide training could be initiated for faculty, staff, and students to raise awareness of issues that student-veterans encounter in the community college environment. Finally, military-friendly colleges could be required to conduct and publish results of student surveys assessing student-veteran satisfaction with the colleges' implementation of the *8 Keys to Veterans' Success*. These results could indicate to future student-veterans the extent of the military-friendly climate at the college.

According to Hamrick and Rumann (2013), serving those who have served is an honor and a privilege. By adjusting policy and implementing changes to accommodate the needs of the student-veteran, community colleges will make positive differences in the lives of the student-

veterans they serve. Community colleges are well positioned to welcome this cadre of students now and into the future – benefitting the college, the community, and veterans. By ensuring student-veterans feel a sense of welcomeness, belonging, and validation, community college leaders can enable student-veteran success, allowing them to experience enhanced outcomes in college.

REFERENCES

About the Community College Survey of Men. (n.d.).   Retrieved July 10, 2014, from http://interwork.sdsu.edu/sp/m2c3/the-ccsm-project/ccsm/

Austin, P. C. (2011). An introduction to propensity score methods for reducing the effects of confounding in observational studies. *Multivariate Behavioral Research, 46*(3), 399-424.

DiRamio, D., Ackerman, R., & Mitchell, R. L. (2008). From combat to campus: Voices of student-veterans. *NASPA Journal, 45*(1), 73-102.

DiRamio, D., & Jarvis, K. (2011). Special Issue: Veterans in higher education -- When Johnny and Jane come marching to campus. *ASHE Higher Education Report, 37*(3), 1-144. doi: 10.1002/aehe.3703

Green, S., & Salkind, N. J. (2011). *Using SPSS for Windows and Macintosh: Analyzing and Understanding Data* (6th ed.). Upper Saddle River, NJ: Pearson Education.

Hamrick, F., & Rumann, C. (Eds.). (2013). *Called to Serve: A Handbook on Student Veterans and Higher Education*. San Francisco: John Wiley & Sons.

Kim, Y. M., & Cole, J. S. (2013). Student veterans/service members' engagement in college and university life and education. Washington, D.C.: American Council on Education.

Lighthall, A. (2012). Ten things you should know about today's student veteran. *Thought & Action, 28*, 81-90.

McBain, L., Kim, Y., Cook, B., & Snead, K. (2012). From soldier to student II: Assessing campus programs for veterans and service members. Washington, DC: American Council on Education.

National Center for Veterans Analysis and Statistics. (2011). *America's Women Veterans: Military service history and VA benefit utlization statistics*. Washington, DC: Department of Veterans Affairs.

O'Herrin, E. (2011). Enhancing veteran success in higher education. *Peer Review, 13*(1), 15-18.

Obama, B. (2012). Executive Order -- Establishing Principles of Excellence for Educational Institutions Serving Service Members, Veterans, Spouses and Othe Family Members. Retrieved June 10, 2014, from http://www.whitehouse.gov/the-press-office/2012/04/27/executive-order-establishing-principles-excellence-educational-instituti

Persky, K. R., & Oliver, D. E. (2010). Veterans coming home to the community college: Linking research to practice. *Community College Journal of Research and Practice, 35*(1-2), 111-120. doi: 10.1080/10668926.2011.525184

Radford, A. W. (2009). *Military service members and veterans in higher education: What the new GI Bill may mean for postsecondary institutions*: American Council On Education.

Radford, A. W. (2011). Military service members and veterans: A profile of those enrolled in undergraduate and graduate education in 2007-2008. Washington, DC: National Center for Education Statistics.

Rubin, D. B., & Neal, T. (2000). Combining propensity score matching with additional adjustments for prognostic covariates. *Journal of the American Statistical Association, 95*(450), 573-585.

Rumann, C. (2010). *Student veterans returning to a community college: Understanding their transitions.* (Doctor of Philosophy Dissertation), Iowa State University, Ames.

Rumann, C., & Hamrick, F. (2009). Supporting student veterans in transition. *New Directions for Student Services*(126), 25-34. doi: 10.1002/ss.313

Rumann, C., Rivera, M., & Hernandez, I. (2011). Student veterans and community colleges. *New Directions for Community Colleges*(155), 51-58. doi: 10.1002/cc.457

U.S. Department of Education. (2013). President Obama applauds community colleges' and universities' efforts to implement 8 Keys to Veterans' Success [Press release]. Retrieved from http://www.ed.gov/news/press-releases/president-obama-applauds-community-colleges-and-universities-efforts-implement-8

Wheeler, H. A. (2012). Veterans' transitions to community college: A case study. *Community College Journal of Research and Practice, 36*(10), 775-792. doi: 10.1080/10668926.2012.679457

Wirt, L. G., & Jaeger, A. J. (2014). Seeking to understand faculty-student interaction at community colleges. *Community College Journal of Research and Practice, 38*(11), 980-994.

Wood, J. L., & Harris III, F. (2013). The Community College Survey of Men: An initial validation of the instrument's non-cognitive outcomes construct. *Community College Journal of Research and Practice, 37*(4), 333-338.

Correspondence regarding this article should be addressed to Judie A. Heineman, Doctoral Student, Educational Leadership (Community College, Postsecondary Education), San Diego State University, 5500 Campanile Drive, San Diego, CA 92182. Email: judie.heineman@cox.net

APPENDIX
Variables and Coding Schema

Variable	Values	Type	Other
Faculty Welcomeness	4 to 24	Composite measure (a=. 84)	4 items; 6 point scale agreement
Faculty Validation	3 to 18	Composite measure (a=.92)	3 items; 6 point scale
Faculty Belonging	5 to 30	Composite measure (a=.96)	5 items; 6 point scale agreement
Age	1=Under 18 2=18 to 24 years old 3=25 to 31 years old 4=32 to 38 years old 5=39 to 45 years old 6=46 to 52 years old 7=53 to 59 years old 8=60 to 66 years old 9=67 or older	Individual item	
Annual Income	1=Under $10,000; 2=$10,001-20,000; 3=$20,001-30,000; 4=$30,001-40,000; 5=$40,001-50,000; 6=$50,001-60,000; 7=$60,001-70,000; 8=$70,001-80,000; 9=$80,001-90,000; 10=$90,001-100,000; 11=$100,001-110,000; 12=$110,000 or more	Individual item	
College GPA	1=No GPA yet; 2=0.0; 3=0.1; 4=0.2; 5=0.3; 6=0.4; 7=0.5; 8=0.6; 9=0.7; 10=0.8; 11=0.9; 12=1.0; 13=1.1; 14=1.2; 15=1.3; 16=1.4;17=1.5; 18=1.6; 19=1.7; 20=1.8; 21=1.9; 22=2.0; 23=2.1; 24=2.2; 25=2.3; 26=2.4;27=2.5; 28=2.6; 29=2.7; 30=2.8; 31=2.9; 32=3.0; 33=3.1; 34=3.2; 35=3.3; 36=3.4; 37=3.5; 38=3.6; 39=3.7; 40=3.8; 41=3.9; 42=4.0;	Individual item	
Dependents	1=none; 2=1; 3=2; 4=3; 5=4; 6= 5 or more	Individual item	
Enrollment Status	1=Full time; 2= Part-time	Individual item	

High school GPA	1= 0.5 - 0.9 (F to D) 2=1.0 - 1.4 (D to C-) 3=1.5 - 1.9 (C- to C) 4=2.0 - 2.4 (C to B-) 5=2.4 - 2.9 (B- to B) 6=3.0 - 3.4 (B to A-) 7=3.5 - 4.0 (A- to A)	Individual item	
Stressful life events in the past two years	1=None; 2=1; 3=2; 4=3; 5=4; 6=5; 7=6; 8=7 or more	Individual item	
Total Credits Completed	1=None yet; 2=1to 14 credits; 3=15 to 29 credits; 4=30 to 44 credits; 5=45 to 60 credits; 6=61 or more credits	Individual item	