

**Wellness and Student Veterans at North Carolina State University:
Survey Results, Spring 2010**

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January 2011

Introduction

For military veterans, attending university offers opportunities and challenges. On the one hand, the university provides important resources for furthering their careers as civilians; on the other hand, it can pose challenges in making the transition from military life into academic studies. Student veterans are typically older and more experienced than their classmates and can enrich the learning environment for all the students.

At the same time, they often face adjustments on entering academic settings after military service. Some may arrive at university with service-connected disabilities; others may be unfamiliar with how to navigate the university system, especially a large one such as North Carolina State University; and many need assistance in accessing available benefits. Optimizing their experience in university is important for their scholastic achievement and for their overall sense of wellness.

As military personnel returning from Iraq and Afghanistan accelerate over the next several years, the need to help veterans make successful transitions is all the more paramount. This is particularly the case for North Carolina which in 2007 had 773,630 veterans (VA, 2010) with the numbers only continuing to grow as bases are closed in other states and military personnel are relocated to North Carolina. On leaving the military, they often choose to pursue their studies within the state.

Their entry into post-secondary education is facilitated by passage of the Post-9/11 Veterans Educational Assistance Act in 2008. It is projected that approximately 75,000 military veterans in North Carolina will access educational benefits under this new GI Bill and

substantially increase enrollments in the state's colleges and universities over the next five years (NCSU, 2009).

The NCSU (2009) Military Veterans Working Group reviewed campus services for military veterans and concluded that while a basic infrastructure is in place, it requires centralization and expansion in order to provide adequate supports. Additionally the Working Group recommended better preparation of veterans for academia and raising awareness among the campus community about veterans. Some of these recommendations such as the establishment of the NCSU Chapter of the Student Veterans of America have already gone into effect.

North Carolina State University seeks to make the campus a welcoming place for student veterans. One way to achieve this goal is to foster the wellness of student veterans. To learn more about the wellness of student veterans, the NCSU Center for Family and Community Engagement conducted an online survey in the spring of 2010. The study addressed two main questions about NCSU student veterans:

- What are their perceptions of their level of wellness overall and in specific areas?
- How do their self-perceptions of wellness relate to their demographic characteristics?

This report summarizes the survey results and is intended to assist the university and other groups in planning for student veterans.

Wellness Survey

To measure wellbeing, the Center administered the adult version of the Five Factor Wellness Inventory (Myers & Sweeney, 2005). The survey is based on Alfred Adler's (1954) individual psychology of the holistic self embedded in its social context. Wellness is conceptualized as integrating the mind, body, and spirit to optimize health. Using structural equation modeling, the current form of the Five Factor Wellness Inventory has one overall measure of wellness. This total wellness measure encompasses five aspects (second-order factors) of the unified self with a total of 17 elements (third-order factors) (see Table 1 below). Definitions of these aspects of self are provided by Myers and Sweeney (2005):

Creative Self—"to make a unique place among others in our social interactions and to positively interpret our world"

Coping Self—“regulate our responses to life events and provide a means for transcending their negative affects”

Social Self—“Social support through connections with others in our friendships and intimate relationships, including family ties”

Essential Self—“our essential meaning-making processes in relation to life, self, and others”

Physical Self—“the biological and physical processes that comprise the physical aspects of our development and functioning” (pp. 10-11)

The survey has 73 wellness statements with responses on a 4-point Likert scale ranging from 4- *strongly agree* to 1-*strongly disagree*. Scale scores are sums of responses to each item and are then transformed to place them in a common metric ranging from 25-100 where higher scores are desirable. Using a norm sample of 3,343 individuals to test the instrument’s reliability, Myers and Sweeney (2005) reported alpha coefficients for each of the five aspects of self as ranging from .89 to .96 with the total wellness coefficient at .98. The norm sample was 52% male and 48% female; between the ages of 18 to 101; of whom the race/ethnicity was 52% Caucasian, 29% African American, 4.3% Asian/Pacific Islander, and 3.2% Hispanic; and completed education of 11.8% less than high school, 39% high school, 12% bachelor’s degree, and 13.4% graduate degree (Myers & Sweeney, 2005).

Additionally, the Five Factor Wellness Inventory has been applied to a sample of 1,567 undergraduate students of whom the large majority (83%) were 24 years and younger and close to 14% were 25 years and above (Myers & Mobley, 2004). The Wellness scores of the younger and older undergraduate students were generally comparable. Their Wellness scores were examined against those of 702 non-student adults, and the study found that on the five aspects of self the undergraduate students had significantly lower means than the non-student adults with the exception of the Physical Self, possibly because of the access on campuses to exercise facilities.

To our knowledge, there are no published studies of the Five Factor Wellness Inventory with veterans or active-duty military. Wellness surveys have been previously administered to first-year undergraduate students at two military colleges. An earlier version of the wellness inventory was used with cadets at West Point (Myers & Bechtel, 2004), and the current version was conducted with cadets at The Citadel (Gibson & Myers, 2006). The West Point study found

that the highest scores were in the following descending order: friendship, exercise, love, sense of worth, self care, and sense of humor; and the lowest scores in ascending order concerned realistic beliefs, nutrition, and work. The Citadel cadets had relatively similar scores to those of the West Point cadets, except that they scored significantly higher on thinking and lower on self-worth (Gibson & Myers, 2006).

Providing checks on the validity of the measures, the two military college studies examined the associations between wellness and perceived stress and between it and mattering, that is, the self-perception as important to others. The West Point study reported significant inverse associations ($p < .05$ or $.01$) between perceived stress and three of the sub-factors—work, realistic beliefs, and stress management; and it found significant positive correlations between nearly all the sub-factors and mattering (Myers & Bechtel, 2004). The Citadel study found that perceived stress significantly correlated negatively with nutrition and positively with exercise and that 16 of the 25 correlations between wellness and mattering were positive and significant (Gibson & Myers, 2006). Thus, as expected, the wellness surveys tended to have direct associations with mattering and some inverse associations with perceived stress.

Participants and Data Collection

The NCSU Center for Family & Community Engagement (“Center”) conducted the Five Factor Wellness Inventory using a software application called Lime Survey. This system permits administering surveys online without capturing either the respondents’ e-mail address or their computer’s IP address; thus, the data cannot be tracked back to respondents, preserving their anonymity.

Once the study protocols were reviewed and exempted by the NCSU Institutional Review Board, the University Registrar provided the Center with the e-mail addresses of 362 students attending NCSU while currently receiving Veteran Affairs educational benefits. Because the dependents of veterans can receive these benefits, the Registrar’s office could not distinguish these students from those who were veterans. The Registrar did not provide the e-mail addresses for any students with a privacy block.

To limit the study to student veterans, the survey began with a letter of consent addressed to student veterans. The letter invited the veterans to complete a 15-minute survey about wellness and emphasized that participation was voluntary and anonymous. Then the students

were asked to proceed with the survey only after confirming that they had read the letter of consent, were a veteran of a branch of the U.S. military, and were at least 18 years old. Afterwards, they were asked to rate the extent to which they agreed that the 73 wellness statements applied to them (e.g., “I frequently see humor even when engaged in a serious task”). At the end of the survey, they were asked about their marital, employment, and educational status and for demographic information on their gender, race/ethnicity, and age. Respondents had fixed choices for each item, and no option for “don’t know”; however, they could elect to skip items and go on to other items.

The survey was emailed to student veterans in late April and early May. This period of time in all likelihood reduced the response rate since many potential participants were focused on end-of-semester work. Because of the grant period, the survey had to be completed before the end June. The students received reminders one and two weeks after they were initially contacted. The NCSU Student Veterans of America (2010) encouraged participation through their newsletter.

Among the 362 students sent the survey, 65 responded. Fourteen respondents who answered none or one of the wellness items were removed from the sample. The remaining 51 participants had completed 84% or more of the items. To take into account missing data, the authors of the wellness survey stipulate that scales be analyzed as long as participants respond to at least three items in a scale (Myers & Sweeney, 2005). If all of the original pool of 362 students were veterans (which is unlikely), then the usable response rate was 14%.

Among the sample of 51 student veterans, the majority indicated that they were married (65%), employed (full time-31%, part time-26%), male (82%), and Caucasian (75%). With respect to age, the largest group was between 26-35 years (67%) followed by those 18-25 (20%) and then 36 or older (14%). In regards to the highest level of education completed, the responses were 28% high school, 43% trade/technical/A.A. degree, 20% bachelor’s degree, and 8% advanced degree.¹ Three-quarters (74.5%) of the participants were working on an undergraduate degree, and the remainder were working on a graduate degree (25.5%). In the sample, proportionately to the men, the women were less often married and employed and were more often older, higher educated, and in graduate studies.

¹ Note that because of rounding, figures do not total 100%.

Results

The first research question asked: What are the perceptions of NCSU student veterans of their level of wellness overall and in specific areas? Table 1 below provides the mean scores for the wellness scales and their standard deviations, reflecting variability in responses. These scales include Total Wellness and the five aspects of self (the second-order scales) and their 17 subscales (third-order scales). Each aspect of self has between two to five subscales.

The mean score on Total Wellness is 78.81, higher than the norm sample of 71.63 (Myers & Sweeney, 2005). In fact, all the means for the NCSU student veterans are higher than those in the norm sample with one exception, Spirituality in the Essential Self: The mean for the norm sample is 71.69 and for the NCSU sample is 67.63. Comparing their scores with those of the undergraduate students in the Myers and Mobley (2004) study shows that the NCSU student veterans have higher or roughly similar means in most areas. However, they scored lower on the Essential Self in regards to Spirituality, Gender Identity, and Cultural Identity.

As seen in Table 1, the Essential Self has two subscales, Spirituality and Cultural Identity, with some of the lowest means and greatest variability, and another subscale, Gender Identity, with a wide standard deviation. The number of responses to Cultural Identity and Gender Identity are lower than for any other scales, and nearly all of these incomplete responses came from Caucasian men, possibly indicating uncertainty on how to rate the items among a predominately White male group.

The means of the five aspects of self (the second-order scales) are in order from highest to lowest: Social Self, Creative Self, Essential Self, Coping Self, and Physical Self. This order parallels relatively well that for the Myers and Sweeney (2005) norm sample. Among the NCSU sample, Physical Self has the greatest variability, and Creative Self has the least. The 17 subscales from highest to lowest means are as follows: Love, Self-Care, Control, Friendship, Self-Worth, Positive Humor, Thinking, Emotions, Gender Identity, Exercise, Stress Management, Leisure, Work, Nutrition, Cultural Identity, Spirituality, and Realistic Beliefs. This order is fairly similar to that for the Myers and Sweeney (2005) norm sample.

The two subscales within Social Self have the highest mean (Love) and the fourth highest mean (Friendship). Love, by far, is the most skewed of the subscales and in a negative direction (skewness = -1.235, $SD=$.33), meaning that bulk of the respondents agreed with the related statements. The Coping Self has the sub-scale with the lowest mean (Realistic Beliefs which

includes irrational beliefs), the factor which typically is the lowest of all in other studies, and this was the case as well for the West Point and The Citadel studies (Gibson & Myers, 2006). The Physical Self has two sub-scales, Nutrition and Exercise, with relatively low means and wide variability. Interestingly, Self-Care, which involves taking responsibility for one's wellness and safety, has the second highest mean.

Table 1
Mean Scores and Standard Deviations of Wellness Scales for NCSU Student Veterans
(N=51)

	<i>n</i>	Range	Min.	Max.	Mean	<i>SD</i>
Total Wellness	51	30.97	63.89	94.86	78.81	6.89
Creative Self	51	36.56	60.94	97.50	81.82	8.11
Thinking	51	31.25	68.75	100.00	84.35	9.74
Emotions	49	43.75	56.25	100.00	80.87	10.72
Control	50	31.25	68.75	100.00	85.46	8.44
Work	50	62.50	37.50	100.00	74.29	13.38
Positive Humor	51	43.75	56.25	100.00	84.97	10.77
Coping Self	51	31.58	59.21	90.79	75.60	8.21
Leisure	51	45.83	54.17	100.00	76.86	11.05
Stress Management	51	50.00	50.00	100.00	77.33	12.21
Self Worth	50	37.50	62.50	100.00	85.04	10.25
Realistic Beliefs	51	50.00	35.00	85.00	64.91	10.02
Social Self	51	37.50	62.50	100.00	88.36	9.26
Friendship	51	43.75	56.25	100.00	85.09	11.08
Love	51	43.75	56.25	100.00	91.54	10.81
Essential Self	51	46.88	48.44	95.31	76.28	10.59
Spirituality	50	75.00	25.00	100.00	67.63	19.89
Gender Identity	40	56.25	43.75	100.00	80.52	15.55
Cultural Identity	39	66.67	33.33	100.00	72.01	15.35
Self-Care	51	37.50	62.50	100.00	86.52	11.48
Physical Self	51	52.50	47.50	100.00	74.89	12.87
Nutrition	51	65.00	35.00	100.00	72.25	15.53
Exercise	51	45.00	55.00	100.00	77.57	13.40

The second research question was: How do the NCSU student veterans' self-perceptions of wellness relate to their demographic characteristics? For reasons of confidentiality, data are not reported where the subgroups fall below 5 in number. Table 2 below summarizes the findings for Total Wellness. The means for Total Wellness means were relatively comparable for student

veterans when grouped by demographic characteristics—race/ethnicity, age, marital status, educational level, student status, and employment.

The one exception was gender. Female student veterans had a significantly lower Total Wellness mean score than the male student veterans. On all the five aspects of self, the women's mean scores were lower than those of the men. These differences, however, were only statistically significant for the Creative Self, $t(48)=2.51, p<.02$, but approached significance for the Essential Self, $t(48)=1.88, p<.055$. One component of the Creative Self is Positive Humor, an area where the women's mean score was significantly lower than that of the men, $t(48)=3.02, p<.004$. The women also scored significantly lower than the men on Spirituality, $t(47)=2.59, p<.01$, a component of the Essential Self, and on Exercise, $t(48)=2.17, p<.04$, a component of the Physical Self. These findings diverge from those of the Myers and Sweeney (2005) norm sample where woman scored higher than the men on all factors with the exception of Realistic Beliefs. They also differ from those of The Citadel study where the three statistically significant differences concern female cadets scoring higher than their male counterparts, that is, on the Social Self, Friendship, and Cultural Identity (Gibson & Myers, 2006).

Table 2
Descriptive Statistics and Comparison of Means of Total Wellness by Demographic Characteristics of NCSU Student Veterans (N=51)

	<i>n</i>	Mean	<i>SD</i>	Comparison of Means
Gender				
Female	8	73.65	4.56	$t(48) = 2.43^*$
Male	42	79.86	6.91	
Race/Ethnicity				
Caucasian	38	79.17	7.03	$t(44) = .46$
Other	8	77.08	8.29	
Age				
18-25	10	79.94	7.17	$t(42) = .90$
26-35	34	77.74	6.76	
Marital Status				
Married	33	79.14	6.38	$t(45) = .05$
Single	14	79.04	8.49	
Highest Level of Education Completed				
High school graduate	14	79.06	6.55	$F(2,43) = .34$
Trade/technical school/A.A. degree	22	79.06	6.46	
Bachelor's Degree	10	76.80	7.12	
Current Student				
Yes, working on an undergraduate degree	38	78.63	6.36	$t(49) = .32$
Yes, working on a graduate degree	13	79.35	8.53	
Employment				
Employed Full Time	16	77.62	6.12	$F(2,45) = .13$
Employed Part Time	13	78.21	7.16	
Not Working	19	78.75	6.44	

* $p < .05$, independent-samples, two-tailed t test with Levene's test to examine homogeneity of variance assumptions

Conclusions and Recommendations

Because of the low response rate to the survey, the findings cannot be generalized to NCSU student veterans as a whole. The low response rate was likely a function of the timing of the survey at the end of the spring semester. Nevertheless, the 51 students in the study sample responded to most or all items. Thus, the instrument appears to be readily completed by student veterans on campus. Given that enrollments of student veterans are projected to substantially rise over the next five years at NC State University and other universities in North Carolina, ongoing planning for their smooth introduction into post-secondary education and sustaining their wellbeing is warranted.

Recommendation 1: Repeat the administration of the Five Factor Wellness Inventory with NCSU student veterans in order to plan for increased enrollments at NC State University and other universities in North Carolina.

The student veterans' mean scores in nearly all components of wellness compare favorably with those of other populations, including at military colleges. The exception is Spirituality, which does not refer to religiosity and instead to a person's overall sense of purpose, meaning, and optimism toward the future. This raises questions about the impact of military experience, especially combat deployments, on a sense of spirituality. It also raises questions about how to assist student veterans in making transitions after military service, moving beyond immediate concerns, and firming up their life directions.

Recommendation 2: Encourage sharing among student veterans about what has helped them to make positive transitions, set overall aims, and gain a sense of purpose and meaning.

An area requiring attention is the lower perceptions of wellness among women student veterans. Their total wellness mean was significantly below that of the men, and on all aspects of self, they scored lower than the men. Three areas—Positive Humor, Spirituality, and Exercise—stand out as significantly lower for the women, and deficits in these areas are likely to increase stress. Compared with the men, the women rated themselves as being less likely to laugh appropriately about their own and others' foibles and life circumstances, having less of a sense of a higher purpose and oneness with the universe, and lacking adequate physical activity. These lower scores for women are atypical for various populations, including military colleges.

Recommendation 3: Provide supportive outreach to women student veterans, promote sharing among them, and encourage means of stress reduction.

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Acknowledgments

Dr. Jane Myers at the University of North Carolina at Greensboro authored the Five Factor Wellness Inventory and granted permission to use the survey. Consultation on the study was provided by Dr. Mary Koss at the University of Arizona and the Vet Centers in Raleigh, NC, and Tucson, AZ. At NC State University, support for the study was provided by Dr. Jose Picart, Vice Provost for Diversity and Inclusion, Dr. Louis Hunt, Vice Provost and University Registrar, and Dr. Cheryl Branker, Associate Vice Provost and Director of Disability Services. The Student Veterans of America—NCSU Chapter, was especially helpful in encouraging participation in the survey. Research assistance was provided by Dr. Hailey Krouse. The College of Humanities and Social Sciences funded the project through a Scholarship and Research Award.