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Prevalence of Probable Mental Disorders and Help Seeking Behaviors among Veteran and Non-veteran Community College Students

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Abstract

Objective—Millions of disadvantaged youth and returning veterans are enrolled in community colleges. Our objective was to determine the prevalence of mental disorders and help seeking behaviors among community college students.

Methods—Veterans (n=211) and non-veterans (n=554) were recruited from 11 community colleges and administered screeners for depression (PHQ-9), generalized anxiety (GAD-7), posttraumatic stress disorder (PC-PTSD), non-lethal self-injury, suicide ideation and suicide intent. The survey also asked about the perceived need for, barriers to, and utilization of services. Regression analysis was used to compare prevalence between non-veterans and veterans adjusting for non-modifiable factors (age, gender, and race/ethnicity).

Disclosures

There are no conflicts of interest for any authors.

Results—A large proportion of student veterans and non-veterans screened positive and unadjusted bivariate comparisons indicated that student veterans had a significantly higher prevalence of positive depression screens (33.1% versus 19.5%, p<0.01), positive PTSD screens (25.7% versus 12.6%, p<.01), and suicide ideation (19.2% versus 10.6%, p=0.01). Adjusting for age, gender, and race/ethnicity, veterans were significantly more likely than non-veterans to screen positive for depression (OR=2.10, p=.01) and suicide ideation (OR=2.31, p=.03). Student veterans had significantly higher odds of perceiving a need for treatment than non-veterans (OR=1.93, p=.02), but were more likely to perceive stigma (beta=0.28, p=.02). Despite greater need among veterans, there was no significant differences between veterans and non-veterans in use of psychotropic medications, although veterans were more likely to receive psychotherapy (OR=2.35, p=.046).

Conclusions—Findings highlight the substantial gap between the prevalence of probable mental health disorders and treatment seeking among community college students. Interventions are needed to link community college students to services, especially for student veterans.

Keywords

Psychiatric Epidemiology; Community Colleges; Veterans

Introduction

The onset of mental illness typically occurs before age 24[1] and these disorders account for about half of the overall burden of illness for adolescents and young adults.[2] Early detection and treatment is critical because, if left untreated, mental illness has significant negative consequences for academic achievement,[3] employment,[4] substance misuse,[5] and social relationships.[6] The college years in particular represent a developmentally challenging transition period to adulthood. Sixty-eight percent of high school graduates attend college[7] and, like their same-aged non-students peers, about a third of college students meet diagnostic criteria for a psychiatric disorder.[8] However, only about a third of college students with a mood disorder report taking psychotropic medications or going to counseling in the previous year.[8, 9] Therefore, campus-wide efforts to engage college students in mental health treatment may be warranted.

In recent years, the growing number of two-year community colleges has given disadvantaged students increased access to post-secondary education. In fact, nearly half (42%) of all college students are enrolled in two-year community colleges.[7] In 2014, there were 1,132 two-year community colleges with 12.8 million enrolled students.[10] Community colleges, also called junior colleges or technical colleges, are two-year institutions that grant certificates and associate's degrees. Community colleges enroll mostly students from the local community, and are primarily funded by state and local governments. The vast majority (88%) of two-year community colleges have open enrollment policies.[7] The average age of community college students is 28, 49% are racial and/or ethnic minorities, and 60% are part-time students. Annual household incomes are substantially lower among two-year college students compared to four-year college students.[11] In addition, two-year college students have substantially lower high school grade point averages and college admission tests scores (e.g., SAT, ACT) than four-year college

students.[11] Only 16% of two-year community college students receive a degree within three years of enrollment.[11] In addition, community college students are significantly more likely to have experienced traumatic events compared to four-year college students.[12] Because lower socioeconomic status and trauma are risk factors for poor mental health among students,[12, 13] the prevalence of mental disorders may be higher at community colleges than four-year colleges. Yet, there has been virtually no research investigating the prevalence of mental disorders and help seeking behaviors on community college campuses. While college campuses potentially represent an ideal setting to detect and treat mental disorders, most (58%) two-year community colleges lack student health centers,[14] and even fewer appear to provide mental health services.[15, 16]

Another important reason to better understand mental illness on community college campuses is that a substantial number of veterans from Operations Enduring Freedom, Iraqi Freedom and New Dawn (OEF/OIF/OND) have been entering community colleges on the new Post-9/11 GI Bill. A majority of returning service members successfully reintegrate into family life, educational activities and vocational pursuits.[17] While attaining further postsecondary education is an extremely important reintegration goal for many veterans, it is difficult to make the transition from a highly structured and hierarchical military setting to the less structured and more self-directed campus environment.[18] These student veterans must contend with the traditional pressures of college life while also dealing with the stress of re-integration. Moreover, a substantial percentage of veterans experience mental disorders, but most do not seek treatment because of stigma.[17] Since the Post-9/11 GI Bill was implemented in August 2009, the Department of Veterans Affairs has provided educational benefits to one million veterans and their family members, amounting to over $30 billion.[19] A third (34.6%) of those using the Post-9/11 GI Bill have enrolled in a community college.[20]

To determine the prevalence of probable mental disorders and help seeking behaviors, we fielded a survey to population-based samples of veterans and non-veterans attending community colleges. We hypothesized that veterans would have a higher prevalence of probable mental disorders than non-veterans. We also compared student veterans and non-veterans with regard to their perceived need for treatment, perceived stigma associated with receiving treatment, and perceived effectiveness of treatment. We also compared the utilization of mental health services between student veterans and non-veterans. We hypothesized that student veterans would perceive a greater need for treatment, but would also perceive greater stigma and use fewer services.

Methods

Eleven two-year community colleges were recruited from across the state of Arkansas. The registrar’s office of each community college provided us with the list of students enrolled in the 2012 Spring semester, which served as the sampling frame. For purposes of sampling, all students using the Post-9/11 GI bill were preliminarily classified as veterans. Using a stratified sampling scheme, we sampled 100% of veterans at each community college and randomly sampled 2.8% – 18.5% of non-veterans from each community college, so that the ratio of non-veterans to veterans sampled was 1.7 at each institution. We sampled and

recruited a total of 2,500 students including 1,572 non-veteran students and 928 student veterans. Design/stratification weights were specified as the inverse probability of being sampled.

Sampled students were sent a letter with a $20 incentive inviting them to complete a survey online followed by up to four email reminders. Written informed consent was obtained online. The study was approved by the University of Arkansas for Medical Sciences Institutional Review Board. Veteran status (as reflected by Post-9/11 GI bill benefits) was initially determined from the registrar's office and was later confirmed from self-report. The overall survey response rate was 31.3% (30.7% for veterans and 31.6% for non-veterans). Data were collected during the period from January to April 2012.

Post-stratification weights were calculated to account for potential non-response bias. Using demographic data (age category, gender, race/ethnicity minority status, and veteran status) legally available from the registrar's office under the Family Educational Rights and Privacy Act (http://www.ed.gov/policy/gen/guid/fpco/ferpa/index.html), a logistic regression equation was specified predicting survey response. Women were significant more likely to respond to the survey than men (OR=1.62. OR_{95}=1.35–1.95, $p<0.01$). Likewise, older students were more likely to respond to the survey than younger students (OR=1.02, OR_{95}=1.01–1.03, $p<0.01$). Importantly, there were no significant differences in response rates between veterans and non-veterans. Post-stratification/non-response weights were specified as the inverse predicted probability of responding for each individual. The stratification weight was multiplied by the post-stratification weight to generate an overall weight and then standardized by dividing by the mean of the overall weights in the sample. Survey respondents self-reported whether they had served in the military and 74 students using the Post-9/11 GI bill reported not serving in the military (i.e., spouses) and were reclassified as non-veterans. In addition, 17 students not using the Post-9/11 GI bill reported serving in the military. These respondents were dropped from the sample because their stratification weights were extreme outliers and artificially inflated the sampling variance. The final analytical sample included 765 students (211 veterans and 554 non-veterans). Because all veterans were sampled, the total (stratification*post-stratification) weights for student veterans were substantially smaller than for non-veterans (μ=0.12 versus μ=1.34), thus substantially reducing the weighted sample size of student veterans.

Items and instruments used in the Healthy Minds Study[21, 22] were used to collect information about socio-demographics, mental health, perceived need, barriers to care, and treatment seeking. The prevalence of current probable mental disorders was assessed using validated screening instruments for depression (PHQ-9, cutoff≥10),[23] generalized anxiety disorder (GAD-7, cutoff≥10),[24] and posttraumatic stress disorder (PC-PTSD, cutoff≥3).[25] Prevalence of non-lethal self-injury (e.g., cutting) in the past month was assessed using an item developed for the Healthy Minds Study.[26] Suicide ideation in the past *two weeks* was assessed with the PHQ-9.[23] Intent on lethal self-injury in the *past year* was assessed using an item from the National Comorbidity Survey Replication (http://www.hcp.med.harvard.edu/ncs/index.php).[1] When comparing responses to these two questions about suicide, it is important to realize that the PHQ-9 question primarily

identifies passive suicide ideation over a short timeframe while the National Comorbitiy Study Replication question primariliy identifies acute suicide intent over a longer timeframe.

Perceptions about the need for and barriers to treatment, as well as the utilization of mental health services over the past year was measured using items from the Healthcare for Communities Study.[27] Perceived need was assessed with a single yes/no question about needing help for emotional or mental health problems. Personal stigma was measured using three items that asked the respondent to rate how they would characterize individuals receiving mental health treatment on a likert scale from strongly agree (0) to strongly disagree (5).[28] Public stigma was measured using three items that asked the respondent to rate how "most people" would characterize individuals receiving mental health treatment on a likert scale from strongly agree (0) to strongly disagree (5). [29] Summated scales for both personal stigma and public stigma were generated by averaging the responses across the three items. These scales were developed for the Health Minds Study and have high internal reliability (Cronbach's α of 0.78 for personal stigma and 0.83 for public stigma).[29] Perceived treatment effectiveness was assessed using separate questions about psychotropic medications and counseling with likert scale responses (Very helpful, Quite helpful, A little helpful, Not at all helpful). The Very helpful and Quite helpful responses were combined to create a dichotomous variable representing the perceived effectiveness of medications and the perceived effectiveness of counseling. Service use was recorded if participants reported receiving counseling from a health professional (psychiatrist, psychologist, or social worker) for their mental or emotional health or if they had taken any psychotropic medications in the past year.

SAS 9.3 PROC SURVEYFREQ, PROC SURVEYMEANS and PROC SURVEYREG (with weights and stratification by college) were used to calculate all percentages and means. SAS 9.3 PROC SURVEYFREQ (with weights and stratification by college) was used to calculate Rao-Scott Chi-Square tests in order to compare veteran and non-veteran differences in modifiable and non-modifiable characteristics. SAS 9.3 PROC SURVEYLOGISTIC (with weights and stratification by college) was used to calculate Wald Chi-Square tests unadjusted odds ratios in order to compare veteran and non-veteran differences in prevalence of positive screens, perceived need, perceived treatment effectiveness and service utilization. SAS 9.3 PROC SURVEYREG (with weights and stratification by college) was used to calculate t- tests and unadjusted differences in means in order to compare veteran and non-veteran differences in perceived stigma. To account for the non-modifiable demographic differences between veterans and non-veterans (i.e., age, gender, race/ethnicity), PROC SURVEYLOGISTIC and SURVEYREG (with weights and stratification by college) was also used to conduct logistic and linear regression analyses in order to calculate age-sex-race adjusted veteran-non-veteran differences in prevalence, perceived need, perceived stigma, perceived treatment effectiveness, and service utilization. For the multivariate analysis, we chose to only control for non-modifiable demographic characteristics. Controling for modifiable characterstics caused by untreated mental illness could have masked important differences between veterans and non-veterans.

Results

There were substantial and significant modifiable and non-modifiable socio-demographic differences between veteran and non-veteran community college students (Table 1). Compared to non-veteran students, veterans were significantly older, more likely to be male, more likely to be married, more likely to be employed more than 30 hours per week, more likely to have health insurance and less likely to be very religious. Three quarters of the student veterans had been deployed during their military careers.

Table 2 presents the unadjusted and the age-sex-race adjusted proportion of students screening positive for mental disorders. Unadjusted bivariate comparisons indicated that student veterans had a significantly higher prevalence of current probable depression (33.1% versus 19.5%, p<0.01), probable PTSD (25.7% versus 12.6%, p<.01), and suicide ideation (19.2% versus 10.6%, p=0.01). Controlling for age, gender, and race/ethnicity, the multivariate findings were consistent with the bivariate findings with regard to depression (OR=2.10, CI_{95}=1.18–3.73, p=.01), and suicide ideation (OR=2.31, CI_{95}=1.09–4.91, p=.03) (Table 2). While the age-sex-race adjusted odds of having screening positive for PTSD were still larger for veterans than non-veterans, it was not statistically significant (OR=1.86, CI95=0.97–3.55, p=.06), as it was in the bivariate analysis. There were no significant bivariate or age-sex-race adjusted differences between veterans and non-veterans with respect to probable GAD, self-injury or suicide intent.

Table 3 presents the unadjusted and the age-sex-race adjusted prevalence of perceived need, perceived stigma, perceived treatment effectiveness, and service utilization. With respect to perceived need, unadjusted bivariate comparisons indicated that a similar proportion of student veterans and non-veterans (39.2% versus 32.7%, p=.14) indicated that they needed help with emotional or mental health problems in the past year. However, when adjusting for age, race/ethnicity and especially the predominantly male gender of veterans (OR=0.28, CI_{95}=0.15–0.52, p<.0001), student veterans had significantly higher odds of perceiving need for treatment than non-veterans (OR=1.93, CI_{95}=1.09–3.43, p=.02). Both veterans and non-veterans reported relatively low levels of personal stigma (μ=0.9 and μ=0.8 respectively, on a scale from 1–5). Both unadjusted bivariate comparisons (unadjusted difference in means=0.12, p=.16) and multivariate findings (beta=0.05, CI_{95}=−0.17–0.27, p=.68) indicated that veterans had similar perceptions about personal stigma compared to non-veterans. Both veterans and non-veterans perceived higher levels of public stigma (μ=2.5 and μ=2.3 respectively, on a scale from 1–5). Both unadjusted bivariate comparisons (unadjusted difference in means=0.27, p=0.007) and multivariate findings (beta=0.28, CI_{95}=0.04 – 0.51, p=.02) indicated that veterans perceived greater public stigma than non-veterans. A somewhat smaller percentage of veterans than non-veterans believed that counseling was helpful (59.7% versus 68.4%, p=0.054). Adjusting for age, gender, and race/ethnicity, there was not a significant difference between veterans and non-veterans with regard to the perceived effectiveness of counseling (OR=1.12, CI_{95}=0.64–1.93, p=.70). According to the bivariate analysis, veterans were significantly less likely to believe that psychotropic medications were helpful (44.1% versus 56.7%, p<.01). However, when controlling for age, race/ethnicity, and especially the predominantly male gender of veterans (OR=2.05, CI_{95}=1.173 – 3.569, p=.01), beliefs about the effectiveness of medications were

not different for veterans compared to non-veterans (OR=0.76, CI_{95}=0.44–1.30, p=.31). In terms of service use, less than a quarter of both student veterans and non-veterans received psychotropic medications in the previous 12 months (24.9% versus 22.6%, p=.435) and there were no significant veteran-non-veteran difference in adjusted analyses (OR=1.04, CI_{95}=0.56–1.91, p=.91). However, both bivariate comparisons between veterans and non-veterans (21.8% versus 9.2%, p<0.01) and multivariate findings (OR=2.35, CI_{95}=1.02–5.45, p=.046) indicated that student veterans were more likely to have received psychotherapy in the previous 12 months.

Discussion

There is a small, but growing, literature on community college students' risky health behaviors, including alcohol and tobacco use.[30] However, to the best of our knowledge, this is the first study to report the prevalence of probable mental health disorders, and help seeking behaviors among community college students. The proportion of students screening positive for depression, GAD, and PTSD appear to be similar at community colleges compared to four-year colleges and universities, despite the increased socioeconomic burden[11] of community college students. Among students at four-year colleges and universities, the Healthy Minds Study reports (http://www.healthymindsnetwork.org/research/data-for-researchers) the proportion of students screening positive was 22% for depression, 17% for GAD, 16% for self-injury, 12% for suicide ideation, and 2% for suicide intent. Using the same methodology, the proportion of community college students screening positive was 20% for depression, 18% for GAD, 9% for self-injury, 11% for suicide ideation, and 8% for suicideintent. Among undergraduate students attending one university and one community college in the mid-west, the percentages of students screening positive for PTSD were 11% and 15% respectively (not statistically different), which is similar to the percentage screening positive for PTSD in our sample of community college students (13%).[12]

In addition to the similar prevalence of probable mental disorders, community college students had somewhat similar levels of perceived need for mental health care relative to students at four-year colleges.[9] However, the patterns of mental health service use were somewhat different at two-year community colleges and four-year colleges. In the Healthy Minds Study, 16% of traditional college students reported taking a psychotropic medication in the past year,[9] whereas 21% of students in our community college sample reported taking a psychotropic mediation. In contrast, while 18% of four-year college students reported receiving psychotherapy in the past year[9], only 7% of students in our community college sample reported receiving psychotherapy. While not a direct comparison, the seemingly greater reliance on psychotropic medications and the lower use of psychotherapy may reflect the lack of counseling services available on community college campuses.

To the best of our knowledge, this is the first study to directly compare the mental health and help seeking behaviors of student veterans and non-veterans. Despite the high prevalence of probable mental illness among non-veteran community college students, student veterans had an even higher age-sex-race adjusted odds (roughly double) of screening positive for depression and suicide ideation as hypothesized. The prevalence of screening positive for

GAD, PTSD, suicide intent and self-injury were also higher among student veterans than non-veterans, but not significantly so when adjusting for age, gender and race/ethnicity. The proportion of veterans screening positive for a mental disorder was quite high, with 33.1% screening positive for depression, 25.1% for PTSD, and 19.2% for suicide ideation. Importantly, the proportion screening positive in this sample of veterans enrolled in community college is substantially higher than the proportion screening positive in general samples of OEF/OIF/OND veterans. For example, in a nationally representative random sample of 1,965 OEF/OIF veterans, 13.7% screened positive for depression (using the PHQ-8 screener) and 13.8% screened positive for PTSD (using the PTSD Checklist screener).[31] In addition, adjusting for age, gender and race/ethnicity, student veterans had a greater perceived need for treatment as hypothesized. The risk factors associated with being a veteran and a community college student may be cumulative. Three quarters of the student veterans in our sample had been deployed. This deployment history together with the stress of reintegrating into the community college setting while maintaining full or part-time employment may have all contributed to the relatively high risk of screening positive.

As hypothesized, compared to non-veterans, student veterans perceived higher levels of public stigma and were less likely to believe that psychotropic medications were helpful. Despite these barriers, student veterans at community colleges had similar psychotropic medication use as non-veteran students, which was contrary to our hypothesis. Also contrary to our hypothesis, student veterans had twice the age-sex-race adjusted odds of psychotherapy use compared to non-veterans. This likely reflects student veterans' enhanced access to psychotherapy. In fact, the vast majority (70.5%) of student veterans receiving psychotherapy in our sample reported visiting clinics operated by the Department of Veterans Affairs.

The results of this study highlight the need for linking community college students to effective mental health services. The substantial difference between the proportion screening positive and the proportion seeking treatment suggests that there are high levels of unmet need among community college students. Because only about half of community colleges nationwide have student health centers on campus,[14] many community college students with mental health disorders do not have the opportunity to be detected or treated in this setting. Moreover, the majority of community colleges appear to lack any on-site mental health services.[15] Thus, non-clinic based programs should be developed to detect mental disorders and link students with off campus mental health services. In order to promote OEF/OIF/OND veterans' successful re-integration into a productive non-veteran life it is especially important to identify and refer the large numbers of student veterans attending community colleges on the Post-9/11 GI Bill who are suffering from mental disorders. Linkage programs developed for community college campuses will likely need to be customized for student veterans who may not identify with the larger non-veteran student population. Peer outreach programs may be particularly effective at identifying student veterans with untreated mental disorders and linking them with needed services.[32] In addition, public awareness campaigns may increase the recognition of mental health disorders on community college campuses and encourage help seeking.

This study has several limitations. All the community colleges were located in one state and results may not generalize to other regions. Likewise, like many on-line surveys, the response rate was low, which increases the risk of non-response bias. However, the response rate is similar to other on-line surveys administered to community college students.[30] In addition, this limitation was mitigated somewhat by the use of non-response weights developed using the characteristics (age category, gender, race/ethnicity minority status, and veteran status) of all sampled students obtained from the registrars' offices. Another limitation is that the students were surveyed using clinical screening instruments rather than structured diagnostic interviews which have better sensitivity and specificity. Thus, results represent the prevalence of probable mental health disorders and likely over-estimates the proportion meeting full diagnostic criteria. Finally, while we oversampled student veterans (in order to facilitate future sub-sample analysis), this led to small sampling weights for veterans and reduced statistical power to detect meaningful veteran-non-veteran differences in outcomes (e.g., prevalence of probable PTSD). Despite these limitations, the results from this study highlight the extraordinary degree of unmet need in the community college setting, especially for OEF/OIF/OND veterans using the Post 9/11 GI Bill. Given the multibillion-dollar investment being made by the Department of Veterans Affairs for the Post 9/11 GI Bill, policy makers should consider deploying screening and linkage programs for student veterans suffering from mental illness to maximize the return on this national investment.

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Table 1

Demographic characteristics of community college student sample

Variable	All N=775 Weighted %	Veteran N=211 Weighted %	Non-veteran N=554 Weighted %	p
Age				
18–22	49.5	9.2	50.8	<.001
23–30	23.4	52.5	22.4	
31–40	16.5	25.6	16.2	
41+	10.6	12.7	10.6	
Male	33.1	76.3	31.6	<.001
Race				
White	73.9	69.6	74.1	. 614
Black	15.3	17.1	15.2	
Other[1]	10.8	12.9	10.7	
Married[2]	31.3	59.3	30.4	<.001
Hours Employed Per Week				
0	36.7	31.5	36.9	<.0001
1–20	21.8	11.7	22.2	
21–30	9.9	4.9	10.1	
>30	31.5	51.9	30.8	
Health Insurance	61.3	78.0	60.7	<0.001
Current financial situation				
It is a financial struggle	39.4	33.1	39.6	.066
It is tight, but doing fine	48.0	47.5	48.1	
Finances not a problem	12.6	19.4	12.3	
Religiosity				
Very religious	27.0	16.0	27.4	<.001
Fairly religious	48.0	42.9	48.2	
Not too religious	19.9	30.4	19.6	
Not at all	5.1	10.8	4.9	
Years attending community college				
1	46.3	30.4	46.9	<.001
2	36.0	51.9	35.4	
3	11.0	14.6	10.8	
4+	6.7	3.0	6.9	
Lives off campus[3]	97.6	98.8	97.6	.361
Mother’s education				
8th grade and lower	6.4	4.5	6.4	.034
9th – 12th grade	6.3	12.6	6.1	
High school degree	34.5	34.4	34.5	
Some college	22.9	27.0	22.8	
Associate’s degree	13.4	11.3	13.5	

Variable	All N=775 Weighted %	Veteran N=211 Weighted %	Non-veteran N=554 Weighted %	p
Bachelor's degree	10.5	7.6	10.6	
Graduate degree	5.9	2.6	6.0	
Father's education				
8th grade and lower	8.1	6.8	8.1	.635
9th – 12th grade	9.5	12.5	9.3	
High school degree	38.7	43.5	38.5	
Some college	20.3	18.1	20.4	
Associate's degree	7.1	7.3	7.1	
Bachelor's degree	10.3	8.3	10.4	
Graduate degree	6.1	3.6	6.2	
Deployed	-	76.5	-	NA

[1]Other includes American Indian/Alaskan Native, Arab/Middle Eastern or Arab American, Asian/Asian-American, Pacific Islander and biracial and multiracial ethnicity/race.

[2]Married included married or living in a domestic partnership. Not married included single, in a relationship, divorced or widowed.

[3]Living on campus included college residence hall, fraternity or sorority house, or other on-campus student housing.

Table 2

Unadjusted and adjusted non-veteran-veteran differences in the prevalence of mental illness and

	All N=765	Veteran N=211	Non-veteran N=554	Unadjusted			Age-Sex-Race Adjusted		
Variable	**Weighted %**	**Weighted %**	**Weighted %**	**OR**	**95% CI**	**p**	**OR**	**95% CI**	**p**
Screening instruments									
Depression[1]	19.9	33.1	19.5	2.05	1.36–3.08	<.001	2.12	1.18–3.79	.011
GAD[2]	17.6	23.1	17.4	1.42	0.91–2.21	.119	1.37	0.77–2.44	.287
PTSD[3]	13.0	25.7	12.6	2.41	1.50–3.88	<.001	1.87	0.99–3.55	.059
Thoughts and behaviors									
Self-injury[4]	8.6	8.3	8.6	0.97	0.49–1.92	.920	2.28	0.82–6.31	.113
Suicide ideation past 2 weeks[5]	10.8	19.2	10.6	2.01	1.17–3.46	.011	2.34	1.10–5.02	.028
Suicide intent past year[6]	8.0	12.5	7.9	1.66	0.89–3.10	.110	2.12	0.86–5.18	.101

[1] PHQ-9 cutoff≥10

[2] GAD-7 cutoff≥10

[3] PC-PTSD cutoff≥3

[4] In the past year, have you ever done any of the following intentionally, without intending to kill yourself? Response options - Cut myself, Burned myself, Punched or banged myself, Scratched myself, Pulled my hair, Bit myself, Interfered with a wound healing, Carved words or symbols into my skin, Rubbed sharp objects into my skin, Punched or banged an object to hurt myself, Other harm to myself, No, none of these

[5] Over the last 2 weeks, how often have you been bothered by any of the following problems? Thoughts that you would be better off dead or of hurting yourself in some way? Response options - Not at all, Several days, More than half the days, Nearly every day. Responses other than “Not at all” were categorized as Suicide Ideation.

[6] In the past year, did you ever seriously think about attempting suicide? Response options – Yes, No. A “Yes” response was categorized as Suicide Intent.

Table 3

Unadjusted and adjusted non-veteran-veteran differences in help seeking behaviors

	All N=765	Veteran N=211	Non-veteran N=554	Unadjusted			Age-Sex-Race Adjusted		
Variable	**Weighted Mean**	**Weighted Mean**	**Weighted Mean**	**Difference in Means**	**95% CI**	**p**	**Beta**	**95% CI**	**p**
Stigma									
Personal stigma[1]	0.81	0.93	0.81	0.12	−0.05–0.29	.163	0.05	−0.17–0.27	.680
Public stigma[2]	2.28	2.54	2.28	0.27	0.08–0.46	.006	0.28	0.04–0.51	.020
Variable	All N=765	Veteran N=211	Non-veteran N=554	Unadjusted			Age-Sex-Race Adjusted		
	Weighted %	Weighted %	Weighted %	OR	95% CI	p	OR	95% CI	p
Perceived need									
Think needed help[3]	32.9	39.2	32.7	1.33	0.91–1.95	.144	1.97	1.11–3.50	.021
Perceived Treatment Effectiveness									
Believe therapy can help[4]	68.1	59.7	68.4	0.68	0.47–1.01	.054	1.12	0.64–1.93	.699
Believe medication can help[5]	56.3	44.1	56.7	0.60	0.42–0.87	.007	0.76	0.44–1.30	.311
Help seeking									
Psychotropic medications[6]	21.2	24.0	21.1	1.19	0.77–1.83	.442	1.04	0.56–1.92	.897
Psychotherapy[7]	6.5	21.2	6.0	4.21	2.39–7.42	<.001	2.36	1.02–5.50	.046

[1] Average response to following questions: 1) I would willingly accept someone who has received mental health treatment as a close friend, 2) I would think less of a person who has received mental health treatment (reverse coded); 3) I feel that receiving mental health treatment is a sign of personal failure (reverse coded). Response options - Strongly agree (0), Agree (1), Somewhat agree (2), Somewhat disagree (3), Disagree (4), Strongly disagree (5).

[2] Average response to following questions: 1) Most people would willingly accept someone who has received mental health treatment as a close friend; 2) Most people feel that receiving mental health treatment is a sign of personal failure (reverse coded); 3) Most people think less of a person who has received mental health treatment (reverse coded). Response options - Strongly agree (0), Agree (1), Somewhat agree (2), Somewhat disagree (3), Disagree (4), Strongly disagree (5).

[3] In the past 12 months, did you think you needed help for emotional or mental health problems such as feeling sad, blue, anxious, or nervous? Response options – Yes, No.

[4] How helpful, on average, do you think medication is, when provided competently, for people your age who are clinically depressed? Response options - Very helpful, Quite helpful, A little helpful, Not at all helpful. Very helpful and quite helpful were combined to create a dichotomous variable.

[5] How helpful, on average, do you think therapy or counseling is, when provided competently, for people your age who are clinically depressed? Response options - Very helpful, Quite helpful, A little helpful, Not at all helpful. Very helpful and quite helpful were combined to create a dichotomous variable.

[6] Based on a doctor's prescription, on how many occasions in the past 12 months have you used the following types of drugs? Response options for each drug category – No occasions, 1–2 occasions, 3–5 occasions, 6–9 occasions, 10–19 occasions, 20–39 occasions, 40+ occasions. All occasions >1 were combined to create a dichotomous variable.

[7] In the past 12 months have you received counseling or therapy for your mental or emotional health from a health professional (such as psychiatrist, psychologist, social worker, or primary care doctor)? Response options – Yes, No.