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**14. ABSTRACT**

This study is collecting survey data and rich qualitative information on student veterans' mental health, help-seeking behavior, and attitudes regarding mental health treatment. Ultimately, this survey and qualitative data will inform the development of a new screening and linkage to care intervention that is feasible in the community college setting and acceptable to this student veteran population and their families. The survey portion of the study is completed and we are conducting proposed analyses. Qualitative interviews and focus groups are ongoing. Analyses from the survey indicate that psychiatric distress is prevalent in the sample of veterans: 32% depression, 23% generalized anxiety, 26% PTSD, 44% with any MH disorder, and 36% binge drinking. Compared to a civilian sample from the same schools, the veterans have significantly higher prevalence of MH disorders in all categories except generalized anxiety. The rates being reported for positive screens are high, thereby demonstrated a need to for increased recognition and intervention in the population. The Veterans in the in-depth interviews are recommending linkage and or services interventions that are acceptable to them, many of which are consistent with current interventions in VA, while some are completely novel. In the next year we will be exploring these intervention ideas further, creating intervention plans in partnership with student Veterans and college representatives, and writing (and resubmitting) grant applications to allow us to develop and pilot test them.

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Community, college, student, depression, PTSD, mental health

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**INTRODUCTION:** While the majority of returning OEF and OIF military service members successfully reintegrate into family life, vocational pursuits, and educational activities, a significant percentage have difficulty because they suffer with TBI, PTSD, depression, and substance misuse and do not seek mental health treatment. It is critical to link OEF/OIF veterans with mental health problems to care in order to promote successful re-integration into a productive, civilian life. **One reintegration domain that is extremely important to veterans and the DOD is attaining further postsecondary education.** A substantial number of OEF/OIF veterans suffering with mental health difficulties will enter rural community colleges on the new GI Bill. They will be forced to make the transition from the highly structured and hierarchical military setting to the unstructured and sometimes chaotic environment of a college**.**

Rural community colleges represent an important community context through which we can potentially promote veterans' engagement with formal care. Yet little has been done to address student veterans' mental health needs as they reintegrate and attend two-year community colleges. A concurrent challenge is that many returning student veterans live and attend school in rural regions where mental health resources are scarce. In order to address the needs of rural OEF/OIF veterans, it is critical to partner with community stakeholders, such as community colleges, who are likely to have frequent interactions with these veterans. **Linking these suffering student veterans to quality care is critical to their educational success on the new GI bill and their successful re-integration into civilian life.**

*Overarching Research Objective:* This study proposes to first collect survey data and then rich qualitative information on student veterans' mental health, help-seeking behavior, and attitudes regarding mental health treatment. Ultimately, this survey and qualitative data will inform the development of a new screening and linkage to care intervention that is feasible in the rural community college setting and acceptable to this student veteran population and their families.

**BODY:** The following body is arranged in 3 separate sections, each titled descriptively.

**Section 1: Progress to Date**

This section is arranged by the tasks in our DoD-approved Statement of Work that are relevant to **this annual report.** Please note that we received approval for a no cost extension year, and as such, some of the dates of tasks and deliverables have been modified to reflect the extension of work.

**Task 4: Recruiting student veteran participants for the web-based quantitative survey, fielding this web-based survey, and cleaning of the survey data (Months 6-24)**:

Survey Sciences Group-Center for Student Studies assisted us in recruiting student Veterans via both mail and email in the 11 rural Arkansas community colleges who agreed to participate in this study and provided student contact lists. Initially, we predicted that we would recruit from a pool of at least 1,000 student veterans. We ended up having a pool of 928 student Veterans at 11 participating community colleges. Student veterans were offered generous $20 pre-incentives to complete the survey, and with this pre-incentive, we aimed to achieve a 70% response rate. Unfortunately, our response rate was less than this target—the response rate ended up being approximately 30%. **Our final sample of student veterans in the survey is 228. Our final civilian sample is 554** (collected with NIMH funds from an

R21), **resulting in a total survey sample of 782**. Because of the large numbers, we have adequate power for our proposed calculations, but we are concerned about bias due to non-response. We are managing with this lower than expected response rate by using weights to control for response bias. As we have communicated before in previous reports, we had difficulties getting the necessary data to make the weights (from one school in particular)which caused significant delays, but this problem has been addressed and we now have the weights and are applying them in all analyses. Per our expert colleagues at Survey Sciences Group, they were not particularly surprised with our response rate at rural community colleges because they have noted lower response rates in 4-year commuter schools compared to residential 4-year schools. Of course, community colleges are "commuter schools" by definition.

Survey Sciences Group-Center for Student Studies has compiled and cleaned the collected survey data and has provided our team with an SPSS data file for data analysis. We are performing analyses on the weighted data and making significant progress in analyses. We can provide copies of slides from multiple presentations and drafts of two manuscripts upon request.

**Task 5: Development of a qualitative interview guide:**

Interview guides for the in-depth qualitative key participant interviews were developed early in the grant based on the methods of ethnographic interviewing. In addition, the related consent form and flier were developed as well.

**Task 6: Obtain UAMS IRB and USAMRMC HRPO approval for the qualitative portion of the study and then recruit, consent, and interview 20-40 (20-25 men and 10-15 women) student veterans who screened positive for a mental health condition (Months 12-42):**

We have obtained IRB approval at the University of Arkansas for Medical Sciences for human subject data collection in the key participant interview portion of the study (Task 6a). UAMS IRB has approved the interview guide, protocol, and the related consent form and flier. We also received HRPO approval for the qualitative key participant interviews on 3-14-2012 (Phase 2).

**6b. Recruit participants (20-25 men and 10-15 women student veterans who screened positive for a mental health condition) and conduct in-depth face-to-face interview (1-2 hours) at the participant's college (or other location selected by the participant). Participants will have a $50 incentive for participating in these involved interviews (Months 18-42).**

We received a list of 87 potential participants from our partners at SSG who both screened positive for at least one mental health condition and were willing to be contacted for further research when they completed their quantitative survey consent form. This is the pool from which we can draw the participants for the in-depth interviews. Participants receive a $50 incentive for participating in these involved interviews.

**To date we have completed 24 interviews** (18 men, 6 women). This is fewer then we had hoped by this point in the study, but we are continuing to recruit and will continue to do so during the no cost extension period. One complication that has arisen is that most of these potential interview participants are not answering their phones when we call, and in many cases were are not able to leave a voicemail. We discuss the issue and interventions/solutions we have employed in more detail below in the "Problem Areas" section.

**Task 7: Focus Group and Intervention Development Process (Months 25-42)**

**We have completed 2 focus groups with 10 student veterans total, and 1 focus group with 6 significant others of student veterans**. We are attempting to recruit more significant others for one

more focus group. We draw from the pool of veterans who completed the in-depth interviews to participate in the focus groups. We are continuing to recruit for significant others and will continue doing so during the no cost extension period in an attempt to field a second focus group with them.

**Task 8**: **Data analyses (Months 12-48):**

As described above, Survey Sciences Group-Center for Student Studies has compiled and cleaned the survey data and has provided our team with a SPSS data file for data analysis. We have the response weights and we are rapidly doing analyses. We have completed numerous analyses around mental health prevalence and services use for mental health disorders, and we also have conducted multivariate analyses on perceived need for care, help seeking, and academic achievement. Many more analyses are currently being conducted. We have developed a paper-writing plan and have outlined numerous papers to be created. All qualitative interviews and focus group interviews have been transcribed and we are coding those data and making interpretations.

**Task 9: Manuscript Development (Months 18-48):**

We are working on our first 4 manuscripts (3 quantitative and 1 qualitative). Our fist paper describing mental health prevalence and barriers to help-seeking from the survey data (attached to this report) was submitted to Psychiatric Services, revised for resubmission to the same journal, then recently rejected. We are revising it and will submit it to another journal. A second paper describing the service use of the overall survey sample is near completion. A third paper describing the prevalence of binge drinking and illegal drug use and their impact on academic performance is in development (poster attached from a June 2014 meeting with some of the data found in the manuscript). A qualitative paper is in development as well (see presentation from this year attached that is the basis of the paper in development). We have submitted two R34 grants to NIH thus far to develop and test 1) a brief alcohol intervention using student Veteran peer support, and 2) a depression intervention using student Veteran peer support. Neither were funded on their initial submission, but they both will be revised and resubmitted in 2015.

**Section II: Problem Areas**

(a) A description of current problems that may impede performance along with proposed corrective action.

At this time we are experiencing one major problem area:

1) In terms of the in-depth interview and focus group data collection, we are below our expected enrollment at this time. We have attempted to reach all of the 87 eligible Veterans thus far to invite them to participate in the qualitative interview (and those who have interviews, the focus groups). Nobody has yet refused. However, many telephone numbers have turned out to be "wrong numbers". Further, most people we have attempted to reach have not actually answered our calls, and we have left many voicemails and/or are repeating calls. We have learned that many of the Veterans do not have voicemail-enabled phones (i.e., we are not able to leave a message). This is impacting recruitment. We have employed two remedies this past year (and increased enrollment this year likely as a result)-- we have home addresses as for each participant, and we contacted them by mail (we are already approved to do so in the current protocol). Further, we contacted the schools and got any additional telephone contact information on those who are not picking up. We got many new numbers and have used them to recruit. We will again update contact info from the schools as we can.

It is possible that we will not reach out target of 20-25 males and 10-15 females for the in-depth interviews, but we are getting close. We have 18 males and 6 females. It is common to reach "theoretical saturation" at 15-20 interviews for similar subpopulations (e.g., male Veterans in community colleges), so we believe strongly that we can reach theoretical saturation for the male Veterans. Certainly, we will continue to attempt to recruit to the target numbers for the duration of the study. We have completed the 2 focus groups we proposed for the student veterans, and 1 of 2 proposed focus groups with significant others. We are attempting to recruit our second of two focus groups with significant others.

**Section III—Description of work to be performed during the 1st quarter of the 5th year (the last in the no cost extension, and only a partial year).**

We describe the upcoming work for each Task.

**Task 6b. Recruit participants (20-25 men and 10-15 women student veterans who screened positive for a mental health condition) and conduct in-depth face-to-face interview (1-2 hours) at the participant's college (or other location selected by the participant).**

We will continue to recruit and interview participants in the 1st quarter of Year 5 (no cost extension).

**Task 6c. Transcribe interviews and prepare the transcripts for data analyses (Research Technologist) with a software program for qualitative data analysis**

We are fully transcribed now, but will transcribe new interviews and focus groups.

**Task 7: Focus Group and Intervention Development Process**

We will continue to recruit for one more focus group with significant others and conduct it during the 1st quarter of Year 5 (no cost extension) if possible. In the final months of this next NCE period we will conduct the proposed multi-stakeholder intervention development process (though we have already done some work with stakeholders already to put together the NIH grants).

**Task 8**: **Data analyses**

We will continue to conduct analyses as proposed in the upcoming quarter and year.

Qualitative analysis software is being used to analyze, code, and interpret the transcribed interview data. Data analyses began soon after the first interviews were done, and analyses will continue in an iterative manner across the next quarter and across the majority of the study period. Drs. Curran, Cheney (who just left UAMS), and the RA, LaKiesha Mitchell, have served as coders (Months 20-48).

**Task 9: Manuscript development**

This will be a focus of the next several months. The paper recently rejected by Psychiatric Services will be revised and sent to another journal. The other papers being completed will be submitted in 2015, and we expect to be writing manuscripts on study data well after the no cost extension period is over.

**KEY RESEARCH ACCOMPLISHMENTS:** We are pleased to report the following accomplishments:

- The survey was fielded and completed (228 veterans). An accompanying set of surveys from civilians from the same schools were collected as well, funded by NIMH, (554 civilians).

- The dataset has been cleaned, we have response weights completed, and analyses are ongoing. We have attached one completed manuscript and one presentation for review.

- We are close to the targets for the qualitative interviews, and we have completed both proposed focus groups with veterans and 1 of 2 with significant others.

- Quantitative and Qualitative analyses are ongoing.

- 2 NIH grants based on quantitative and qualitative findings have been submitted and while not funded, will be revised and resubmitted.

**REPORTABLE OUTCOMES:** We have prepared numerous presentations with preliminary findings thus far-- two presented at Fort Detrick, MD (conference on "Stigma/Barriers to Care and Accessing Solutions"), one at a local University presentation, two at a national substance abuse conference, and one at a national anthropology conference. We summarize some key preliminary findings here.

Analyses from the survey indicate that the student Veterans are reporting high levels of psychological distress. Thirty-three percent of the student Veterans screened positive on a 9-item screener for current depression (past 2 weeks). Twenty-three percent screened positive on a 7-item screener for generalized anxiety. Twenty-Six percent of the student Veterans screened positive on a 4-item screener for post-traumatic stress (PTSD). Forty-Four percent of the student Veterans screened positive on at least one mental health screening instrument. Thirty-Six percent of the student Veterans reported recent binge drinking. All of these rates, with the exception of generalized anxiety, are statistically significantly and substantially higher for the student veterans than the comparison group of non-Veterans from the same colleges. Further, 19% of the student Veterans reported thoughts of suicide in the past year, compared to 11% of the non-Veterans comparison group from the same colleges. In terms of perceived need for help, 39% of the student Veterans reported a perceived need for help for an emotional or mental health problem. In terms of service use, 24% of student veterans reported the use of a psychiatric medication, and 21% reported using counseling. Compared to non-Veterans from the same collages, these rates were not significantly different, except in the case of counseling services, where the student Veterans used more counseling services. In multivariate models, positive scores on screens for PTSD and generalized anxiety disorder are significantly associated with perceived need for treatment and actual receipt of psychotherapy and psychiatric medications. Predictors of binge drinking include veterans status, being married, use of illicit drugs, and finances being "not a problem" (compared to being "a struggle). Binge drinking is not predictive of academic performance, but illicit drug use associated with lower academic performance as measure by self-reported grades.

Analyses from the in-depth interviews have uncovered a number of consistent emergent themes. For example, numerous barriers to help-seeking are being reported and elucidated, including-- lack of perceived need, skepticism of treatment efficacy, stigma, and lack of available services. Relative to their recommendations for interventions they would find acceptable, a common theme that is emerging is "Vet-

to-Vet connections." Numerous participants have discussed their ideas about using student Veterans as liaisons and/or connectors to care. Some also recommend using student Veterans to screen the Veteran student populations for potential problems. Others recommended setting up activities for student Veterans that were "positive" (such as fishing or volunteering), to enhance well-being, but also to allow relationships to be established, thereby allowing those student Veterans who are struggling avenues to self-identify as needing help. They are also expressing distress and some anger around relations with non-veteran students, whom many in our qualitative sample consider "still young, not serious, and getting in the way of others' success in school." Focus group participants are echoing these themes and recommending a focus on per-led interventions. Participants in the significant other focus group also recommended programs to be developed for them so they could better assist their significant other with their struggles and to assist in navigating seeking help.

**CONCLUSIONS:** It is clear that the student Veterans are experiencing substantial psychological distress. The rates being reported for positive screens are high, thereby demonstrated a need to for increased recognition and intervention in the population. The Veterans in the in-depth interviews are recommending linkage and or services interventions that are acceptable to them, many of which are consistent with current interventions in VA, while some are completely novel. We will be exploring these intervention ideas further, creating intervention plans in partnership with student Veterans and representatives from these community colleges, and re-submitting applications to pilot test these interventions.

3,326 Words

# Prevalence of Mental Disorders and Help Seeking Behaviors among Veteran and Civilian Community College Students

Disclosures and Acknowledgments:

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## Abstract

**Objective**: Millions of disadvantaged youth are enrolled in community colleges. The objective was to determine the prevalence of mental disorders and help seeking behaviors among student veterans and civilians attending community college. **Methods**: Veterans (n=211) and civilians (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 acute suicide ideation. The survey also asked about the perceived need for, barriers to, and utilization of services. Regression analysis was used to compare prevalence between student veterans and civilians adjusting for non-modifiable factors (age, gender, and race/ethnicity). **Results**: A large proportion of civilian community college students screened positive for depression (19.5%), generalized anxiety (17.4%), PTSD (12.6%), self-injury (8.6%), suicide ideation (10.6%) and acute suicide ideation (7.9%). Veterans were significantly more likely than civilians to screen positive for depression (OR=2.10, p=.01), and suicide ideation (OR=2.31, p=.03), but not PTSD, generalized anxiety, acute suicide ideation, or self-injury. Student veterans had significantly higher odds of perceiving a need for treatment than civilians (OR=1.93, p=.02), but were also more likely to perceive public stigma (beta=0.28, p=.02). There was no significant veteran-civilian difference in use of psychotropic medications. However, veterans had significantly higher odds of receiving psychotherapy than civilians (OR=2.35, p=.046). **Conclusions**: Findings highlight the substantial difference between the prevalence of and treatment seeking for mental disorders among community college students, suggesting a high level of unmet need. 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. While the majority of returning service members successfully reintegrate into family life, educational activities and vocational pursuits, a significant percentage of veterans experience mental disorders and most do not seek treatment.[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. 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 mental disorders and help seeking behaviors, we fielded a survey to population-based samples of veterans and civilians attending community colleges. We hypothesized that veterans would have a higher prevalence of mental disorders than

civilians. We also compared student veteran and civilian perceptions about the need for treatment and barriers to mental health treatment, as well as the utilization of mental health services. We hypothesized that student veterans would have a greater perceived need for treatment, perceive more barriers to care, and use fewer services.

**Methods**

Eleven two-year community colleges were recruited from the state of Arkansas (see Figure 1). 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 civilians from each community college, so that the ratio of civilians to veterans sampled was 1.7 at each institution. We sampled and recruited a total of 2,500 students including 1,572 civilian 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 civilians). 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. 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 civilians. 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 civilians). Because all veterans were sampled, the total (stratification*post-stratification) weights for student veterans were substantially smaller than for civilians ($\mu$=0.12 versus $\mu$=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 mental disorders was assessed using validated screening instruments for depression (PHQ-9),[23] generalized anxiety disorder (GAD-7),[24] and posttraumatic stress disorder (PC-PTSD).[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] Acute suicide ideation (i.e., 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]

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). 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). Summated scales for both personal stigma and public stigma were generated by averaging the responses across the three items. 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-civilian 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-civilian differences in prevalence, 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-civilian differences in perceived stigma. To account for the non-modifiable demographic differences between veterans and civilians (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-civilian differences in prevalence, perceived need, perceived stigma, perceived treatment effectiveness, and service utilization. Given the relatively large sample, an alpha significance level of 0.05 was used to determine statistical significance.

**Results**

As expected, there were substantial and significant modifiable and non-modifiable socio-demographic differences between veteran and civilian community college students (Table 1). Compared to civilians, student 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 depression (33.1% versus 19.5%, $p<0.01$), PTSD (25.7% versus 12.6%, $p<.01$), and suicide ideation (19.2% versus 10.6%, $p=0.01$). There were no significant bivariate differences with respect to GAD, acute suicide ideation, or self-injury. 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 civilians, it was no longer statistically significant (OR=1.86, CI95=0.97-3.55, p=.06), as it was in the bivariate analysis. There were no significant age-sex-race adjusted veteran-civilian differences with respect to GAD, self-injury or acute suicide ideation, which was consistent with the bivariate findings.

Table 3 presents the unadjusted and the age-sex-race adjusted results for 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 civilians (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 civilians (OR=1.93, $CI_{95}$=1.09-3.43, p=.02). Both veterans and civilians reported relatively low levels of personal stigma (μ=0.9 and μ=0.8 respectively, on a scale from 1-5) and an unadjusted bivariate comparison indicated that veterans had similar perceptions about personal stigma compared to civilians (unadjusted difference in means=0.12, p=.16). Controlling for age, gender, and race/ethnicity, the multivariate findings were consistent with the bivariate findings (beta=0.05, $CI_{95}$=-0.17-0.27, p=.68). Both veterans and civilians perceived higher levels of public stigma (μ=2.5 and μ=2.3 respectively, on a scale from 1-5), and an unadjusted bivariate comparison indicated that veterans perceived greater public stigma than civilians (unadjusted difference in means=0.27, p=0.007). Controlling for age, gender, and race/ethnicity, the multivariate findings were consistent with the bivariate findings (beta=0.28, $CI_{95}$=0.04 - 0.51, p=.02). A somewhat smaller percentage of veterans than civilians 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 civilians 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 civilians (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 civilians received psychotropic medications in the previous 12 months (24.9% versus 22.6%, p=.435) and there were no significant veteran-civilian difference in

adjusted analyses (OR=1.04, $CI_{95}$=0.56-1.91, p=.91). However, a significantly and substantially higher proportion of student veterans received psychotherapy in the previous 12 months compared to civilians (21.8% versus 9.2%, p<0.01). Adjusting for age, race/ethnicity and gender, student veterans had significantly higher odds of receiving psychotherapy (OR=2.35, $CI_{95}$=1.02-5.45, p=.046).

**Discussion**

There is a small, but growing, literature on community college students' risky health behaviors, including alcohol and tobacco use.[28] However, to the best of our knowledge, this is the first study to report the prevalence of a range of mental disorders and help seeking behaviors among community college students. The proportion of students screening positive 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) 22% of students screen positive for depression, 17% for GAD, 16% for self-injury, 12% for suicide ideation, and 2% for acute suicide ideation. Using the same methodology, the proportion of community college students screening positive for depression was 20%, 18% for GAD, 9% for self-injury, 11% for suicide ideation, and 8% for acute suicide ideation. 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 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 civilians. Despite the high prevalence of mental illness among civilian 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, acute suicide ideation and self-injury were also higher among student veterans than civilians, 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 and 13.8% screened positive for PTSD.[29] 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 civilians, student veterans perceived higher levels of public stigma and were less likely to believe that psychotropic medciations were helpful. Despite these barriers, student veterans at community colleges had similar psychotropic medication use as civilian students, which was contrary to our hypothesis. Moreover, opposite to our hypothesis, student veterans had twice the age-sex-race adjusted odds of psychotherapy use as civilians in the previous 12 months. 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 do not have the opportunity to be detected and 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 civilian life it is especially important to detect 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 civilian student population. Peer outreach programs may be particularly effective at identifying student veterans with untreated mental disorders and linking them with needed services.[30]

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.[28] 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. 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-civilian differences in outcomes (e.g., prevalence of 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 % | Civilian N=554 Weighted % | p |
|---|---|---|---|---|
| Age | | | | |
| 18-22 | 49.5 | 9.2 | 50.8 | |
| 23-30 | 23.4 | 52.5 | 22.4 | <.001 |
| 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 | |
| Black | 15.3 | 17.1 | 15.2 | . 614 |
| 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 | |
| 1-20 | 21.8 | 11.7 | 22.2 | <.0001 |
| 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 | |
| It is tight, but doing fine | 48.0 | 47.5 | 48.1 | .066 |
| Finances not a problem | 12.6 | 19.4 | 12.3 | |
| Religiosity | | | | |
| Very religious | 27.0 | 16.0 | 27.4 | |
| Fairly religious | 48.0 | 42.9 | 48.2 | <.001 |
| 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 | |
| 2 | 36.0 | 51.9 | 35.4 | <.001 |
| 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 | |
| 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 | .034 |
| Associate's degree | 13.4 | 11.3 | 13.5 | |
| 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 | |
| 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 | .635 |
| 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 civilian-veteran differences in the prevalence of mental illness and

| | All N=765 | Veteran N=211 | Civilian 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[5] | 10.8 | 19.2 | 10.6 | 2.01 | 1.17-3.46 | .011 | 2.34 | 1.10-5.02 | .028 |
| Acute suicide ideation[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
6. In the past year, did you ever seriously think about attempting suicide? Response options – Yes, No

Table 3. Unadjusted and adjusted civilian-veteran differences in help seeking behaviors

| | All N=765 | Veteran N=211 | Civilian 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 |

| | All N=765 | Veteran N=211 | Civilian N=554 | Unadjusted | | | Age-Sex-Race Adjusted | | |
|---|---|---|---|---|---|---|---|---|---|
| Variable | 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.

Figure 1. Map of Participating Community Colleges

UNIVERSITY OF ARKANSAS FOR MEDICAL SCIENCES

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# Background

- ❑ **3 out of 5 students who use the GI Bill will enroll in community colleges or a distance-education institution (e.g., U of Phoenix)[1]**
  - Few, if any, MH or SUD resources on campus
- ❑ **Results from Healthy Minds Study:**
  - Fewer than half of students w/+ screen for depression, anxiety, or SU disorders received care[2]
  - MH (including SUD) status associated w/lower GPA, dropping out[3]
- ❑ **Gap in the literature on student veterans' MH and SUD needs who attend 2-year college**

1. Field, 2008; 2. Eisenberg et al., 2007; 3. Eisenberg et al., 2009

# Purpose

***Research Questions:***

1. **What are the MH and SUD (especially alcohol) needs and help-seeking behaviors of student veterans at community colleges?**
2. **What kind of screening and linkage-to-care intervention would best meet the needs of this student population?**

***Specific Aims:***

**Aim 1: Quantitatively assess the mental health and SUD status of student Veterans attending community colleges, their help-seeking behaviors, and their attitudes toward mental health-SUD care and potential screening and linkage-to-care approaches.**

**Aim 2: Elicit student Veterans' preferences for help-seeking and their attitudes toward screening and linkage-to-care interventions.**

**Aim 3: Develop a screening and linkage-to-care model that reflects the perspectives of student Veterans and their significant others.**

# Research Design

- ❑ **Mixed-methods study**
  - Quantitative data collected from student Veterans
    - Web-based, survey questionnaire
  - Qualitative data collected from subset of participant pool
    - Semi-structured interviews
- ❑ **Data analysis**
  - Integrate the quantitative and qualitative findings
- ❑ **Intervention development**
  - Product design meeting

### *Self-Administered, Web-Based Questionnaire*

- ❑ **Recruitment**
  - List of students using GI Bill from participating colleges
  - Email, mailed letter
- ❑ **Procedures**
  - Secure, survey website, anonymous
  - Online consent form
- ❑ **Analyses**
  - Increase understanding of MH and SUD burden & factors influencing help-seeking

### *Measures*

- ❑ **Alc/Drug Use**
- ❑ **PHQ-9 for depression**
- ❑ **GAD-7**
- ❑ **Brief Trauma Brain Injury Screen**
- ❑ **Primary-Care PTSD scre**
- ❑ **Suicidality**
- ❑ **Perceived public stigma, perceived need, MH and utilization**
- ❑ **Social Support**
- ❑ **Intervention platforms**

### *Qualitative Research*

- ❑ **Semi-structured interviews (target=40)**
  - 25 men; 15 women w/ positive MH or SUD screens
  - Conducted at Veteran's college or another location of their choice
- ❑ **Recruitment**
  - Veterans w/ positive MH or SUD screen from survey
- ❑ **Open-ended questions explored:**
  - Attitudes and beliefs about MH and alcohol/drug problems, perceived need for care, barriers to help-seeking, screening and linkage-to-care ideas
- ❑ **Grounded theory techniques**
  - Theoretical sampling; inductive analysis

### *Focus Groups & Intervention Development (pen*

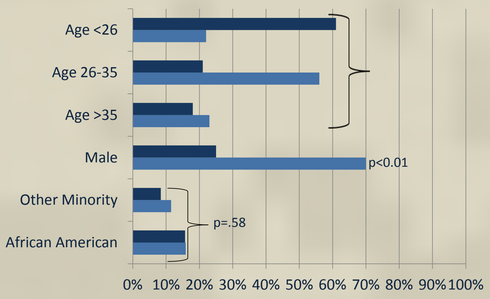
- ❑ **4 Intervention Development Focus Groups**
  - 2 all-Veterans focus groups
  - 2 all-significant others focus groups
- ❑ **Collective brainstorming**
  - Elicit Veterans' and Significant Others' responses to further intervention (e.g., access pathways, use of technology)
- ❑ **Intervention prototype development**
  - Half-day meeting with key stakeholders

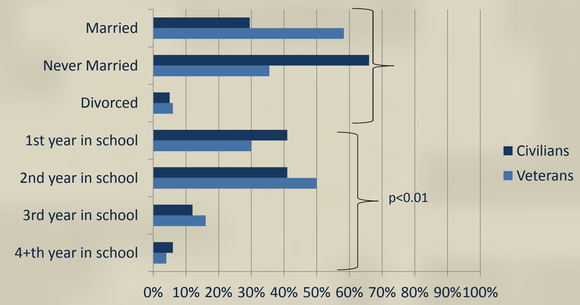
# Demographics


***Study Population:***

**Veterans and soldiers attending community colleges in Arkansas**

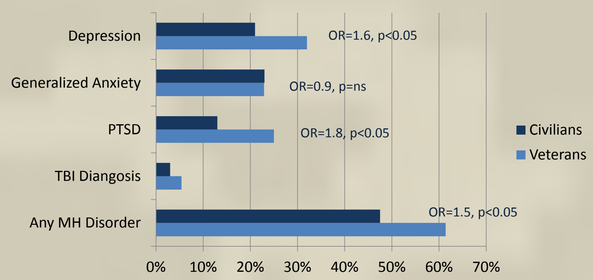
- ❑ **Majority age 26-35**
- ❑ **70% men**
- ❑ **73% white**
- ❑ **58% married**
- ❑ **50% 2nd year in college**
- ❑ **99% lived off-campus**
- ❑ **48% reported "tight but doing fine" current financial situation**



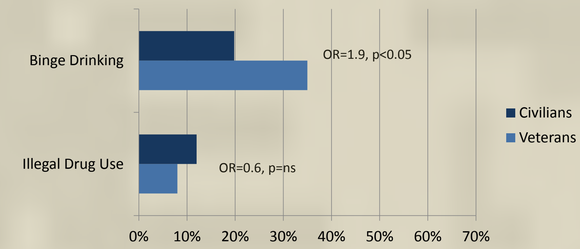




# Results

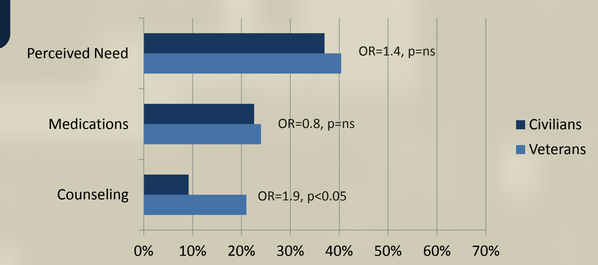
***Relative Risk of MH Disorders:***




***Relative Risk of SUD Disorders:***




***Help Seeking:***




***Predictors of Current Binge Drinking***

| | Odds Ratio | P value |
|---|---|---|
| Age 23-30 | 1.3 | .2485 |
| Age 31-40 | 1.7 | .0631 |
| Age 40+ | 1.3 | .4766 |
| Male | 1.1 | .5320 |
| Veteran | 2.3 | .0006 |
| Married | .5 | .0037 |
| Illegal Drug | 3.3 | .0001 |
| Depression+ | 1.1 | .7041 |
| PSTD+ | 1.6 | .0557 |
| Generalized Anxiety+ | .97 | .9175 |
| African American | .99 | .9910 |
| Other Race | .72 | .3144 |
| Finances not a problem | .48 | .0202 |
| Finances a struggle | 1.2 | .3246 |

***Predicting Perceived Need, Psychotherapy, and Us Medications***

| | Perceived Need | | Psychotherapy | | Medi |
|---|---|---|---|---|---|
| Age 23-30 | 1.28 | p=0.1044 | 1.13 | p=0.4961 | 1.30 |
| Age 31-40 | .936 | p=0.7206 | 0.95 | p=0.8261 | .823 |
| Age 40+ | 1.00 | p=0.9950 | 1.60 | p=0.0908 | 2.03 |
| Male | .610 | p<.0001 | 1.00 | p=0.9607 | .806 |
| Veteran | 1.05 | p=0.6620 | 1.31 | p=0.0851 | .808 |
| Married | 1.11 | p=0.3182 | 1.02 | p=0.8706 | 1.15 |
| Others think less | 1.09 | p=0.3208 | 0.90 | p=0.452 | 1.07 |
| Suicide ideation | 2.54 | p<.0001 | 1.25 | p=0.2039 | 1.41 |
| Illegal drug | 1.19 | p=0.2222 | 0.89 | p=0.5825 | 1.01 |
| Binge drink | 1.31 | p=0.0095 | 1.04 | p=0.7917 | 1.11 |
| Generalized anxiety + | 1.35 | p=0.0185 | 1.60 | p=0.0039 | 1.50 |
| PTSD+ | 1.66 | p=0.0002 | 1.84 | p<.0001 | 1.80 |
| Depression+ | 1.46 | p=0.0015 | 1.00 | p=0.9487 | 1.05 |

***Next Steps***

- ❑ **Qualitatively explore:**
  - Critical factors that influence help-seeking
  - Feasibility of vet-to-vet approach to screening and linkage to care
- ❑ **Focus groups and intervention development**
- ❑ **Apply for extramural funding to develop and test the screeni linkage to care interventions**

This project was supported by the Department of Defense with grant W81XWH-11-2-0059

# The Value of Connectedness in Student Veteran's Models of Screening and Linkage-to Care Interventions

**Ann M. Cheney, Ph.D.**

Paper presented at the Society for Applied Anthropology, March 18-22, Albuquerque, New Mexico.

# Acknowledgements

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# BACKGROUND

1 out of every 5 soldiers returning from the wars in Iraq and Afghanistan are diagnosed with post-traumatic stress disorder (PTSD), depression, or traumatic brain injury (TBI)

Nearly 3000 OEF/OIF Veterans in Arkansas use the New GI Bill

- matriculate at two-year community colleges and four-year universities in rural communities
- limited resources and support

Burnham et al., 2008

# Disconnection

Many struggle to find a sense of belonging and connection:

- Gap between high school and college (4 to 5 years for Vets compared to 2 to 3 months for freshmen)
- Older often “non-traditional”
- Deployment experiences
- Disruption in family/relationships after deployments
- Physical and cognitive injuries (TBI)
- Emotional and mental health problems (PTSD, anxiety)

# Peer Support

"Support from a person who has experiential knowledge of a specific behavior or stressor and similar characteristics of the target population." (Dennis, 2003)

- *Linked to better physical and mental health outcomes*
  - less depressive symptoms, improved self-esteem, and improved quality of life

Has been successful for Veterans with severe mental illness:

- reduced mental health stigma and bias
- assisted in navigating the mental health system and gaining access to needed services
- instilled hope for recovery
- increased feelings of empowerment
- increased levels of functioning

(Resnick & Rosenheck, 2003)

# Kinship and Belonging

- *We draw from recent conceptualizations of kinship as a **cultural process that is based on a sense of belonging** rather than a biological connection cemented by blood relations (Sahlins, 2012)*

- How do Veterans think about their relatedness to other Veterans? What do these relationships and ideas of relatedness mean to Veterans? How do they influence ideas about care, support, and help seeking?

- Interested in themes of belonging, relatedness, connection, and disconnection

# Overview of Study

**Examine MH & TX Seeking**

- MH burden among student Veterans attending community colleges in rural communities
- Treatment-seeking behaviors
- Ideal models of screening and linkage-to-care intervention

**11 Community Colleges**

# Mixed-Methods Design

- Web-based survey
  - MH burden and service utilization (n=228)
- Semi-structured interviews (n=24)
  - + MH screen
  - MH experience, helping seeking, intervention ideas
- **Focus Group Discussions (n=2)**
- Product Development Meeting

# Focus Groups

**Data collection & analysis**

- Present findings on MH burden, treatment seeking, and intervention ideas to subgroup of student Veterans
- Explore intervention ideas in greater detail
- Analyzed in light of key themes present in semi-structured interviews
  - Peer led approaches and support
  - Connection and disconnection

Mixed-gender FGs, 10 participants

# Campus Environment

- Two-year community colleges in rural communities
  - Limited resources
- VA representatives
  - help with GI bill, tuition, financial paperwork
  - Some are providing informal emotional support
- Academic counselors, provide educational guidance
  - Student support services, e.g., tutoring
- No knowledge of formal mental health services on campus
  - Knowledge of VA MH services, and personal experience with accessing care for substance abuse, TBI, PTSD

**Difference and Disconnection**

**The Experience of "Being" a Student Veteran**

"You know, we kind of stick out."

"You can tell by the way they hold themselves, the way they present themselves, the way they talk. I keep a pretty squared haircut still."

"It's just pretty much their whole demeanor, the way they carry themselves."

Despite knowing other Veterans are on their campuses, they are not connected to each other:

"If you still have a lot of military discipline, you could see somebody that has prior service. But other than that, I haven't really had any **connection**, networking other than 'Here are your classes. These are what your degree field is." [male]

# Theme: Feelings of Disconnection

*Expressions of being different from civilian "college kids" fostered a sense of disconnection from peers*

"That's the thing I had problems with the first year or two I was in [college]: I got so irritated being with civilians and immature kids. . . . You get that mentality of doing a lot of training and you don't want to do all the BS that goes with being a civilian . . . You just want to get in there, get the knowledge, get the training and go on to your next objective."

"I had a similar issue where people just didn't understand that I'm not a kid."

# Connection: Sense of Brotherhood

Military background fosters a sense of "brotherhood," "trust," and "connection"

"I think veterans, we all have a bond between each other. Even if we were in different branches, we've all gone through similar training and background and we all have done our time. **There's just a brotherhood about that**. . . It's just a trust that as a civilian now, if I run across a veteran I have more of a connection with somebody right off the bat and just a trust automatically."

# “Vets help other Vets”

*-Within the VA system this sense of brotherhood, connection, and trust continues and informs their relations and relatedness to other Veterans*

“I ended up at the VA hospital to seek treatment and to get off alcohol . . . That’s where I actually got more information from people in rehab, other veterans there that were going there for alcohol or drug-related rehab services and found out basically we have **veterans help other veterans**. I just did it that way and that’s what I continue to do now. Whenever I do run into veterans at the hospital and see maybe a new guy or a guy out of the military kind of lost, I do what somebody did for me: I get to know them a little bit and see where I can help them now, where I can point them in the right direction or get them somewhere where they need it, get the information out.” [young male Veteran, problem drinking]

# Vet-to-Vet Intervention Idea

**Notions of Connection Informed Intervention Ideas**

- Connect Veterans on campus
- Create a “Buddy” system
- Have Veteran serve as a “buddy”–someone who has experience with mental health issues
- Veteran “buddy” can connect student Veterans to health care services

# “Veteran Service Guy”

- One-on-one relationship facilitated through on- and off-campus activities (e.g., all-Veteran classes, fishing trips)
- Opportunity to share experiences (military, integration, as student)

***What can he/she do**:*

- Buddy up with student Veterans on campus
- Screen for MH problems, link them to care
- Reach out to soldiers transitioning out of military to connect them to services in their communities and region

# Immediate Connection

- Expressed wanting to connect with Veterans in their state and community after leaving the military and even before matriculating to college

"If you're going through PTSD or whatever and you're just feeling very isolated, that might be all you need to get you into mental health care, or get you to the VA, or get you talking to somebody. . . Because when you get out, at least I did, you experience a lot of distress. You're just kind of lost and then you're dealing with all these other emotions and feelings going in your head and just in life and it can get really crazy."

# From the Military to Home

- Want someone to help Veterans transition from the military to civilian life and the college environment

"If there's a way to streamline by your region, by your state, 'This is the contact person that is going to get in touch with you the next coming weeks when you get back home,' and maybe have a follow up."

Suggested having Veterans in local area obtain name/number of Veteran processing "out" of the military

# Implementation Recommendations

- *Emphasized the importance of relatedness, e.g., respect, compassion, purpose*

“If you’re going to implement this and do it, make sure the people that are doing it, helping Veterans, are there to give service.”

“I just think people in general, not just Veterans, like to be treated like they’re more than a number, for somebody to really have some concern for their well-being and have a genuine want to know what they need and not just thin of them as, “You’re another number.”

# Conclusion & Future Direction

- Themes of connection and disconnection are critical when developing models of care that screen and link Veterans to healthcare services

- These same themes are salient in Veteran's recommendations on how to successfully implement peer-based support systems

- *Future work* should assess how best to implement peer-based support systems in light of Veteran's understandings of relatedness, connection, and disconnection

# Thanks!

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