

INFLUENCE OF MENTAL HEALTH STIGMA ON BEHAVIORAL HEALTH
EVALUATIONS

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partial fulfilment of the requirements for the degree of Master of Arts in General Psychology

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ABSTRACT

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Individuals in leadership roles in the military are in unique and complex positions to make the most ethical decisions to protect the mission and fellow soldiers on deployments. These difficult decisions may negatively impact the career of a soldier but are essential to fulfil the role of a military leader. Currently, a large database of literature explores mental health stigma; however, little to no research explores the impact of mental health stigma on decision-making processes in the context of deployments. The purpose of the current study was to explore how mental health stigma associated with post-traumatic stress disorder, depression, and alcohol use influence evaluations and decisions to deploy soldiers with a history of mental health diagnosis. This study used an experimental design with vignettes to simulate a military deployment assessment in which participants were asked to rate the likelihood that they would deploy the soldier from the vignette. Additionally, the current study worked to further explore personality traits associated with mental health stigma and examine the differences in stigma between the civilian and military population. The total sample consisted of 202 participants; however, only a sample of 60 was used for the analyses, which is described further in the method section. Results did not reveal significant findings when testing whether or not different diagnoses were associated with varying levels of stigma. Higher ratings of stigma were associated with a lower likelihood to deploy a soldier with a history of a mental health diagnosis. Additionally, the results did not

reveal significant findings in association with deployment decisions and specific personality traits. The limitations of the study are described more fully below.

INTRODUCTION

LEADERSHIP IN THE MILITARY

The military defines leadership as “the process of influencing people by providing purpose, direction, and motivation while operating to accomplish the mission and improving the organization” (Army Field Manual 6-22:1-2). Because military operations carry such high risk for nations and individuals, the importance of leadership in the military is well established through extensive and specialized leadership training for leaders at all levels in the enlisted, warrant officer, and commissioned officer ranks through professional military education (PME) (Laurence, 2011). Military leaders, because of their position and roles, routinely make complex decisions regarding mission execution and impacting soldiers’ careers (Army Field Manual 6-22:11-2). Leader adaptability, described as the ability of leaders to adjust thoughts and behaviors to produce appropriate responses to novel and changing situations for decision-making, plays a major role in the functioning of military leaders (Bartone et al., 2013; Hannah et al., 2013). Leaders are expected to remain effective in the face of unpredictable internal and external circumstances through decisional adjustment (Hannah et al., 2013).

One aspect of adaptability that military leaders encounter is the requirement to continuously assess unit and individual soldier readiness for training, preparation for military occupational specialties, and deployment. In terms of readiness for deployment, commanders additionally assess soldiers based on both physical and mental readiness (Army Regulation 600-20, chapter 5-4). Standards of medical fitness apply to all aspects of military service including recruitment, appointment, retention, separation, and fitness for specific duty assignments. These physical and mental standards are governed by Army Regulation 27-501. A soldier’s medical

readiness is reflected in the soldier's profile in 6 clearly identified areas. From time to time, a soldier may experience a physical or mental issue which will be reflected in a temporary profile that identifies the issue and specifies a period during which the deficiency will be corrected. While on a temporary profile, the soldier is temporarily nondeployable. For example, a soldier who has recently given birth is temporarily nondeployable for a specific period based on a temporary profile (DA PAM 200-1, chapter 5-4). Commanders constantly stay abreast of soldiers' medical readiness and adjust plans for deployment accordingly based on soldiers' individual medical readiness.

In that regard, commanders have the authority to determine a soldier's fitness for duty including fitness for deployment. Commanders can direct that soldiers receive certain medical or dental care to ensure deployability. In the event of a soldier's noncompliance with a commander's order, there are administrative procedures which may result in a soldier being separated from military service for noncompliance. Commanders may also refer soldiers for a behavioral health evaluation. This referral for mental health evaluation may include mental health treatment and administrative management where soldiers may be evaluated and assessed for risk of potentially dangerous behavior and possible psychiatric hospitalization (AR 600-20).

Soldier evaluations and medical records are available to commanders from a soldier's health care provider to give the commander the necessary information to make informed decisions that impact deployments (Curley et al., 2018). Behavioral health profiles provided to a commander may present impairing conditions that will inhibit a soldier's performance during a

deployment. Examples of conditions included on such a profile may include homicidal or suicidal behavior, psychotropic medications, or active substance use. Other conditions which may also be profiled are less severe conditions such as a soldier currently prescribed an antidepressant (Curley et al., 2018). Given less severe conditions, a soldier may still be deployable despite the profile so long as medical needs will be met within the deployment environment.

The behavioral health profiles put commanders in the unique position to make decisions about whether or not to deploy soldiers. If a soldier presents a profile from a provider, the commander is still responsible for deciding whether or not they will deploy with the soldier based on the needs of the mission and the needs of the unit. Similar to the ability to accept recommendations from a health provider, a commander also has the power to override the recommendation from a health care provider (Department of Defense Instruction 6490.04).

The emphasis on good leadership in the military is seen through extensive training and careful leadership selection processes (Laurence, 2011). Despite extensive training and careful promotions, military leaders, similar to the civilian population, may be subject to personal biases. Military leaders hold significant authority and make decisions with great implications for soldier careers and health. To fully evaluate the implications of leadership in the military, it is necessary to assess effective versus ineffective leadership in the military (Johnson & Hill, 2009; Oreg & Berson, 2015).

PERSONALITY IN DECISION-MAKING

The five factor model (FFM) of personality categorizes traits into five broad domains: Extraversion, Agreeableness, Conscientiousness, Neuroticism, and Openness to Experience (McCrae, 2011; Socha et al., 2010). Leaders categorized as effective typically rate higher on Extraversion, Agreeableness, Openness to Experience, and Conscientiousness, while ineffective leaders are generally associated with higher ratings of Neuroticism (Johnson & Hill, 2009). A number of studies examine the relationship between personality traits and the categorization of leaders as effective versus ineffective (Johnson & Hill, 2009; Oreg & Berson, 2015). Leadership efficacy is commonly categorized as either effective or ineffective, and is further attached to specific personality traits (Huszczo & Endres, 2017). Additionally, Conscientiousness is commonly associated with ethical decision-making by leaders (Babalola, 2019).

Current literature suggests personality traits play a role in decision-making styles in various ways including the understanding of intuitive-based decisions versus rational-based decisions (Hamilton et al., 2016). Intuitive decision style is based on personal experience and quick decisions. Rational decision making refers to thorough evaluation and lengthy gathering of information to make decisions (Hamilton et al., 2016). Conscientiousness, Openness to Experience and Agreeableness are all associated with a rational decision-making style. Literature highlights a negative association between Agreeableness and Openness to Experience with mental health stigma (Solmi et al., 2019; Yuan et al., 2018)

PREVALENT DISORDERS IN THE MILITARY

There are a number of mental health disorders experienced by service members in the military. Most notably, the military population sees a substantial percentage of alcohol use disorder, post-traumatic stress disorder (PTSD), and depression (Boakye, et al., 2017;

Ghaffarzadegan et al., 2016; Norman et al., 2018). Interestingly, alcohol use disorder and PTSD commonly co-occur and are seen within the treatment-seeking veteran population at a rate of about 63% (Norman et al., 2018). Similar research finds veterans reporting both alcohol use disorder and PTSD screened positively for major depression at a rate of about 36% compared to a rate of 2.3% in veterans reporting only alcohol use disorder (Norman et al., 2018).

Alcohol use disorder is characterized by clinically significant distress caused by problematic alcohol use and related behaviors (Fuehrlein et al., 2016). Reports indicate 24.7% of the civilian population engages in binge drinking, while 30.0% of active duty personnel engage in binge drinking (Rodriguez, et al., 2020). Of the service members who report heavy drinking, 32% report engaging in risky behaviors, 30% received at least one serious consequence, and 32% reported decreased work productivity (Rodriguez et al., 2020).

Although there are more cases of PTSD stemming from non-combat related traumatic experiences, lifetime prevalence of PTSD is high among individuals with PTSD stemming from combat-related events. PTSD is experienced at increasingly high rates within the military population, ranging from about 11-20% among veterans with service time in Iraq or Afghanistan (Ghaffarzadegan et al., 2016). Recent literature reports similar estimates surrounding the prevalence of depression among service members citing numbers rates of about 14-34%, and 17-24% (Boayke et al., 2017; Brown & Bruce, 2016).

MENTAL HEALTH STIGMA

Mental health stigma is a social construct in which individuals negatively perceive and label others based on preconceived notions of associated attributes, typically categorized as undesirable characteristics (Brown & Bruce, 2016; Corrigan & Watson, 2002). The undesirable characteristics often associated with mental illness include incompetence, dangerousness, and

unruliness (Brown & Bruce, 2016). Stigma is further grouped into two categories, public stigma and self-stigma (Corrigan & Rao, 2012). Public stigma refers to the beliefs an individual believes the public attaches to mental illness. Self-stigma refers to the beliefs that an individual associates with a mental illness and then internalizes those negative beliefs in their own lives (Corrigan & Rao, 2012). For employers and individuals in positions to make decisions about hiring, public stigma is particularly important to address. Public stigma represents biased thoughts and beliefs directed towards a group by a larger group (Corrigan & Rao, 2012).

Mittal and colleagues (2011) summarize current mental health stigma research that highlights the issues faced by many people with mental health diagnoses. The issues frequently include experiencing lost opportunities for work, and other adverse or even discriminatory actions from employers (Mittal et al., 2011). In the military, a special focus exists on the concern regarding the operational readiness and reliability of soldiers with mental health diagnoses in relation to their abilities to perform their job (Britt & McFadden, 2012).

Uniquely, the military allows commanders access to medical records of soldiers, which includes information associated with mental health (DoDI 6490.08). The Military Command Exception states that commanders may have access to protected health information under one of the following conditions: harm to self, harm to others, harm to the mission, special personnel, inpatient care, acute medical conditions that interfere with duty, substance misuse treatment program, command-directed mental health evaluation, or other special circumstances. The needs of the mission outweigh the need for confidentiality in the military. The Military Command Exception, Department of Defense Instruction (DoDI) 6490.08, further prescribes that if one of the previously mentioned criteria is met, disclosure to the commander is required and permitted.

Given the commander's ability to gain access to a soldier's current mental health information, it is important for individuals in commander roles to be able to look beyond personal stigma and biases when making decisions. Mental health stigma is particularly damaging in the military setting for service members seeking treatment (Britt et al., 2012). Military service members are very likely to encounter barriers to care because the military is an occupation that demands a high workload from soldiers and treatment is often perceived as an entity that will interfere with work performance (Britt et al., 2012). While mental health stigma from an individual in a leadership role can directly influence their own decision-making, the stigma can also influence the behavior and decisions of the soldiers they command.

The implications of leadership in the military extend beyond decision-making and into the attitudes and decisions of soldiers. Leadership behavior and attitude can influence how soldiers respond to stressors as well as treatment-seeking behaviors in soldiers (Britt et al., 2012).

THE CURRENT STUDY

Individuals in military leadership roles are in unique and complex positions to make the most ethical decisions to protect the mission and to protect fellow soldiers on deployments, even if the decision negatively impacts the career of an individual soldier. The purpose of the current study is to explore how mental health stigma associated with certain diagnoses influence evaluations and decisions to deploy soldiers with previous mental health diagnoses. Currently, a large database of literature exploring mental health stigma exists; however, little to no research explores the impact of mental health stigma on decision-making in the military. The vignettes created for this study explain the responsibilities of a military leader when evaluating whether or

not to deploy a soldier based on a previous diagnosis consistent with Diagnostic and Statistical Manual of Mental Disorders, 5th Edition, PTSD, depression, and alcohol use disorder. Although not all participants have relevant military experience, the study included people who reported both military or civilian backgrounds to increase sample size. Additionally, the current study seeks to further explore personality traits associated with mental health stigma and examine the differences in stigma between the civilian and military population. The following hypotheses are postulated:

HYPOTHESES

Hypothesis I: Mental health stigma will be higher in the military population than in the civilian population.

Hypothesis II: Different diagnoses will be associated with varying deployment decisions: Participants will be less likely to deploy with soldiers with a history of PTSD than soldiers with problematic alcohol use or depression. Participants will be most likely to deploy with soldiers with a diagnosis of depression than other diagnoses.

Hypothesis III: The relationship between mental health stigma and likelihood of deployment will be moderated by military status/military history. Participants with higher ratings of stigma will be less likely to deploy with soldiers who have a history of a mental health diagnosis, which will be especially true for individuals with military experience.

Hypothesis IV: Personality traits will predict deployment ratings when the effect of stigma is controlled for. Participants who are higher on agreeableness and openness to experience will be more likely to deploy soldiers who have a history of a mental health diagnosis when controlling for stigma.

METHOD

PARTICIPANTS

A total of 202 participants completed the study. Of that, 1 participant was removed for reporting under the age of 18, and 93 participants discontinued the survey before reaching the point where they were given the vignette and asked to provide their deployment rating, which was the main output of interest to this study. Of the remaining 108 potential participants, 48 participants were excluded for incorrectly answering the manipulation check (identifying the correct diagnosis from the vignette). It should be noted that majority (34, 70.8%) of this latter group was omitted not because of failing the manipulation check, but because they did not complete the check. The final sample consisted of 60 participants, ranging in age from 19 years to 70 years ($M = 38.6$, $SD = 18.82$). 90% identified as male ($n = 54$), 5% female ($n = 3$), gender queer 3.3% ($n = 2$), and 1.7% identified as other ($n = 1$). Of the 60 participants in the final sample, the military population was $n = 49$, and civilian population totaled $n = 11$ (See Table 1 Demographics).

MEASURES

Demographics. The targeted population consists of individuals with relevant military experience— active duty and retirees, and civilians from the general public. The demographics measure addressed age, ethnicity, gender, and education. The participants were asked to disclose whether or not they have a history of military experience. For participants with relevant military experience, further questions asked them to disclose the military branch in which they served

(Army, Air Force, Navy, Marines, Coast Guard), current military status (active, reserve, national guard, veteran or retiree), duration of service and highest rank achieved (See Appendix A).

Vignettes. The vignettes created for the purpose of this study simulated a military-based decision in which the participant rated the likelihood of whether or not to deploy a soldier. The vignettes were altered such that the soldier either had no mental health diagnosis or had one of several diagnoses (PTSD, alcohol use disorder, or depression). The vignettes highlighted the ways in which personal stigma can influence decisions made in mission-oriented situations (See Appendix B).

Deployment Rating. Following the vignette, the participants were asked questions about how likely they would be to recommend a soldier go on deployment based on the randomly assigned vignette they read. Participants rated their agreement with statements concerning the deployment of a soldier on a 5-point Likert scale from *strongly disagree* to *strongly agree*. The ratings are applied to four questions (1) how likely the participant would be to deploy the soldier, (2) ability to do the job, and (3) individual fit of the soldier with fellow soldiers, and (4) the individual fit of the soldier in the Army work environment (Krupa et al., 2016; Van Liew et al., 2020; See Appendix C). The overall reliability from the deployment rating used in this study is $\alpha = 0.875$.

Mental Health Stigma. Public stigma was measured by 26 items from the Community Attitudes Toward the Mentally Ill (CAMI; Rossetto et al., 2020). Participants were asked to rate items on a 5-point Likert scale from *strongly disagree* to *strongly agree*. The items addressed attitudes about social exclusion, tolerance, benevolence and support toward community mental health (Rüsch et al., 2011). Example items include, “*One of main causes of mental illness is a lack of self-discipline and will-power*” and “*Mental illness is an illness like any other.*” CAMI overall

reliability is cited at $\alpha = 0.79$ (Girma et al., 2013; See Appendix D). The overall reliability from the CAMI in this study sample is $\alpha = 0.816$.

Personality. Personality traits were assessed using the M5-50 consisting of 50 items (McCord, 2002). Participants were asked to rate the extent to which an item describes them on a 5-point Likert scale from *inaccurate* to *accurate*. Example items include, “*Am not interested in abstract ideas*” and “*Accept people as they are.*” The M5-50 items are derived from Goldberg’s International Personality Item Pool (IPIP), which has been correlated with the NEO Personality Inventory - Revised (NEO-PI-R). The M5-50 is representative of the NEO-PI-R’s five broad domain scales: Extraversion (E), Agreeableness (A), Conscientiousness (C), Neuroticism (N), and Openness to Experience (O; Shoca et al., 2010). Reliability for the broad domain scales is cited at (E) $\alpha = 0.863$; (A) $\alpha = 0.759$; (C) $\alpha = 0.849$; (N) $\alpha = 0.864$; (O) $\alpha = 0.778$ (Shoca et al., 2010). Although the NEO-PI-R is considered the gold standard personality inventory regarding the Five Factor Model (Costa & McCrae, 1995), a measure that is public domain, such as the M5-50, was better suited for the purposes of this study (See Appendix E).

PROCEDURE

Data were collected via an online survey distributed to various sites including Facebook and Reddit. The target population for the study consisted of both non-military and military participants. The survey was shared to various military specific groups, and civilian groups on both Reddit and Facebook. Participants with and without a history of military service were asked to read a vignette briefly describing a scenario in which they needed to decide whether or not to deploy a soldier with a history of a mental health diagnosis of either PTSD, depression, AUD or a control group in which there was no diagnosis. These vignettes were randomly assigned in the survey. To ensure participants understood and remembered information from the vignette, a

manipulation check was included after reading the vignette that asked participants to correctly identify the diagnosis given to the soldier from the vignette they previously read. Participants were then asked a number of questions regarding whether or not they would deploy the soldier from the scenarios, followed by the CAMI-12 to assess for mental health stigma (Rossetto et al., 2020). Lastly, participants were exposed to the M5-50 to assess for personality traits (Socha et al., 2010).

RESULTS

Hypothesis 1: An independent samples t-test was used to compare ratings of mental health stigma between civilian and military populations. There was not a significant difference in mental health stigma ratings between military service members ($M = 1.95, SD = .62$) compared to their civilian counterparts ($M = 1.89, SD = .65$), $t(58) = .35, p = .870$ (See Table 2).

Hypothesis 2: A one-way between subjects ANOVA was conducted to analyze the impact of mental health stigma on deployment decisions for soldiers diagnosed with PTSD, depression, and alcohol use disorder. The independent variable was the vignette group and the dependent variable was the deployment rating. The differences between the four diagnosis groups (PTSD, depression, alcohol use disorder, and no diagnosis), were not significant, $F(3, 56) = .632, p = .598, M_{PTSD} = 83.70, SD = 16.66, M_{AUD} = 82.46, SD = 11.08, M_{Depression} = 79.40, SD = 23.29$, and $M_{Control} = 87.79, SD = 15.13$ (See Table 3.1). Because this analysis was central to the study, and a large number of subjects were removed from the study for not reaching the manipulation check, this hypothesis was also examined using complete case analysis of the 108 participants who at least completed this portion of survey. Results indicated that the difference between the vignette diagnosis groups was significant, $F(3, 103) = 2.98, p < .05, M_{PTSD} = 75.33$,

$SD = 29.07$, $M_{\text{Depression}} = 81.75$, $SD = 23.73$, $M_{\text{AUD}} = 83.21$, $SD = 23.29$, $M_{\text{Control}} = 94.40$, $SD = 22.96$. A post hoc comparisons using Tukey HSD test reveals that the mean score for PTSD was significantly different from the control group, $p < .05$. Participants were significantly more likely to deploy individuals from the control group (no diagnosis) than individuals with a diagnosis of PTSD (See Table 3.2).

A post hoc power analysis indicated our sample size of 60 participants yielded 32% power assuming a small effect size. In the second analysis (ANOVA) in which the manipulation check was removed and the sample size increased to 108, a post hoc power analysis indicated our sample size of 108 yielded 55% power assuming a small effect size.

Hypothesis 3: Deployment decision was regressed onto military service, the moderator, mental health stigma, and the interaction between military service (the moderator). Mental health stigma and military service were entered in the first step of the model and the interaction term was entered into the second step. The first step of the model accounted for 49% of the variance, $R^2 = .49$, $F(2, 102) = 2.62$, $p = .078$. Mental health stigma was associated with lower likelihood of deploying a soldier with a mental health diagnosis $B = -5.43$, $SE = 2.49$, $\beta = -.21$, $t(2, 102) = -2.18$, $p < .05$, 95% CI [-10.37, -0.49], $r_{\text{sp}} = -.21$. Military service was not associated with likelihood of deployment, $B = -3.90$, $SE = 3.82$, $\beta = -.10$, $t(2, 102) = -1.02$, $p = .31$, 95% CI [-11.49, 3.68], $r_{\text{sp}} = -.10$. Adding the interaction term to the second step of the model did not significantly add to the model, $\Delta R^2 = .01$, $B = 6.50$, $SE = 6.16$, $\beta = .32$, $t(3, 101) = 1.06$, $p = .29$, 95% CI [-5.72, 18.71], $r_{\text{sp}} = .102$ (See Table 4).

Hypothesis 4: Deployment rating was regressed onto agreeableness and openness to experience, while controlling for mental health stigma (see Table 5). Below, we report semi-partial Pearson's r (r_{sp}) as a measure of effect size for regression coefficients. For the first step of

the model, agreeableness and openness to experience were entered, and for the second step, mental health stigma was entered. The first step of the model (Agreeableness and Openness to Experience) accounted for 2% of the variance, $R^2 = 0.02$, $F(2, 55) = .621$, $p = .541$. Agreeableness was not significantly associated with deployment ratings, $B = -3.77$, $\beta = -0.156$, $t(55) = -1.10$, $p = .276$, 95% CI [-10.65, 3.10], $r_{sp} = -.15$. Openness to Experience was not significantly associated with deployment ratings, $B = 1.42$, $\beta = 0.076$, $t(55) = 0.54$, $p = .593$, 95% CI [-3.88, 6.73], $r_{sp} = 0.72$. The second step of the model (mental health stigma), accounted for 1% of the variance, $R^2 = 0.01$, $F(1, 54) = .554$, $p = .460$. Mental health stigma was not significantly associated with deployment ratings, $B = -2.70$, $\beta = -0.100$, $t(54) = -.744$, $p = .460$, 95% CI [-9.98, 4.57], $r_{sp} = -.10$ (See Table 5).

DISCUSSION

Although few of the findings from this study are significant, mental health stigma within the military remains a topic that warrants further study. Mental health diagnoses can disqualify individuals from service eligibility, and subsequently, carry significant weight during active-duty service (AR 40-501). Although the findings from this study are limited by a small sample size, it was expected that stigma towards mental health would be higher within the veteran population because of the implications for service retention and job advancement within the military. Individuals seeking to join the military who disclose a mental health diagnosis, like depression, are required to obtain a waiver for military service. Waivers may not be granted. Consequently, these individuals will be ineligible to enter service.

In line with the idea that mental health stigma would be greater among the military population, it was also suggested that different diagnoses would be associated with varying

levels of stigma. Within military branches, specific diagnoses may result in different service outcomes. For example, soldiers who have less than 24-months of service may be separated without benefits from the military for a personality disorder when job performance or conduct is impacted (AR 635-200). Based on the prevalence rates of PTSD, depression and alcohol use disorder within service branches, it was postulated that PTSD would be the greatest deterrent for deploying a soldier in comparison to depression and alcohol use disorder.

When keeping the manipulation check in the analysis, there was no significant effect between diagnosis groups on deployment ratings. The second analysis in this group in which the manipulation check was removed revealed that individuals were more likely to deploy a soldier from the control group (no diagnosis) than a soldier with a diagnosis of PTSD.

Lastly, it was postulated that personality traits would be correlated with varying deployment decisions made by commanders. Specifically, participants higher on agreeableness and conscientiousness would be more likely to deploy soldiers with a history of mental health diagnosis. While these findings were also not significant as a result of the limited sample size, both agreeableness and openness to experience have been linked with lower levels of stigma (Yuan et al., 2018; Solmi et al., 2019).

While the findings from this study were not significant, the proposed research and concern for mental health stigma within the military remain a relevant topic for practicing military psychologists. Operational psychology is the practical application of behavioral science principles that inform groups or organizations with the underlying goal of accomplishing tactical, strategic or operational objectives (Stall & Stephenson, 2013). Military psychologists work under distinct ethical challenges where often the individual receiving psychological services is not the client but the larger organization, like the specific military branch, is the client. As a result of this

unique role of a military psychologist, there is often a challenge in addressing issues of informed consent and confidentiality (Stall & Stephenson, 2013). As previously noted, the Department of Defense instructions and Army Regulations provide that commanders are granted access to specific medical records upon request and may gain access to psychological reports where diagnoses and treatment may be listed (DoDI 6490.04). This Military Command Exception to the Health Insurance Portability and Accountability Act (HIPAA) provides needed information about soldier medical readiness to commanders, however, it may also work to chill soldiers' willingness to obtain mental health treatment and to cooperate fully with military psychologists.

Although the military maintains a strong emphasis on good leadership and employs extensive training processes and selection methods, military leaders may be subject to their own personal biases in work (Laurence, 2011). Leaders, particularly those who function within the military context, play an impactful role in service outcomes and hold significant authority in which personal bias may interfere with duty performance. One way that personal biases in the workplace may be addressed is through additional trainings that help individuals develop greater understandings and awareness of the personal experiences and opinions that shape their leadership style.

Limitations

With few statistically significant findings, the sample size included in this study proved to be an extreme limitation. One of the major difficulties in collecting for this study was the amount of missing data. To address the limited sample size in future studies, the online survey will need to require responses from participants because many questions were skipped. The majority of the sample was removed due to data not missing at random, which indicates the survey drop-out rate significantly contributed to the small sample size.

Additionally, the data reveal that many participants were not able to correctly answer manipulation checks in the study. Participants were asked to identify the correct diagnosis in the vignette and many were not able to correctly identify the label. Subsequently, the sample size was significantly impacted. The poor performance on the manipulation check is indicative of a number of issues, including but not limited to, lack of incentive to pay attention in the survey and a too lengthy survey.

CONCLUSION

This study investigated whether or not mental health stigma impacted deployment decisions among civilian and veteran populations. This research explores the differences of mental health stigma among military versus civilian populations, stigma associated with different diagnoses, the impact of military service and mental health stigma on deployment decisions, and the relationship between personality traits and the deployment decisions. The only significant finding in the study was that higher ratings of mental health prejudice were associated with a lower likelihood of deploying a soldier with a previous mental health diagnosis.

The sample size used for the purpose of this study was significantly limited; however, the topics discussed and explored warrant further study in the future. Future research should explore the different ways that mental health stigma impacts service outcomes and examine the clinical implications this outcome may have for military psychologists. Further research should examine how diagnostic labels impact service outcomes and the different ways that behavioral health evaluations can represent difficulties that soldiers may be facing, without long term impacts on their careers.

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Table 1

Sample Demographics

Characteristic				
	<i>n</i>	%	<i>M</i>	<i>SD</i>
Gender				
Male	54	90		
Female	3	5		
Gender Queer	2	3.3		
Open Option	1	1.7		
Nationality				
USA	51	85.2		

Other	6	10.2		
Age			38.6	18.82
19-30	22	36.7		
31-40	17	28.4		
41-50	6	10.1		
51-60	10	16.7		
61 +	5	8.5		
Education Level				
High School/GED	11	18.3		
Associates or Tech	13	21.7		
Bachelor's	17	28.3		
Master's	18	30.0		
Doctorate	1	1.7		
Marital Status				
Single	19	31.7		
Married	31	51.7		
Divorced	3	5.0		
Cohabiting	3	5.0		
Other	2	3.3		
Ethnicity				
Black/African Am.	2	3.3		
White/Caucasian	56	93.3		
Asian/Asian-Am.	2	3.3		

Hispanic/Latinx	4	6.7
Native Am.	1	1.7
Other	0	0
Veteran Status		
Yes	49	81.7
No	11	18.3
Current Military		
Yes	14	23.3
No	35	58.3
Military Branch		
Army	36	60.0
Air Force	2	3.3
Navy	8	13.3
Marine Corps	3	5.0
Coast Guard	1	1.7
Military Status		
Active	13	21.7
Reserve	1	1.7
Nat'l Guard	1	1.7
Retired	13	21.7
Veteran	21	35.0
Highest Rank		
Officer	13	21.7

Warrant Officer	5	8.3
Enlisted	31	51.7

Table 2

Independent Samples t-test Civilian versus Veteran Stigma Ratings

Outcome	Group						95% CI for Mean Difference	<i>t</i>	<i>df</i>
	Civilian			Veteran					
	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>			
Mental Health Stigma	1.89	.653	11	1.96	.616	49	-0.34, 0.49	.345	58

Table 3.1

Two-Way ANOVA Tests of Between-Subject Effects with manipulation check

Source	<i>df</i>	MS	F	<i>P</i>	Partial Eta Squared
Corrected Model	3	176.80	.632	.598	.033
Intercept	1	413716.47	1478.55	.000	.964
Vignette	3	176.803	.632	.598	.033
Error	56	279.812			
Total	60				
Corrected Total	59				

Table 4

*Regression Analysis Predicting Deployment Decision from Military Service and Mental Health**Stigma*

	<i>B</i>	<i>SE</i>	β	<i>t</i>	<i>p</i>	95% CI for <i>B</i>		Effect Size
						Lower	Upper	<i>r</i> _{sp}
Step 1								
Military Service	-3.90	3.82	-.10	-1.02	= .31	-11.49	3.68	-.10
MH Stigma	-5.43	2.49	-.21	-2.18	< .05	-10.37	0.49	-.21
Step 2								
Military Service x MH Stigma	6.50	6.16	.32	1.06	= .29	-5.72	18.71	.102

Table 5
Regression Analysis Predicting Deployment Ratings from Agreeableness, Openness to Experience, and Mental Health Stigma

	<i>B</i>	<i>SE</i>	β	<i>t</i>	<i>p</i>	95% CI for <i>B</i>		Effect Size
						Lower	Upper	<i>r</i> _{sp}
Step 1								
Agreeableness	-3.774	3.429	-0.156	-1.101	= .276	-10.65	3.10	-.147
Openness to Experience	1.424	2.646	0.076	0.538	= .593	-3.88	6.73	.072
Step 2								
Mental Health Stigma	-2.702	3.629	-0.100	-0.744	= .460	-9.98	4.57	-.100

Notes: CI = confidence interval. Effect size *r*_{sp} is the semi-partial Pearson correlation.

Appendix A

Demographic Information Sheet

Please answer the following questions.

Are you located:

In the United States

Outside of the United States

What is your nationality?

Please indicate your age:

Open option

Ethnicity (select all that apply):

Black or African-American

White/Caucasian

Asian or Asian-American

Hispanic or Latinx

Native American

Other: _____

What is your gender?

Male

Female

Transgender

Gender Queer

Open option: _____

Please indicate your highest level of education obtained:

- Less than a High School Diploma
- High School Diploma or GED equivalent
- Associates Degree or Certification (Technical College)
- Bachelor's Degree
- Master's or Other Professional Degree
- Doctorate Degree

What is your marital status:

- Single
- Married
- Separated
- Divorced
- Cohabiting
- Other

Have you ever served in the Military?

- Yes
- No

Are you currently still in the Military?

- Yes
- No

Which branch(es) did you serve in? (select all that apply?)

- Army
- Air Force
- Navy

Marines

Coast Guard

Highest military rank attained:

Enlisted

Warrant Officer

Officer

What is your current military status?

Active Duty

Reserves

National Guard

Retired

Veteran

Appendix B

Vignettes

Imagine you are a commander in the US Army. You are in charge of protecting the mission and protecting the soldiers under your command. You are preparing for a preparing for a three-month deployment in Syria and reviewing the files on your soldiers to finalize the roster of soldiers who will deploy with you. You are likely to experience combat during this deployment. One of your soldiers, John Thompson, is 24-years old. He recently completed basic training and was reported to have done adequately. His medical evaluation indicated no significant problems other being slightly far-sighted requiring reading glasses. His psychological evaluation indicated a history of treatment for [inset diagnosis] but no current issues. His IQ was found to be slightly above average.

Control

Imagine you are a commander in the US Army. You are in charge of protecting the mission and protecting the soldiers under your command. You are preparing for a preparing for a three-month deployment in Syria and reviewing the files on your soldiers to finalize the roster of soldiers who will deploy with you. You are likely to experience combat during this deployment. One of your soldiers, John Thompson, is 24-years old. He recently completed basic training and was reported to have done adequately. His medical evaluation indicated no significant problems other being slightly far-sighted requiring reading glasses. His psychological evaluation indicated no previous mental health treatment or current issues. His IQ was found to be slightly above average.

Appendix C

Employability/Deployment Decision

Please rate your agreement with the following statements.

1 = Strongly Disagree

2 = Disagree

3 = Neither agree nor disagree

4 = Agree

5 = Strongly Agree

- | | | | | | |
|---|---|---|---|---|---|
| 1. I would deploy the soldier from the previous scenario. | 1 | 2 | 3 | 4 | 5 |
| 2. The soldier is capable of performing necessary duties during deployment. | 1 | 2 | 3 | 4 | 5 |
| 3. The soldier will fit in with fellow soldiers during the deployment. | 1 | 2 | 3 | 4 | 5 |
| 4. The soldier will fit in with the military work environment. | 1 | 2 | 3 | 4 | 5 |
| 5. The soldier from the scenario was intelligent. | 1 | 2 | 3 | 4 | 5 |

Appendix D

CAMI-12

Please respond with your level of agreement to each statement.

1 = Strongly Disagree

2 = Disagree

3 = Neither agree nor disagree

4 = Agree

5 = Strongly Agree

1	One of the main causes of mental illness is a lack of self-discipline and will-power.	1	2	3	4	5
2	There is something about people with mental illness that makes it easy to tell them from normal people.	1	2	3	4	5
3	As soon as a person shows signs of mental disturbance, he should be hospitalized.	1	2	3	4	5
4	Mental illness is an illness like any other.	1	2	3	4	5
5	Less emphasis should be placed on protecting the public from people with mental illness.	1	2	3	4	5
6	Mental hospitals are an outdated means of treating people with mental illness.	1	2	3	4	5
7	Virtually anyone can become mentally ill.	1	2	3	4	5
8	People with mental illness have for too long been the subject of ridicule.	1	2	3	4	5
9	We need to adopt a far more tolerant attitude toward people with mental illness in our society.	1	2	3	4	5
10	We have a responsibility to provide the best possible care for people with mental illness.	1	2	3	4	5
11	People with mental illness don't deserve our sympathy.	1	2	3	4	5
12	People with mental illness are a burden on society.	1	2	3	4	5
13	Increased spending on mental health services is a waste of money.	1	2	3	4	5
14	There are sufficient existing services for people with mental illness.	1	2	3	4	5
15	People with mental illness should not be given any responsibility.	1	2	3	4	5
16	A woman would be foolish to marry a man who has suffered from mental illness, even though he seems fully recovered.	1	2	3	4	5
17	I would not want to live next door to someone who has been mentally ill.	1	2	3	4	5
18	Anyone with a history of mental problems should be excluded from taking public office.	1	2	3	4	5

19	No-one has the right to exclude people with mental illness from their neighbourhood.	1	2	3	4	5
20	People with mental illness are far less of a danger than most people suppose.	1	2	3	4	5
21	Most women who were once patients in a mental hospital can be trusted as babysitters.	1	2	3	4	5
22	The best therapy for many people with mental illness is to be part of a normal community.	1	2	3	4	5
23	As far as possible, mental health services should be provided through community based facilities.	1	2	3	4	5
24	Residents have nothing to fear from people coming into their neighbourhood to obtain mental health services.	1	2	3	4	5
25	It is frightening to think of people with mental problems living in residential neighbourhoods.	1	2	3	4	5
26	Locating mental health facilities in a residential area downgrades the neighbourhood.	1	2	3	4	5

Appendix E

M5-50

Without spending too much time dwelling on any one item, just give the first reaction that comes to mind. In order to score this test accurately, it is very important that you answer *every* item, without skipping any. You may change an answer if you wish. It is ultimately in your best interest to respond as honestly as possible. Mark the response that best shows how you really feel or see yourself, not responses that you think might be desirable or ideal.

1 = Inaccurate

2 = Moderately Inaccurate

3 = Neither

4 = Moderately Accurate

5 = Accurate

1.	Have a vivid imagination	1	2	3	4	5
2.	Believe in the importance of art	1	2	3	4	5
3.	Seldom feel blue	1	2	3	4	5
4.	Have a sharp tongue	1	2	3	4	5
5.	Am not interested in abstract ideas	1	2	3	4	5
6.	Find it difficult to get down to work	1	2	3	4	5
7.	Panic easily	1	2	3	4	5
8.	Tend to vote for liberal political candidates	1	2	3	4	5
9.	Am not easily bothered by things	1	2	3	4	5
10.	Make friends easily	1	2	3	4	5
11.	Often feel blue	1	2	3	4	5
12.	Get chores done right away	1	2	3	4	5
13.	Suspect hidden motives in others	1	2	3	4	5
14.	Rarely get irritated	1	2	3	4	5
15.	Do not like art	1	2	3	4	5
16.	Dislike myself	1	2	3	4	5
17.	Keep in the background	1	2	3	4	5
18.	Do just enough work to get by	1	2	3	4	5
19.	Am always prepared	1	2	3	4	5
20.	Tend to vote for conservative political candidates	1	2	3	4	5
21.	Feel comfortable with myself	1	2	3	4	5
22.	Avoid philosophical discussions	1	2	3	4	5
23.	Waste my time	1	2	3	4	5
24.	Believe that others have good intentions	1	2	3	4	5
25.	Am very pleased with myself	1	2	3	4	5
26.	Have little to say	1	2	3	4	5
27.	Feel comfortable around other people	1	2	3	4	5
28.	Am often down in the dumps	1	2	3	4	5
29.	Do not enjoy going to art museums	1	2	3	4	5
30.	Have frequent mood swings	1	2	3	4	5
31.	Don't like to draw attention to myself	1	2	3	4	5
32.	Insult people	1	2	3	4	5

33.	Have a good word for everyone	1	2	3	4	5
34.	Get back at others	1	2	3	4	5
35.	Carry out my plans	1	2	3	4	5
36.	Would describe my experiences as somewhat dull	1	2	3	4	5
37.	Carry the conversation to a higher level	1	2	3	4	5
38.	Don't see things through	1	2	3	4	5
39.	Am skilled in handling social situations	1	2	3	4	5
40.	Respect others	1	2	3	4	5
41.	Pay attention to details	1	2	3	4	5
42.	Am the life of the party	1	2	3	4	5
43.	Enjoy hearing new ideas	1	2	3	4	5
44.	Accept people as they are	1	2	3	4	5
45.	Don't talk a lot	1	2	3	4	5
46.	Cut others to pieces	1	2	3	4	5
47.	Make plans and stick to them	1	2	3	4	5
48.	Know how to captivate people	1	2	3	4	5
49.	Make people feel at ease	1	2	3	4	5
50.	Shirk my duties	1	2	3	4	5