

HELP SEEKING INTENTIONS IN RETURNING SERVICE
MEMBERS: ASSOCIATIONS WITH ANTICIPATED
ENACTED STIGMA, SELF-STIGMA, AND
ATTRIBUTIONS FOR PSYCHOLOGICAL
DISTRESS

by

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STATEMENT OF DISSERTATION APPROVAL

The following faculty members served as the supervisory committee chair and members for the dissertation of Rebecca Kate Blais.

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ABSTRACT

Many Operation Enduring Freedom (OEF), Iraqi Freedom (OIF), and New Dawn (OND) troops return from deployment with posttraumatic stress (PTS) symptoms, but few service members seek psychological help. It is possible that stigma is a barrier to help-seeking; however, the research examining the link between stigma and help-seeking is limited. The purpose of the present study was to examine anticipated enacted stigma (AES) from various military and nonmilitary sources and self-stigma as correlates of help-seeking intentions from mental health professionals or medical doctors/advance practice registered nurses (APRNs). Participants were 126 male service members who returned from combat theatres within the last year and who completed self-report measures of help-seeking intentions, stigma, and PTS symptoms. Results demonstrated that AES from unit leaders and self-stigma was negatively associated with help-seeking intentions from mental health professionals, and self-stigma was negatively associated with help-seeking from medical doctors/APRNs. AES from unit members and family/friends were unrelated to help-seeking intentions from either type of provider. The association between self-stigma and help-seeking from mental health professionals was more strongly negative than the associations between self-stigma and seeking from medical doctors/APRNs and between AES from unit leaders and seeking help from mental health professionals. These results suggest it is important to distinguish between various sources of AES and to consider the relative effects of self-stigma when trying to

understand correlates of help-seeking. Further, these findings show that self-stigma for help-seeking varies depending on choice of intended treatment providers. Clinical and research implications derived from these findings are discussed.

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CHAPTER 1

INTRODUCTION

Since the start of Operations Enduring Freedom (OEF), Iraqi Freedom (OIF), and New Dawn (OND) beginning in 2001, over 1.9 million troops have deployed to combat theatres (Institute of Medicine, 2010). Up to 94% of those service members reported witnessing or personally experiencing a traumatic event that could potentially meet Diagnostic and Statistical Manual-Revised IV-Text Revision (DSM-IV-TR; APA, 2000) criterion A for posttraumatic stress disorder (PTSD; Dedert et al., 2009; Hoge et al., 2004; Milliken, Auchterlonie, & Hoge, 2007), and 8-31% of service members experienced clinically significant psychological distress (e.g., PTSD symptoms, depressive symptoms) in the first 3-12 months post deployment (Hoge et al., 2004; Kim, Thomas, Wilk, Castro, & Hoge, 2010; Thomas, 2010). However, studies indicate that between 33% and 95% of service members in psychological distress will not seek psychological help (Fikretoglu, Brunet, Guay, & Pedlar, 2007; Hoge et al., 2004; Kehle et al., 2010; Kim et al., 2010). Similarly, of service members who reported some level of psychological distress, including notable posttraumatic stress (PTS) symptoms, during mental health screenings, between 33-58% fail to follow through with referrals within 3-12 months postreferral or diagnosis (Johnston & Dipp, 2009; Milliken et al., 2007; Seal, 2010). Although there is emerging evidence that the time period between diagnosis and/or referral and obtaining mental health-care appointments is decreasing (Seal et al., 2010), the fact remains that a

large number of service members who could benefit from treatment do not seek help. The Department of Veterans Affairs (DVA) offers a number of effective treatments that are known to reduce PTSD, and treatment is free to Veterans for the first 5 years post deployment. As such, it is important to understand factors that impact treatment utilization.

Although research on help-seeking is somewhat limited for returning service members, the available evidence suggests that stigma might act as a barrier to care. In the existing military research on psychological distress and help-seeking, stigma is a broadly used construct that reflects beliefs that service members will be thought of differently or treated differently if they seek help for mental health problems, including fears that others will see them as weak or to blame for their distress (Britt et al., 2008; Corrigan & Penn, 1999; Rauch et al., 2010). It is important to note that this broad usage differs somewhat from research on stigma in civilians. In the broader literature on stigma, researchers typically differentiate between various forms of stigma, including overt acts of hostility or discrimination (i.e., enacted stigma), witnessing another individual experience hostility or discrimination (i.e., vicarious stigma), perceptions of negative attitudes expressed by society toward individuals with a stigmatized condition (i.e., public stigma), or endorsement of negative stereotypes by the individual in a stigmatized group (i.e., self-stigma) (Ludwikowski, Vogel, & Armstrong, 2009; Steward et al., 2008). Though differentiation between the various forms of stigma is not common in military research, the items used in existing research with military populations (see Appendix A) appear

analogous to anticipated enacted stigma (AES). Thus, this term will be used throughout the paper in reference to what most military researchers describe broadly as stigma.

Studies on recently returned service members show that some service members reporting clinically significant symptoms of PTS or other psychological distress (e.g., depression, anxiety) also report perceptions that others will view them as weak or “crazy” if they seek help (Stecker, Fortney, Hamilton, & Ajzen, 2004, p. 1359), as well as expressing fear of negative career ramifications (e.g., not being promoted or redeployed) and fears that fellow service members may treat them differently if their help-seeking is discovered (Britt, 2000; Britt et al., 2008; Hoge et al., 2004; Kim et al., 2010; Pietrzak, Johnson, Goldstein, Malley, & Southwick, 2009; Visco, 2009). In fact, service members in distress are more likely to report such perceptions of AES than service members who are not in distress (Britt, 2000; Britt et al., 2008; Hoge et al., 2004; Ouimette et al., 2011; Pietrzak et al., 2009; Pyne et al., 2004), which may be related to the lessened likelihood of help-seeking in distressed service members. Given the well-documented association between symptom severity and AES, an aim of this study was to replicate this association in a new sample.

Despite these consistent findings, almost all the studies on AES and psychological distress focused on general AES from military sources, with no distinction between different military personnel (e.g., unit leaders, fellow unit members). Further, there has been no assessment of AES from nonmilitary sources, except for a single qualitative study that found some service members who reported specific concerns that their family members would openly discourage treatment seeking if they made their distress known

(Stecker et al., 2007). Moreover, only two studies were identified that specifically examined the direct link between AES and help-seeking. One small qualitative study found that service members reported concerns about stigma-like reactions if their help-seeking for distress was discovered (Sayer et al., 2009); however, the only quantitative study in the literature failed to detect a significant association between AES and post deployment psychotherapy or medication use (Kehle et al., 2010). This latter study may suggest that AES might not be a barrier to care as many have postulated; however, there are other interpretations. For example, Kehle et al. (2010) examined AES in service members who were already receiving care for psychological distress; thus, if AES negatively relates to help-seeking, a null association between AES and help-seeking in a sample of service members already receiving psychological help would be expected. Another potential explanation is that Kehle et al. (2010) used a general measure of AES that does not distinguish between different stigma sources. It is possible that service members may experience different levels of AES from different sources, and a nonspecific assessment of AES, such as the one used in the Kehle et al. (2010) study, might not fully capture the association between AES and help-seeking.

Thus, a primary aim of this investigation was to assess the levels of AES from various sources (i.e., service members' unit leaders, fellow unit members, family/friends) and examine their respective associations with help-seeking intentions. Further, the current investigation measured *intentions* to seek help in service members not necessarily receiving treatment already, in order to circumvent any potential issues, such as detecting an association between AES and help-seeking in service members already receiving

mental health treatment. As existing research stresses fears of negative career consequences if help-seeking behaviors were reported, I hypothesized: (1) AES from military personnel (i.e., unit leaders, fellow unit members) would be higher than AES from nonmilitary personnel (i.e., family/friends), and (2) the negative association between AES from military personnel and help-seeking would be stronger than the negative association between AES from nonmilitary sources and help-seeking. In addition, as service members with higher PTS symptoms are more likely to report greater AES (Britt, 2000; Britt et al., 2008; Hoge et al., 2004; Ouimette et al., 2011; Pietrzak et al., 2009; Pyne et al., 2004), I hypothesized that service members with greater PTS symptoms would report higher AES and lower help-seeking intentions as compared to service members with lesser PTS symptoms.

Although AES has been the primary focus of research investigating help-seeking in the military, other potentially important factors have yet to be explored in this population. One such factor is self-stigma. Self-stigma comprises the “negative attitudes about mental illness and its treatment that are held by the individual with the stigmatized condition” (Manos, Rusch, Kanter, & Clifford, 2009, p. 1128). In research on civilians, self-stigma has been identified as a barrier to help-seeking. For example, depressed men who indicated higher self-stigma on self-report measures related poorer attitudes toward seeking help and lower intentions of seeking help (Pederson & Vogel, 2007), and individuals with schizophrenia who endorsed greater self-stigma displayed poorer treatment adherence and participation in treatment (Fung, Tsang, & Corrigan, 2008). Other studies using analogue or community samples have also found that self-stigma is

negatively correlated with help-seeking and poorer attitudes toward seeking professional help, mostly with large-effect sizes (Barney, Griffiths, Jorm, & Christensen, 2006; Vogel, Wade, & Haake, 2006; Vogel, Wade, & Hackler, 2007). In fact, some research shows that self-stigma exerts a greater effect on attitudes toward help-seeking than other forms of stigma, including felt normative stigma (Bathje & Pryor, 2011; Ludwikowski et al., 2009; Vogel et al., 2007).

Although it has not yet been studied in the military, there are several reasons to believe that self-stigma may be as influential, if not more influential, in a military population as compared to a civilian population. The military culture emphasizes strength, duty to country, and unwavering ability to protect one's country (Fikretoglu et al., 2007). Also, impaired functioning on the battlefield due to psychological distress could result in significant harm or death (Bray et al., 2002; Visco, 2009). Thus, the pressure for military service members to appear psychologically healthy may be even greater than that experienced by civilians. Additionally, much of the research on civilian AES, self-stigma, and help-seeking has been conducted with mixed-gender or female-only samples (Barney et al., 2006; Dinos, Stevens, Serfaty, Weich, & King, 2004; Hepworth & Paxton, 2007). It has been well established in both civilian and military research that women are more likely to seek help than men (Barney et al., 2006; Bathje & Pryor, 2011; Fikretoglu, Elhai, Liu, Richardson, & Pedlar, 2009; Fikretoglu, Guay, Pedlar, & Brunet, 2008; Komiya, Good, & Sherrod, 2000; Sheu & Sedlacek, 2004; Visco, 2009), and civilian men report greater self-stigma for help-seeking than civilian women (Bathje & Pryor, 2011; Vogel et al., 2007). Thus, results regarding self-stigma in mixed-gendered or female-only samples

may even underestimate the potential importance of self-stigma in the mostly male population of service members.

On the other hand, the career concerns that appear so paramount for service members and the emphasis on strength within the general military culture may increase the relative importance of AES (particularly from military sources) in this population. Given the lack of knowledge regarding self-stigma in this population, the second aim of this study was to assess self-stigma and its association with help-seeking attitudes in a sample of service members. This aspect of the project was more exploratory, but based on existing research, I hypothesized that (1) self-stigma would be associated with reduced help-seeking intentions, but (2) AES from military personnel would have a greater negative association with help-seeking intentions than self-stigma. In addition, similar to hypotheses regarding associations of AES with help-seeking intentions, I hypothesized that service members with greater PTS symptoms would report higher self-stigma and lower help-seeking intentions.

Finally, although AES and self-stigma appear to be related to help-seeking attitudes and behaviors, correlates of these forms of stigma are not well understood. One potential factor is whether individuals view their psychological symptoms as controllable. Individuals' own controllable attributions about their symptoms (hereafter referred to as personal controllable attributions) have been linked directly to self-stigma in civilians with depression, HIV/AIDS, and schizophrenia (Blais, unpublished; Mak et al., 2007; Mak & Wu, 2006). Although no studies have examined explicitly the association between AES from others and individuals' perceptions that others believe they can control their

symptoms (hereafter referred to as perceived controllable attributions), research has shown that relatives who believe that mental illness is controllable in patients with diagnosed mental illness express greater negative attitudes toward that person than relatives who believe that mental illness is uncontrollable (review by Barrowclough & Hooley, 2003). Additionally, respondents who believe that individuals can control psychological symptoms report that they would be less likely to offer aid to those individuals (Cooper, Corrigan & Watson, 2003; MacKay & Barrowclough, 2005; Weiner, 1995; Weiner, Perry, & Magnusson, 1988). Coupled with research that demonstrates the importance of perceived attributions for psychological symptoms (e.g., Blais & Renshaw, 2010), these results suggest that perceived controllable attributions could be related to AES. Thus, the final aim of the current project was to examine whether personal and perceived controllable attributions for psychological distress were associated with self-stigma and AES, respectively. I hypothesized that personal controllable attributions would be linked to greater self-stigma, and perceived controllable attributions from specific sources would be linked with greater AES from that same source. Though it has not yet been explored in the extant literature, I also sought to examine potential associations between personal and perceived controllable attributions and help-seeking intentions. As these analyses were exploratory, no a priori hypotheses were formulated.

Current Study

The present study was designed to address the aforementioned limitations in the extant literature on help-seeking in returning service members. The primary aims were to explore potential differences in AES from different sources, examine associations of AES

and self-stigma with help-seeking intentions, and explore whether personal and perceived controllable attributions for psychological distress underlie self-stigma, AES, and help-seeking intentions. Finally, I sought to examine whether the associations among attributions, stigma, and help-seeking were moderated by PTS symptom severity, given the strong, positive link between stigma and psychological distress (Britt, 2000; Britt et al., 2008; Hoge et al., 2004; Pietrzak et al., 2009; Ouimette et al., 2011; Pyne et al., 2004). Consistent with these aims, I hypothesized that (1) AES from military personnel would be higher than AES from family/friends; (2) AES from any source would be negatively associated with help-seeking intentions, but the association of AES from military sources with help-seeking would be more strongly negative than the association of AES from nonmilitary sources and help-seeking; (3) greater self-stigma would be associated with decreased help-seeking behaviors; (4) the association of self-stigma with help-seeking intentions would be weaker than the association of AES from military sources with help-seeking intentions; (5) personal and perceived controllable attributions would be positively correlated with self-stigma and AES, respectively, (6) PTS symptom severity would be positively correlated with self-stigma and AES from any source, and negatively correlated with help-seeking intentions, and (7) PTS symptom severity would moderate the associations between either form of stigma and help-seeking variables, such that the links would be even more strongly negative as PTS symptom severity increased.

CHAPTER 2

METHOD

Participants

Participants were 126 male National Guard/Reserve (NG/R) service members who deployed to OEF/OIF/OND combat theatres within the previous 12 months. The mean length of time since service members reported being home from deployment was 4.12 months ($SD = 2.37$). The majority of service members were in the Marines (56%) or Army (40.8%) branches of service. The majority of the sample reported being deployed one time (59.5%), with 31.7% reporting two deployments, and 7.9% reporting three or more deployments. Service members were mostly White (88.1%), married (61.9%), and self-identified as members of the Church of Jesus Christ of Latter Day Saints (69.0%). The mean age was 27.54 ($SD = 7.17$), and most service members (76.2%) reported receiving at least some college education.

Measures

The PTSD Checklist – Military Measure

The PTSD Checklist – Military version (PCL-M; Weathers, Litz, Herman, Huska, & Keane, 1993) is a 17-item self-report measure that assesses presence and severity of symptoms of PTSD as outlined in the DSM-IV-TR. Participants are asked to rate how much each symptom has bothered them over the last month. Questionnaire items are rated

on a Likert scale ranging from 1 (*not at all*) to 5 (*extremely*), and summed for a total score. Sample items include: *During the last month, I have been* “bothered by avoiding thinking or talking about stressful military experiences or avoiding having feelings related to it,” and “bothered by repeated, disturbing dreams of a stressful military experience.” The PCL-M is shown to have high internal consistency, test–retest reliability, and convergent validity with other assessments of PTSD symptomology (Blanchard, Jones-Alexander, Buckley, & Foreris, 1996; Norris & Hamblen, 2004). In the present sample, internal consistency was also very strong, Cronbach’s $\alpha = .95$.

The original scale authors suggested that the cutoff when using the PCL-M as a screening measure for problematic PTSD symptomology should be a score of 50 or above in military samples (Weathers et al., 1993). However, recent research suggests that this score may be unreasonably high. Bliese and colleagues (2008) examined the diagnostic efficiency of the PCL-M in returning OEF/OIF soldiers. Using Receiver Operating Characteristics, they found that scores on the PCL-M of 26 to 34 maximized sensitivity and specificity. We used a cutoff of 30 or higher as an indicator of problematic PTSD symptomology, which has a sensitivity index of .78 and a specificity index of .88 (Bliese et al., 2008). One hundred twenty participants completed all 17 PCL-M items, and six participants completed only 16 items. For participants who completed at least 16 of the 17 items, a total score was calculated by extrapolation (i.e., I calculated the average item score among the 16 completed items and then added this average score to the total of the 16 items).

The General Help-Seeking Questionnaire

The General Help-Seeking Questionnaire (GHSQ, Wilson, Deane, Ciarrochi, & Rickwood, 2005) assesses the likelihood of seeking help for psychological distress from a variety of sources (e.g., mental health professional, medical doctor/Advanced Practice Registered Nurse [APRN]), as well as the likelihood of seeking help for suicidal ideation. Items related to suicidal ideation were not included in the current investigation. The items regarding seeking help for psychological distress specify nine different sources, with an additional tenth question that states, “I would not seek help from anyone.” The authors designed the scale to allow researchers to select which help sources to include in their investigation (i.e., not all nine help sources need to be included if specific help sources are irrelevant) and also add other help sources that are sample-specific. For the current investigation, service members were asked to rate how likely they were to seek help from five sources: mental health professional, medical doctor/APRN, phone help-line, religious bishop, and military chaplain. Scores range from 1 (*extremely unlikely*) to 7 (*extremely likely*). Items can be combined for a total help-seeking score, or single items can be used to reflect a single index of help-seeking from a specific source (e.g., mental health professional). The scale shows adequate internal consistency and reliability (Wilson et al., 2005). In the current sample, the items regarding the five sources of help-seeking showed adequate internal consistency (Cronbach’s alpha = .72).

The Perceived Stigma and Barriers to Care Scale-Stigma Subscale

The Perceived Stigma and Barriers to Care Scale-Stigma Subscale (Britt, 2000) is a 13-item scale that assesses AES (as it has been measured by military researchers) and

perceived logistical barriers to care (e.g., lack of transportation, scheduling difficulties). A principal axis factor analysis on the norm sample indicated the presence of two factors, with six items representing stigma (Britt, 2000), heretofore referred to as general AES. The six items specific to general AES, with wording adaptations used by Hoge et al. (2004), were used in this investigation (see Appendix A). Respondents are asked to rate their level of agreement with each stigma item, using a Likert scale from 1 (*strongly disagree*) to 5 (*strongly disagree*). Items are then summed for a total score. In the current sample, a principal axis factor analysis with a direct oblimin rotation on the six items confirmed the presence of a single factor that accounted for 70% of the variance. Internal consistency for the six-item stigma subscale in the current sample was good, Cronbach's alpha = .87.

The Perceptions of Stigmatization by Others for Seeking Help Scale

The Perceptions of Stigmatization by Others for Seeking Help (PSOSH; Vogel, Wade, & Ascherman, 2009) scale is a five-item scale that assesses concerns about experiencing stigma from others for seeking psychological help. This measure was used as an additional indicator of anticipated enacted stigma. Participants are asked to rate their agreement with each statement about how others might perceive them if they were to seek psychological help, using a Likert scale of 1 (*not at all*) to 5 (*a great deal*). Sample items include “*Think you posed a risk to others*” and “*Think of you in a less favorable way.*” Items are summed to create a total score and higher scores indicate a greater perception of anticipated enacted stigma. Analyses in the norm sample showed that this is a unidimensional scale with good internal reliability and validity (Vogel, Wade, &

Ascherman, 2009). The instructions for the PSOSH can be altered to assess AES from different targets, thus, we altered instructions that so service members completed the scale in regard to unit leader, unit members, and family/friends. Internal consistency for each version of the scale was high in our sample (Cronbach's alpha of .94, .94, and .93 for unit leader, fellow unit members, and family/close friends, respectively).

The Self-Stigma of Seeking Help Scale

The Self-Stigma of Seeking Help (SSOSH; Vogel, Wade, & Haake, 2006) scale is a 10-item questionnaire that assesses self-stigma for seeking help for a mental health problem. Participants are asked to rate their agreement with the statement using a Likert scale of 1 (*strongly disagree*) to 5 (*strongly agree*). Sample items include “It would make me feel inferior to ask a therapist for help” and “I would feel inadequate if I went to a therapist for psychological help.” Five of the items are reverse scored, and total scores are derived by summing all 10 items. In the norm sample, a principal axis factor analysis indicated the presence of a single factor that accounted for 53% of the variance, and internal reliability (Cronbach's $\alpha = .91$) and test–retest reliability over a two-month period ($r = .72$) were good (Vogel et al., 2006). In the present sample, internal consistency for the sample was also high (Cronbach's $\alpha = .85$).

The Illness Attribution Measure

The Illness Attribution Measure (Blais & Renshaw, 2008) is a 16-item scale that assesses biological, psychological, and controllable illness attributions for psychological distress. In the current study, the two controllable attribution items from the scale were

used: “I should be able to control the negative emotions or psychological problems I have,” and “If I would try harder, I could get the best of the negative emotions or psychological problems I have.” The service members answered these questions in regard to their own beliefs (personal) and their perceptions of others’ beliefs (perceived), specifically in regard to unit leaders, fellow unit members, and family/friends, for a total of eight items (two per target). Responses to each item are on a Likert scale, with scores ranging from 1 (*not at all*) to 5 (*very much*). Responses to the two items from each target were averaged to create a combined variable from each source (four total combined variables).

Procedures

The current investigation was approved by the Institutional Review Board at a large intermountain west university and the neighboring VA Human Subjects Subcommittee. Service members were recruited from two Postdeployment Health Reassessments (PDHRAs) and a Yellow Ribbon event, mostly conducted within 4 months of returning from deployment. Approximately 240 total service members were made aware of the study during a general announcement made at the PDHRA or Yellow Ribbon event by the principal investigator (PI). In order to maintain anonymity of service members, a waiver of documentation of informed consent was used, and interested service members were given a consent cover letter (in place of a consent form) and a packet of questionnaires that they could complete during the course of the postdeployment event. They were asked to leave out all identifying information. Packets were returned at the end of the workshop or via mail, using prepaid envelopes provided by the PI. It took most

participants approximately 30 minutes to complete the packets, and participants were given \$15 for their participation. Of the 240 service members informed of the study, 209 opted to complete packets. Twelve female service members completed packets. Given that the small number precluded examining the potential effect of gender, their data were excluded to preserve the homogeneity of the sample. Six additional participants did not list their gender and were thus excluded from analyses. Of the remaining 191 participants, 28 reported that they returned from deployments more than 12 months ago, and 37 participants did not list any deployments and/or deployment dates or locations, thus preventing any confirmation of their deployment status. These 65 participants were also excluded from analyses. The remaining 126 participants composed the current sample.

Analytic Plan

To identify potential covariates relevant to the relationships in question, bivariate correlations between all primary variables (self-stigma, AES from all targets, help-seeking intentions) were conducted with the following variables: participant age, history of previous mental health care utilization, months since participant returned from deployment, presumed likelihood of being deployed again (based on a single item with a Likert scaled score), and total number of deployments. The potential impact of covariates with a significant association with any primary variables was examined by controlling for the covariate(s) in subsequent analyses (e.g., including the covariate[s] in regressions); however, in no case did controlling for any covariates change the significance of associations of interest. Thus, results are reported without covariates included. In order to determine whether the associations between stigma variables and help-seeking variables

were different based on target (e.g., unit leader, unit member, family/friend, self), correlation coefficients were compared using formulas by Steiger (1980). In addition, PTS symptom severity was examined as a potential moderator of all associations of interest via regressions with interactions. Any significant interactions are reported below.

Data on help-seeking intentions from five different sources were collected; however, our primary interests were potential barriers to obtaining help from a mental health professional and medical doctor/APRN, as those are the primary help providers for mental health-related problems within the DVA. Thus, initial tests of primary hypotheses involving help-seeking included the items related to help-seeking intentions from a mental health professional and medical doctor/APRN as separate individual items. This approach decreased the potential for Type I error from analyses not relevant to the current study (e.g., examining the association of help-seeking from a bishop with stigma variables). To test for potential differences between AES from different sources and potential differences between willingness to seek help from a mental health professional and willingness to seek help from a medical doctor/APRN, paired samples t-tests were used. Initial associations among help-seeking variables of primary interest, stigma variables, and controllable attribution variables were examined using bivariate correlations and regressions.

Subsequently, given the high correlation between the various stigma measures and the multiple measurements of attributions and help-seeking, the utility of measurement models of potential underlying latent variables of controllable attributions (e.g., personal/perceived), stigma (perceived from various sources, general AES, and self-

stigma), and help-seeking (mental health professional, medical doctor/APRN, phone helpline, chaplain, bishop) were explored using structural equation modeling (SEM) software. This approach allowed for maximization of data while protecting against Type I error, and to explore the associations among the constructs of attributions, stigma, and help-seeking simultaneously. Given that the primary focus of this investigation was on barriers to seeking help from a mental health professional or medical doctor/APRN, we took two approaches to operationalizing help-seeking intentions when using structural equation modeling: (1) the two individual items of seeking help from a mental health professional and medical doctor/APRN, modeled as independent but covarying observed variables, and (2) a latent variable of help-seeking, with all five sources as observed indicators.

For evaluating goodness of fit of models with SEM, Hu and Bentler (1999) suggest using a cutoff of .95 for the Normed Fit Index (NFI), Tucker-Lewis Index (TLI) and Comparative Fit Index (CFI), and a cutoff of .05 for the Root Mean Square Error of Approximation (RMSEA). However, other researchers have argued that these cutoffs are too stringent, and that more liberal cutoffs (e.g., .90 for NFI, TLI, and CFI; and .08 or .10 for RMSEA) may be more appropriate in some cases (Marsh, Hau, & Wen, 2004). Thus, fit indices were analyzed with these general guidelines in mind.

RESULTS

Descriptives

Help-Seeking

Means, standard deviations, and intercorrelations of all help-seeking variables can be found in Table 1. Willingness to seek help from each source was positively correlated with willingness to seek help from the other sources with small-to-large effect sizes, with the exception of the correlation between mental health professional and bishop, which was nonsignificant. Scores on the item for seeking help from a mental health professional were significantly higher than scores on the item for seeking help from a medical doctor/APRN ($t[124] = 3.78, p < .001$).

Table 1. *Means, Standards Deviations, and Intercorrelations for Help-Seeking Intentions*

	<i>M</i>	<i>SD</i>	Correlations					
			1	2	3	4	5	
1. Mental Health Professional	3.34	1.93	--					
2. Medical Doctor/APRN	2.74	1.73	.54***	--				
3. Phone line	1.87	1.53	.23*	.48***	--			
4. Military Chaplain	2.02	1.60	.22*	.46***	.50***	--		
5. Bishop	3.02	2.02	.07	.22*	.38***	.47***	--	

Note. APRN = Advanced Practice Registered Nurse.
* $p < .05$; ** $p < .01$; *** $p < .001$.

Stigma

Means and standard deviations for all stigma variables can be found in Table 2. AES from unit leader was significantly higher than AES from unit members ($t[119] = 3.64, p = .001$) and family/friends ($t[118] = 9.50, p = .001$), and AES from unit members was significantly higher than AES from family/friends ($t[120] = 7.17, p = .001$). Intercorrelations among the various stigma variables are also shown in Table 2. AES from unit leader, unit member, and family/friends were positively correlated with each other, with medium-to-large effect sizes. Self-stigma was positively correlated with AES from unit leader with a medium effect size, but unrelated to AES from unit members and family/friends. General AES was positively correlated with all stigma measures, with medium-to-large effect sizes.

Table 2. *Means, Standards Deviations, and Intercorrelations for all Stigma Variables*

	<i>M</i>	<i>SD</i>	Correlations				
			1	2	3	4	5
1. Self-Stigma	28.13	7.89	--				
2. AES – Unit Leader	12.93	6.14	.33***	--			
3. AES - Unit Members	11.25	5.43	.17	.58***	--		
4. AES - Family/Friends	8.09	4.22	.05	.42***	.49***	--	
5. General AES	15.04	6.64	.33***	.61***	.52***	.40***	--
6. Bishop	3.02	2.02	.07	.22*	.38***	.47***	--

Note. AES = Anticipated Enacted Stigma.
* $p < .05$; ** $p < .01$; *** $p < .001$.

Controllable Attributions

Means, standard deviations, and intercorrelations of the personal and three perceived controllable attribution variables can be found in Table 3. Intercorrelations show that all controllable attribution variables were positively correlated with one another, with medium-to-large effect sizes.

Correlations and Regressions

PTS Symptoms and Variables of Interest

Correlations among PTS symptoms and attribution variables, stigma variables, and primary help-seeking variables of interest can be seen in Table 4. PTS symptom severity was unrelated to all attribution variables, stigma variables, and help-seeking variables, with the single exception of a positive association with AES from family/friends (small-medium effect size).

Table 3. *Means, Standards Deviations, and Intercorrelations for Controllable Attribution Variables*

	<i>M</i>	<i>SD</i>	Correlations			
			1	2	3	4
1. Personal	5.58	1.50	--			
2. Perceived – Unit Leader	5.20	1.75	.42***	--		
3. Perceived - Unit Members	4.62	1.57	.40***	.60***	--	
4. Perceived - Family/Friends	3.98	1.79	.36***	.42***	.57***	--

Note: * $p < .05$; ** $p < .01$; *** $p < .001$.

Table 4. *Correlations of PTS Symptoms with Help-Seeking, Stigma, and Attribution Variables*

	Correlation with PTS Symptoms
Mental Health Professional	.06
Medical Doctor/APRN	-.06
Self-Stigma	-.07
AES – Leader	.05
AES – Unit Member	.03
AES – Family/friends	.22*
General AES	.03
Personal Controllable Attributions	-.07
Perceived Controllable Attribution – Leader	.00
Perceived Controllable Attribution – Unit Member	-.09
Perceived Controllable Attribution – Family/Friends	-.03

Note. AES = Anticipated Enacted Stigma.
 APRN = Advanced Practice Registered Nurse.
 PTS = Post Traumatic Stress.

* $p < .05$; ** $p < .01$; *** $p < .01$

Stigma and Help-Seeking

Correlations of all stigma variables with primary help-seeking variables of interest can be found in Table 5. Self-stigma was negatively correlated with seeking help from both a mental health professional and a medical doctor/APRN, with medium effect sizes. AES from unit leaders was negatively correlated with seeking help from a mental health professional with a small effect size, but unrelated to seeking help from a medical

Table 5. *Correlations of Stigma Variables with Help-Seeking Intention Variables*

	Correlations	
	Mental Health Professional	Medical Doctor/APRN
1. Self-Stigma	-.46***	-.27**
2. AES – Unit Leader	-.19*	-.13
3. AES – Unit Members	-.06	.03
4. AES – Family/Friends	-.01	.05
5. General AES	-.12	-.03

Note. AES = Anticipated Enacted Stigma.
 APRN = Advanced Practice Registered Nurse.
 * $p < .05$; ** $p < .01$; *** $p < .01$.

doctor/APRN. AES from unit members, AES from family/friends, and general AES were all unrelated to help-seeking from either source (see Table 5).

The associations of AES from unit leader and from unit members with help-seeking from a mental health professional were not significantly greater than the association of AES from family/friends with seeking help from a mental health professional ($t[116] = -1.84, p > .05$, $t[117] = -.54, p > .05$, respectively), nor were the associations of AES from unit leader and from unit member with help-seeking from a medical doctor/APRN significantly greater than the association of AES from family/friends with seeking help from a medical doctor/APRN ($t[116] = -1.83, p > .05$, $t[118] = -.86, p > .05$, respectively). The associations between self-stigma and seeking help from a mental health professional and medical doctor/APRN were significantly greater than the associations between AES from unit members and seeking help from a

mental health professional and medical doctor/ARPN ($t[117] = 3.74, p > .025, t[118] = 2.10, p < .05$, respectively). Also, the association between self-stigma and seeking help from a mental health professional was greater than the association between AES from unit leader and seeking help from a mental health professional ($t[117] = 7.47, p < .05$), but the association between self-stigma and seeking help from a medical doctor/APRN was not significantly greater than the association between AES from unit leader and seeking help from a medical doctor/APRN ($t[117] = -1.36, p > .05$). PTS symptom severity did not moderate any of these associations (see Appendix B).

As AES from unit leader and self-stigma were both negatively correlated with help-seeking from a mental health professional, we ran a regression of help-seeking from a mental health professional onto AES from unit leader and self-stigma, to determine whether the two stigma variables demonstrated unique associations with help-seeking from a mental health professional. The overall regression was significant ($F[2, 116] = 13.57, p < .001$). AES from unit leader was nonsignificant (partial $r = -.05, p = .57$), whereas self-stigma remained significant with a medium effect size (partial $r = -.40, p = .001$). This pattern is consistent with the possibility that self-stigma mediates the association between AES from unit leader and help-seeking from a mental health professional.

Controllable Attributions and Stigma

Perceived controllable attributions from specific sources (unit leader, unit member, family/friends) were positively related to AES from the same source, with medium to large effect sizes, but personal controllable attributions were unrelated to self-stigma (see

Table 6). All attributions (perceived controllable attributions from each source and personal attributions) were positively correlated with general AES, with medium effect sizes (see Table 6).

PTS symptom severity did not moderate any of the associations between stigma and attributions (see Appendix C), with the exception of the association between AES from family/friends and perceived controllable attributions from family/friends ($F[3, 117] = 8.96, p < .001$; see Appendix C). The interaction between PTS symptom severity and controllable attributions was significant (partial $r = .35, p < .001$). Probes of this interaction revealed that the positive association between AES from family/friends and perceived controllable attributions from family/friends increased as PTS symptom severity increased (partial $r = .39, p = .001$ at +1 SD of PTS symptom severity; partial $r = .12, p = .19$ at -1 SD of PTS symptom severity).

Controllable Attributions and Help-Seeking

Bivariate correlations between the controllable attribution variables and help-seeking variables can be seen in Table 7. No attribution variable was significantly correlated with help-seeking from a mental health professional or with help-seeking from a medical doctor/APRN. PTS symptom severity did not moderate any of these associations (see Appendix D).

Table 6. *Correlations Among Controllable Attribution Variables and Stigma Variables*

	1	2	3	4	5	6	7	8	9
1. Personal Controllable Attributions	--								
2. PCA - Leader	.42***	--							
3. PCA – Unit Member	.40***	.60***	--						
4. PCA – Family	.36***	.42***	.57***	--					
5. Self-Stigma	.06	-.02	.06	.03	--				
6. AES - Leader	.17	.37***	.25**	.13	.33***	--			
7. AES - Unit Member	.28**	.32***	.37***	.31**	.17	.58***	--		
8. AES – Family/Friend	.31***	.18	.16	.34***	.05	.42***	.49***	--	
9. General AES	.28**	.34***	.24**	.24**	.40***	.61***	.52***	.40***	--

Note. PCA = Perceived Controllable Attribution.

AES = Anticipated Enacted Stigma.

* $p < .05$; ** $p < .01$; *** $p < .01$.

Table 7. *Correlations Among Controllable Attribution Variables and Help-Seeking Intention Variables*

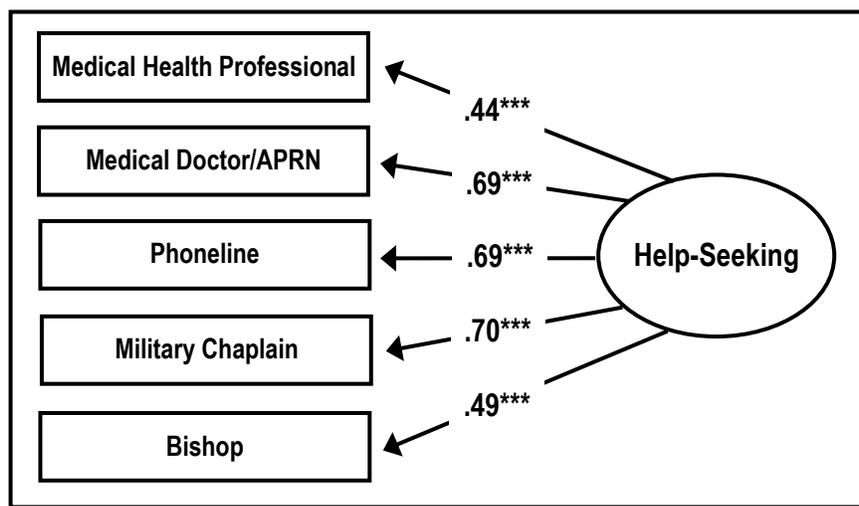
	Correlations	
	Mental Health Professional	Mental Health Professional
1. Personal Controllable	-.10	-.02
2. Perceived Controllable – Unit Leader	-.06	-.02
3. Perceived Controllable – Unit Members	-.14	-.03
4. Perceived Controllable – Family/Friends	-.08	-.02

Note. APRN = Advanced Practice Registered Nurse.
* $p < .05$; ** $p < .01$; *** $p < .01$.

Structural Equation Modeling

Measurement Model of Help-Seeking

To evaluate a measurement model of help-seeking, we constructed a latent variable that included five indicators, which were the five items from the GHSQ, representing five different formal help-seeking sources. The model showed a poor fit to the data ($\chi^2[5] = 31.59, p = .001$; CFI = .81; NFI = .80; TLI = .43; RMSEA = .21; see Figure 1). Given the particularly high correlations between help-seeking from a mental health professional and medical doctor/APRN and between help-seeking from a bishop and chaplain, covariances were added among the error terms for those two pairs of variables. The subsequent fit indices showed an excellent fit to the data ($\chi^2[3] = 2.92, p = .41$; CFI = 1.00; NFI = .98; TLI = 1.00; RMSEA = .00; see Figure 2), although it should be noted that path estimates indicated that help-seeking from a mental health professional



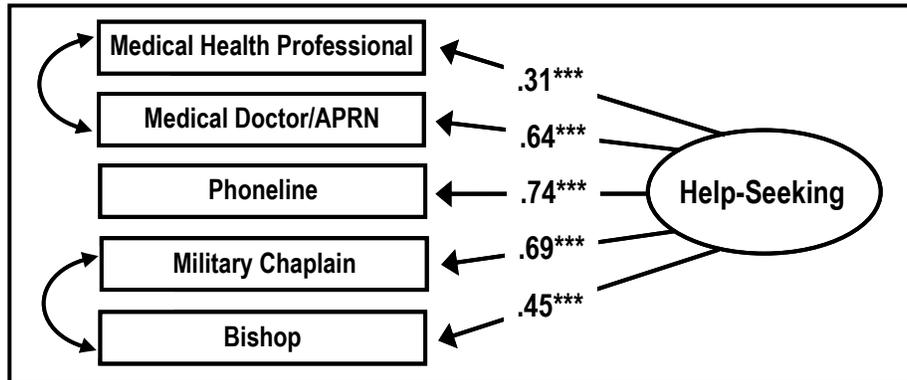
Standardized path estimates shown.
 APRN = Advanced Practice Registered Nurse.
 * $p < .05$; ** $p < .01$; *** $p < .001$.

Figure 1. Measurement model of latent variable help-seeking, utilizing the five scores from the General Help-Seeking Questionnaire.

(one of the primary help-seeking sources of interest) demonstrated the weakest association with this latent variable (see Figure 2).

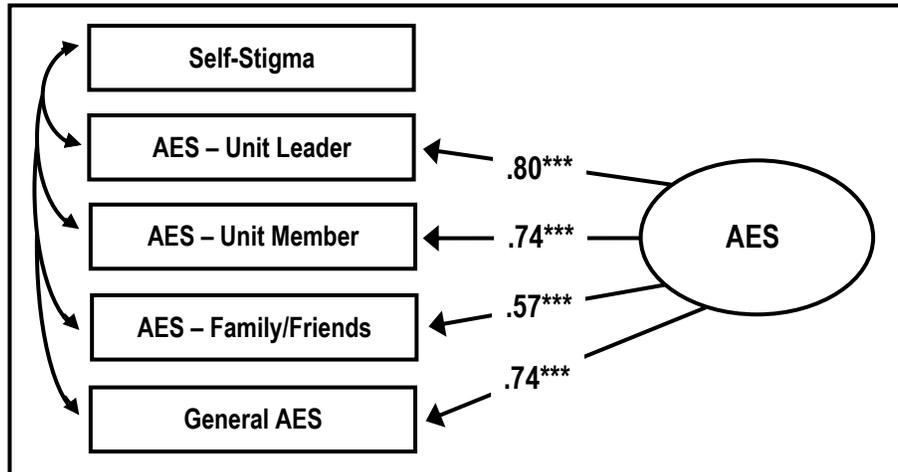
Measurement Model of Stigma

To evaluate a measurement model of AES, we first constructed a latent variable with four observed indicator variables: AES from unit leader, AES from unit members, AES from family members, and general AES. As our hypothesized model originally separated self-stigma from AES, self-stigma was modeled as a single observed variable with covariances between its error term and the error terms for the four AES variables. This model was an excellent fit to the data ($\chi^2[2] = 3.60, p = .17$; CFI = .99; NFI = .98; TLI = .99; RMSEA = .08; see Figure 3). Each AES variable loaded highly onto the latent



Standardized path estimates shown.
 APRN = Advanced Practice Registered Nurse.
 * $p < .05$; ** $p < .01$; *** $p < .001$.

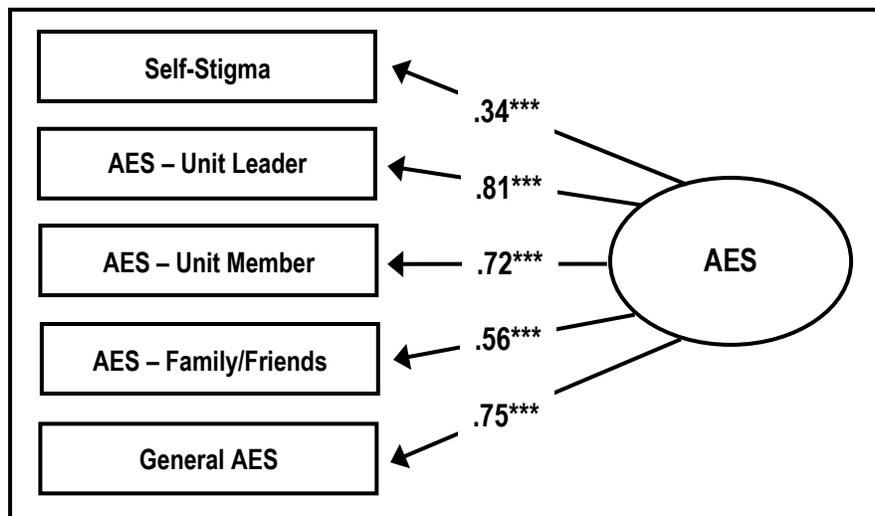
Figure 2. Measurement model of latent variable help-seeking, utilizing The five scores from the General Help-Seeking Questionnaire with covariances drawn between mental health professional and medical doctor/ARPN, bishop and chaplain.



Covariances between self-stigma and all Indicator variables included.
 Standardized path estimates shown.
 AES = Anticipated enacted stigma.
 * $p < .05$; ** $p < .01$; *** $p < .001$.

Figure 3. Measurement model of latent variable stigma, utilizing the four indicator variables of anticipated enacted stigma from leader, unit member, family/friends, and general anticipated enacted stigma.

variable (see Figure 3). In order to examine whether this was the best fitting model, we then tested a second model that included self-stigma in the latent variable. Thus, a path was added from the latent variable to self-stigma, and the covariances between the error term of self-stigma and the error terms of the AES scales were removed. The model was a marginally good fit to the data ($\chi^2[5] = 10.60, p = .06; CFI = .96; NFI = .94, TLI = .89; RMSEA = .10; see Figure 4), and the path for self-stigma had the smallest coefficient (see Figure 4). Given these results and our conceptual model, we used the former measurement model to represent stigma in the overarching model of help-seeking.$

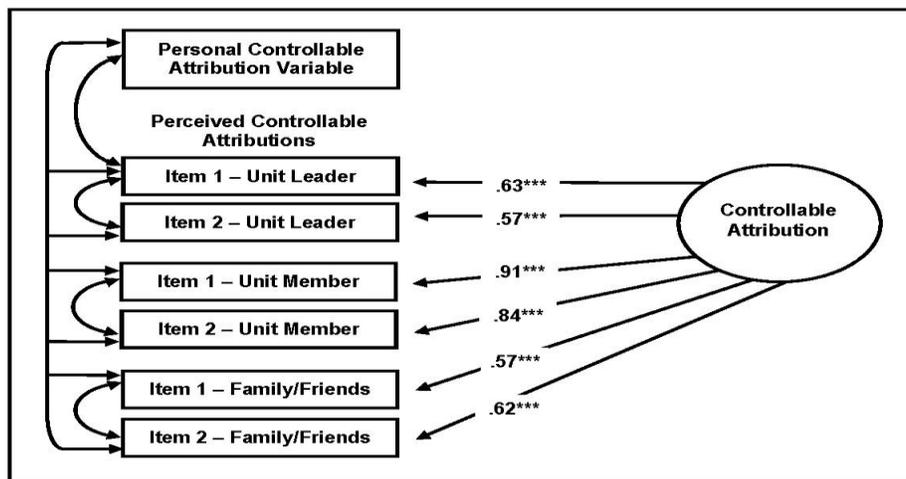


Covariances between self-stigma and all indicator variables included.
 Standardized path estimates shown.
 AES = Anticipated enacted stigma.
 * $p < .05$; ** $p < .01$; *** $p < .001$.

Figure 4. Measurement model of latent variable stigma, utilizing the five indicator variables of anticipated enacted stigma from leader, unit member, family/friends, general anticipated enacted stigma, and self-stigma.

Measurement Model for Controllable Attributions

To evaluate a measurement model of perceived controllable attributions, we first constructed a latent variable with six observed indicator variables: the two perceived controllable attribution items from unit leader, the two perceived controllable attribution items from unit member, and the two perceived controllable attribution items from family/friend. Covariances were specified between the two error terms of each attribution item from the same target (3 total covariances). Covariances between each perceived controllable attribution item and the personal controllable attribution variable were also specified (6 covariances). The model fit indices were marginal ($\chi^2[6] = 15.40, p = .02$; CFI = .98; NFI = .97; TLI = .92; RMSEA = .11; see Figure 5). In order to examine

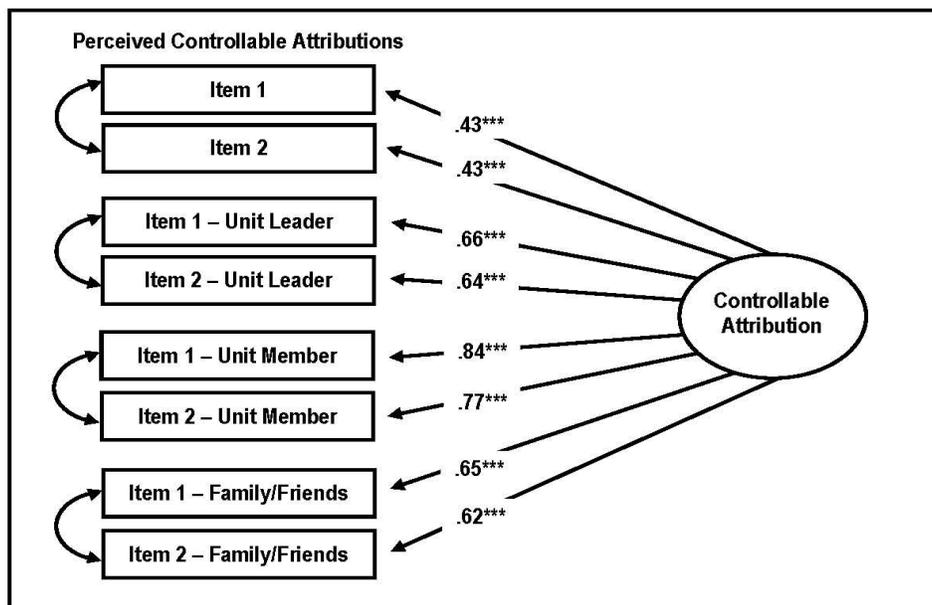


Covariances between Items 1 and 2 within each target and personal controllable attribution variable and all controllable attribution indicator items included. Standardized path estimates shown.

* $p < .05$. ** $p < .01$. *** $p < .001$.

Figure 5. Measurement model of latent variable controllable attributions, utilizing the six indicator items of controllable attributions from leader, unit member, and family/friends.

whether this was the best fitting model, we then tested a second model that included the two personal controllable attributions items in the latent variable. In this model, covariances were again specified between the error terms of the two attribution items within each target (self, unit leader, unit member, family/friend; 4 total covariances). This model was again a marginal fit to the data ($\chi^2[6] = 38.37, p = .001$; CFI = .96; NFI = .94; TLI = .91; RMSEA = .11; see Figure 6). All perceived controllable attribution items standardized path estimates were high ($\lambda_s > .61$) except for the personal attribution items ($\lambda_s = .43, .43$). Given that both measurement models produced poor fit statistics and that



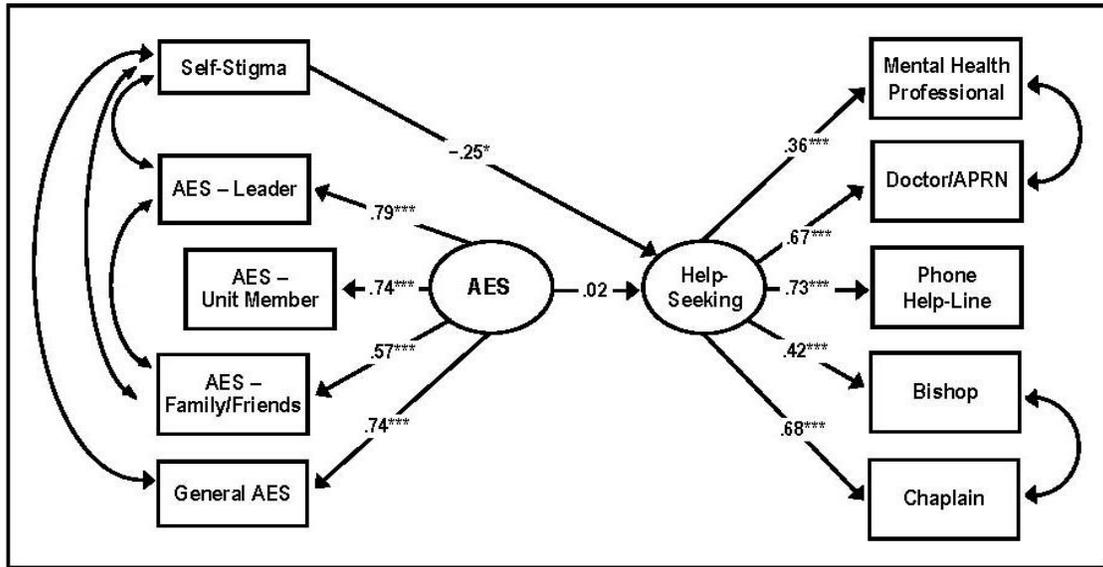
Covariances within each target included.
Standardized path estimates shown.
* $p < .05$. ** $p < .01$. *** $p < .001$.

Figure 6. Measurement model of latent variable controllable attribution, utilizing the eight indicator items of controllable attributions from leader, unit member, family/friends, and personal controllable attribution items.

attributions were not consistently associated with stigma or help-seeking variables, attribution variables were excluded from subsequent model testing.

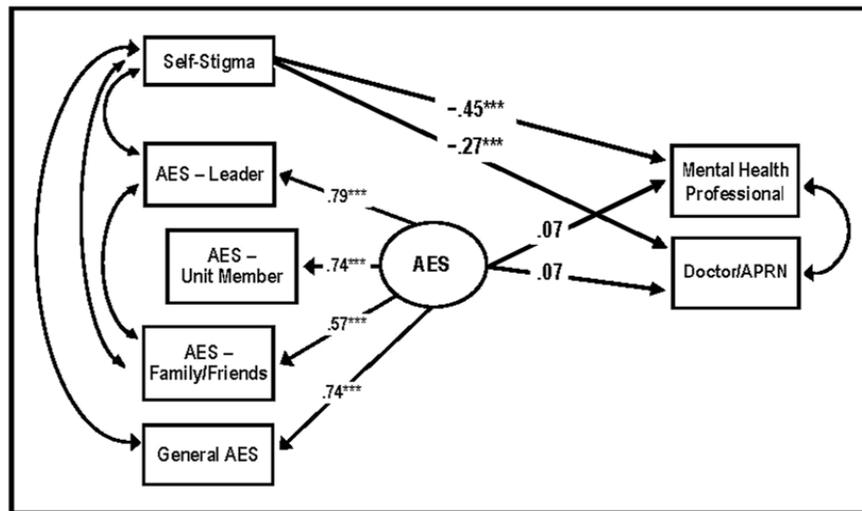
Structural Model of Stigma and Help-Seeking

Given the consistent lack of significant associations between controllable attribution variables and help-seeking outcomes in both bivariate and multivariate analyses, and the marginal fit of the measurement model for controllable attributions, we next decided to model the associations between stigma and help-seeking and between controllable attributions and stigma separately, to examine the model fit of each component of the structural model. In the first model with the help-seeking latent variable, paths were specified from the observed self-stigma variable and the AES latent variable to the help-seeking latent variable. The model was a marginal fit to the data ($\chi^2[28] = 43.76, p = .03$; CFI = .95; NFI = .88; TLI = .90; RMSEA = .07; see Figure 7). Similar to previous models, the path from self-stigma to the help-seeking latent variable was significantly negative, and the AES latent variable was unrelated to help-seeking. In the second model, the help-seeking latent variable was replaced by the observed variables of seeking help from a mental health professional and seeking help from a medical doctor/APRN. The model was an excellent fit to the data ($\chi^2[8] = 6.58, p = .58$; CFI = 1.00; NFI = .97; TLI = 1.02; RMSEA = .00; see Figure 8). Consistent with previous models, the paths from self-stigma to both help-seeking observed variables were significantly negative, and the AES latent variable was unrelated to either form of help-seeking.



AES = Anticipated enacted stigma. APRN = Advanced practice registered nurse.
 Standardized path estimates shown.
 * $p < .05$. ** $p < .01$. *** $p < .001$.

Figure 7. Reduced structural model of latent variable help-seeking with AES and self-stigma as predictor variables.



AES = Anticipated enacted stigma. APRN = Advanced practice registered nurse.
 Standardized path estimates shown. * $p < .05$. ** $p < .01$. *** $p < .001$.

Figure 8. Reduced structural model of help-seeking from a mental health professional and medical doctor/APRN with AES and self-stigma as predictor variables.

As a final step, in order to determine if there was a significant difference between the association of self-stigma and likelihood of seeking help from a mental health professional and the association of self-stigma and likelihood of seeking help from a medical doctor/APRN, we tested a nested model in which the paths from self-stigma to both help-seeking variables were constrained to be equal. The model fit remained excellent ($\chi^2 [9] = 12.92, p = .17$ CFI = .98; TLI = .94; NFI = .95, RMSEA = .06), but slightly less strong than the model in which the paths were freely estimated. In order to evaluate if there was a significant difference between the fit of the two models, a chi-square difference from the first model to the second model was then calculated. The chi-square difference between these two models was significant ($\chi^2 [1] = 6.34, p = .05$), meaning that constraining the two paths to be equal resulted in a significantly worse fit. Thus, the path between self-stigma and seeking help from a mental health professional appears significantly different (i.e., more negative) than the path from self-stigma to seeking help from a medical doctor/APRN.

DISCUSSION

The extant literature on help-seeking in returning service members shows that 8% to 31% of service members experience problematic levels of psychological distress (e.g., PTS symptoms, depressive symptoms) after deployments (Hoge et al., 2004; Kim et al., 2010; Thomas et al., 2010), but between 33% to 95% of these troops will not seek psychological help and/or follow through with treatment referrals (Fikretoglu et al., 2007; Hoge et al., 2004; Johnston & Dipp, 2009; Kehle et al., 2010; Kim et al., 2010; Milliken et al., 2007; Seal et al., 2010). At present, barriers to treatment seeking in this population are not well understood. Given the strong, positive link between psychological distress and AES in military samples (Britt, 2000; Britt et al., 2008; Hoge et al., 2004; Pietrzak et al., 2009; Ouimette et al., 2011; Pyne et al., 2004), it has been posited that AES might be a barrier to help-seeking intentions, and civilian literature supports this supposition (Fung et al., 2008; Pederson & Vogel, 2007; Vogel et al., 2006; 2007). However, the single quantitative study that examined the direct association between AES and treatment utilization showed that AES was unrelated to utilization (Kehle et al., 2010). Thus, additional research is needed. One possible explanation for the null finding of Kehle and colleagues (2010) is that the study utilized a general assessment of AES that does not differentiate between different sources of AES (e.g., unit leader, fellow unit members, family friends). It is possible that various sources of AES have a unique association with help-seeking, which cannot be captured via a general assessment. Further, there has been

no exploration of the potential link between self-stigma and help-seeking in military samples, despite the strong, positive link between self-stigma and help-seeking intentions and behaviors detected in civilian samples (Fung et al., 2008; Pederson & Vogel, 2007; Vogel et al., 2006; 2007). The primary purpose of the present study was to examine AES from various sources and self-stigma as correlates of help-seeking intentions, with a specific focus on seeking help from a mental health professional and a doctor/APRN.

Results from the present study show that AES from unit leaders, unit members, and family/friends are all strongly correlated with one another, but service members reported higher levels of AES from their unit leader, followed by unit members and family/friends, respectively. An overall latent variable of AES was unrelated to help-seeking, but bivariate associations did show that AES specifically from unit leaders was negatively associated with help-seeking intentions from a mental health professional (AES from unit members and family/friends was unrelated to intentions to seek help from any source). These findings suggest that anticipated enacted stigma is linked with help-seeking only when stigma is anticipated from someone in a position of authority (e.g., unit leader). These findings are consistent with prior research that notes considerable career concerns from service members if their help-seeking were to be discovered (Hoge et al., 2004, Pietrzak et al., 2010; Stecker et al., 2007).

Such findings have important implications for antistigma campaigns in the military, in that these campaigns may be most beneficial if such efforts focus on reducing anticipation of stigma specifically from unit leaders. In addition, if the link between AES and help-seeking is driven in part by career concerns, reducing the anticipation (and

actual possibility) of negative career ramifications for help-seeking may also be beneficial, but further research is needed to better understand the association between AES from unit leaders and help-seeking intentions. Finally, these results suggest that when studying AES in the military population, it may be important to distinguish between various sources of stigma, as not all sources of AES are related to help-seeking. Though AES from each source was positively correlated with general AES, general AES was unrelated to help-seeking. The lack of association between general AES and help-seeking intentions is consistent with the findings of Kehle et al. (2010). Thus, our findings suggest that a more refined measure of AES that distinguishes between stigma sources may provide more precise information about AES and its association with help-seeking.

Results from the present study also suggest that self-stigma is related to help-seeking intentions in returning service members. Specifically, service members who reported greater self-stigma reported that they were less likely to seek help for psychological distress, regardless of how help-seeking was operationalized. In fact, findings from the current study showed that help-seeking intentions are more closely associated with self-stigma than AES from any source. These results are somewhat consistent with studies that have found that self-stigma mediates the association between felt normative stigma and attitudes toward help-seeking (e.g., Bathje & Pryor, 2011; Vogel et al., 2007; Ludwikowski, Vogel, & Armstrong, 2009). However, interpreting results of the present study as evidence of mediation should be done with caution. Examining mediation using cross-sectional data can introduce notable biases that can

impact the integrity of findings given that mediation is generally conceived of as a test of causal associations across time (Maxwell & Cole, 2007). In addition, the bivariate association between AES from unit leader and seeking help from a mental health professional was small in effect size, so the null association between AES from unit leader and help-seeking detected when adding self-stigma to a regression predicting help-seeking is not surprising. Finally, the associations between AES from unit member and family/friends with help-seeking intentions from a mental health professional were nonsignificant. As mediation is often based on the assumption that self-stigma is the internalization of AES (e.g., Steward et al., 2008; Watson, Corrigan, Larson, & Sells, 2007), it would be expected that self-stigma would mediate the associations of AES from any source with help-seeking intentions. Notwithstanding these caveats, to my knowledge, this is the first investigation to examine self-stigma and its association with help-seeking intentions in a military population, and results suggest that it is indeed important to look beyond AES and consider the relative importance of the service members' *own* thoughts about what seeking help might mean about them.

These findings may also have important implications for interventions aimed at decreasing stigma associated with help-seeking in military service members. That is, efforts to decrease stigma may need to focus primarily on altering individual attitudes toward seeking help, in place of changing perceptions of others' attitudes. It has been suggested that interventions aimed at decreasing self-stigma may be a more feasible task than reducing perceptions of negative attitudes held by other group members, as these latter interventions may require larger scale movements, such as changing societal or

cultural, in this case military culture, beliefs (Vogel et al., 2008). However, trying to reduce self-stigma by altering personal beliefs about treatment seeking in individuals who are reticent to seek treatment is difficult, as it is unclear as to how such interventions can be delivered. At the same time, there is evidence that depressed civilian males who received brochures aimed at reducing self-stigma by addressing concerns about masculinity and other barriers to help-seeking experienced by males reported more positive attitudes toward help-seeking and lower self-stigma compared to males who received a general psychoeducational brochure or a *Real Men Real Depression* brochure (Hammer & Vogel, 2010). Similar brochures that address such concerns in male service members could be distributed during mandatory health screenings conducted by the Department of Defense, which occur before service members return from deployment or immediately upon their arrival in the United States (Post Deployment Health Assessments) and in the first 6 months after returning from deployment (Post Deployment Health Reassessments). Distributing such materials at mandatory health screenings may circumvent the potential issue of reaching service members who are reticent to seek help, but future research is needed to investigate the utility of such brochures and other methods that target self-stigma as part of stigma-reduction interventions in the military.

In addition to examining the association of AES and self-stigma as correlates of help-seeking intentions, the current study also investigated service members' attitudes toward seeking help from different sources. Findings from the current study show that service members reported a greater likelihood of seeking help from a mental health

professional compared to a medical doctor/APRN. On the surface, these results may be surprising, particularly given that self-stigma was more strongly negatively associated with seeking help from a mental health professional than seeking help from a medical doctor/APRN. However, this is the first investigation to examine specifically intentions to seek help from different providers. As such, there is no existing evidence to suggest that these findings are, in fact, unusual. In this study, service members were asked to rate how likely they would be to seek help from various sources if they were experiencing psychological problems. It is possible that service members recognize that mental health professionals specialize in treating psychological distress, and therefore, they may be more qualified to treat psychological distress than medical doctors/APRNs. As this is the first study to examine intentions to seek help from different providers, additional research is needed to clarify these associations. Notwithstanding the novelty of these findings, the results are promising, as there is evidence that service members who are diagnosed with PTSD in PTSD clinics or general mental health clinics are more likely to receive more comprehensive treatment (e.g., >8 counseling sessions, medication) than service members diagnosed in medical clinics (Spoont, Murdoch, Hodges, & Nugent, 2010). Thus, a greater likelihood of seeking help from a mental health professional could suggest that service members may be more likely to receive extensive PTSD treatment. These findings further underscore the necessity of reducing the self-stigma associated with seeking help from a mental health professional.

As the extant literature suggested that both AES and self-stigma were related to help-seeking intentions and behaviors in civilian and military populations, an exploratory

aim of the current study was to understand whether personal and perceived controllable attributions for distress might underlie either form of stigma or help-seeking. Results demonstrated that perceived attributions were positively associated with AES, but personal controllable attributions were unrelated to self-stigma, and both forms of attributions were unrelated to help-seeking intentions. The link between perceived controllable attributions and AES could have important implications for efforts to reduce AES. Indeed, previous literature demonstrates that controllable attributions are related to increased blame, pity, and lower likelihood of offering aid (MacKay & Barrowclough, 2005; Weiner, Perry, & Magnussen, 1988); thus, reducing perceptions that others view psychological distress as controllable could reduce AES from those individuals. However, as noted above, after controlling for self-stigma, AES from unit leaders was unrelated to help-seeking intentions, and given the null association between personal controllable attributions and self-stigma, there is little evidence to suggest that altering attributions about distress will impact help-seeking. Further research is needed to understand better the correlates of self-stigma and help-seeking intentions in order to increase help-seeking in this population.

Finally, with only one exception, PTS symptom severity was not associated with self-stigma, AES, or help-seeking intentions, and with only one exception, it did not moderate the associations among attributions, stigma, and help-seeking. Prior research has found that service members with PTS symptoms are more likely to report greater concerns about stigma and seeking help than service members without PTS symptoms (Britt et al., 2008; Hoge et al. 2004; Maguen et al., 2007; Pietrzak et al., 2010). Thus, the

lack of associations of PTS symptoms with these variables in our sample is surprising. However, participants in the current study were younger than samples used in other studies (Kehle et al., 2010; Ouimette et al., 2011) and fairly homogenous in terms of ethnicity, race, and religion. It is unclear whether these demographic differences can account for the lack of association between PTS symptoms and our outcomes or the moderation of PTS symptoms on the associations between stigma and help-seeking, so these findings should be considered preliminary. Additional research is needed to investigate further these associations.

There are limitations to the current study. First, this was a cross-sectional study design, so causal inferences about the directionality of the associations among attributions, stigma, and help-seeking intentions cannot be made. Second, our sample was composed of National Guard/Reserve service members homogenous in terms of ethnicity, race, and religion. Further, the age of the sample differed from previous samples (e.g., Kehle et al., 2010; Ouimette et al., 2011). As such, the ability to generalize from this sample to the general population of service members is limited. Third, our findings are limited to intentions to seek mental health treatment and not help-seeking behaviors. The theory of planned behavior/reasoned action suggests that intentions are closely linked to subsequent behaviors (Ajzen, 1991; Fishbein & Ajzen, 2010); however, there is also evidence that actual behaviors can differ from reported intentions, particularly with regard to health behaviors and intentions (e.g., Sherrod, 2002). Future research should examine these associations with regard to actual help-seeking behaviors. Fourth, the average time since returning from deployment was relatively short

(approximately 4 months), and there is evidence that the rates of mental health diagnoses (e.g., PTSD, depression) increase over a 12-month period (Kim et al., 2010). It is possible that service members who have only recently returned from deployment do not yet recognize distress or a need for services. Fifth, our primary help-seeking variables of interest (seeking help from a mental health professional and medical doctor/APRN) were measured via two single items, thus subjecting them to low reliability. However, this is the first study to our knowledge that has examined help-seeking intentions from different providers, so while the findings should be interpreted with caution, our study presents novel information regarding help-seeking intentions in this population. These findings can serve as a basis for future investigations using more comprehensive measures of help-seeking intentions. Finally, though the measures we used to assess self-stigma and AES showed similar psychometric properties in our sample as in the norm civilian sample, this is the first time they have been used in a military population. Additional research should be conducted using a larger sample to examine further the utility of these measures in this population.

Despite these limitations, the current study presents novel findings that highlight the importance of examining AES from various sources and accounting for self-stigma when trying to understand help-seeking in returning service members. These findings also provide preliminary suggestions for changes to antistigma campaigns aimed at increasing help-seeking in this population, such that these campaigns will need to address self-stigma. Future research on help-seeking in returning service should extend on these findings by examining the associations between various forms of stigma and actual help-

seeking behaviors. Further, future research on help-seeking in returning service members should also consider other factors that might impact decisions to seek help beyond self-stigma or AES. For example, masculinity has been linked to decreased help-seeking in civilian samples (Steinfeldt, Steinfeldt, England, & Speight, 2009), and in a military sample, masculinity was linked to difficulty expressing emotional distress (Jakupcak, Osbourne, Cook, Michael, & McFall, 2006), which may have important implications for service members seeking psychotherapy. Given the number of service members who are returning from combat theatres in psychological distress and the low rate of help-seeking, it is critical that correlates of help-seeking continue to be identified so that additional interventions to increase help-seeking can be developed.

APPENDIX B

PARTIAL CORRELATION COEFFICIENTS FROM REGRESSIONS OF HELP SEEKING VARIABLES ONTO STIGMA VARIABLES, PTS SYMPTOMS, AND THEIR INTERACTION

	Mental Health Professional	Medical Doctor/ APRN
<i>Regression with Self-Stigma</i>		
Self-Stigma	-.46***	-.27**
PTS Symptoms	.11	-.04
Interaction	.13 ^a	.07 ^b
<i>Regression with AES – Unit Leader</i>		
AES – Unit Leader	-.19*	-.12
PTS Symptoms	.03	-.06
Interaction	.16 ^c	.06 ^d
<i>Regression with Unit Member</i>		
AES – Unit Member	-.06	-.02
PTS Symptoms	.06	-.07
Interaction	.14 ^e	.09 ^f
<i>Regression with Family/Friend</i>		
AES – Family/Friends	.08	.07
PTS Symptoms	-.05	-.07
Interaction	.10 ^g	-.01 ^h

Note. AES – Anticipated Enacted Stigma.

APRN – Advanced Practice Registered Nurse.

^a $F(3, 119) = 11.70, p < .001.$ ^b $F(3, 119) = 3.53 p < .05.$

^c $F(3, 116) = 2.68, p = .05.$ ^d $F(3, 116) = .87 p > .05.$

^e $F(3, 117) = 1.16 p > .05.$ ^f $F(3, 117) = .49 p > .05.$

^g $F(3, 117) = .62, p > .05.$ ^h $F(3, 117) = .30 p > .05.$

* $p < .05$; ** $p < .01$; *** $p < .001$.

APPENDIX C

PARTIAL CORRELATION COEFFICIENTS FROM REGRESSIONS OF STIGMA VARIABLES ONTO RESPECTIVE ATTRIBUTION VARIABLES, PTS SYMPTOMS, AND THEIR INTERACTION

	Self-Stigma ^a	AES Leader ^b	AES Unit Member ^c	AES Family/Friends ^d
Controllable Attribution Variable	.06	.38***	.38***	.36***
PTS Symptoms	.06	.07	.10	.27**
Interaction	-.04	.14	.07	.20*

Note. PCA = Perceived Controllable Attribution.
^a $F(3, 119) = .36, p > .78$. ^b $F(3, 115) = 7.27, p < .001$.
^c $F(3, 117) = 6.72, p < .001$. ^d $F(3, 118) = 9.95, p < .001$.
 * $p < .05$; ** $p < .01$; *** $p < .001$.

APPENDIX D

PARTIAL CORRELATION COEFFICIENTS FROM REGRESSIONS
OF HELP SEEKING VARIABLES ONTO ATTRIBUTION
VARIABLES, PTS SYMPTOMS, AND THEIR
INTERACTION

	Mental Health Professional	Medical Doctor/APRN
<i>Regression with Personal Controllable Attributions</i>		
Attribution	-.10	-.03
PTS Symptoms	.07	-.07
Interaction	-.17 ^a	-.15 ^b
<i>Regression with PCA - Leader</i>		
Attribution	-.05	-.02
PTS Symptoms	-.04	-.05
Interaction	.14 ^c	.02 ^d
<i>Regression with PCA – Unit Member</i>		
Attribution	-.13	-.01
PTS Symptoms	-.13	-.04
Interaction	.09 ^e	.18 ^f
<i>Regression PCA – Family/Friend</i>		
Attribution	-.08	-.02
PTS Symptoms	.08	-.05
Interaction	.01 ^g	.02 ^h

Note. PCA = Perceived Controllable Attribution.
^a $F[3, 119] = 1.69, p = .17.$ ^b $F[3, 119] = 1.19, p = .32.$
^c $F[3, 116] = .91, p = .44.$ ^d $F[3, 116] = .14, p = .94.$
^e $F[3, 118] = 1.23, p = .30.$ ^f $F[3, 118] = 1.44, p = .23.$
^g $F[3, 118] = .51, p = .67.$ ^h $F[3, 118] = .15, p = .93.$
* $p < .05.$ ** $p < .01.$ *** $p < .001.$

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