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Mental Health Beliefs and Their Relationship With Treatment Seeking Among U.S. OEF/OIF Veterans

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Many veterans who would benefit from mental health care do not seek treatment. The current study provided an in-depth examination of mental health-related beliefs and their relationship with mental health and substance abuse service use in a national sample of 640 U.S. Operation Enduring Freedom and Operation Iraqi Freedom (OEF/OIF) veterans. Both concerns about mental health stigma from others and personal beliefs about mental illness and mental health treatment were examined. Data were weighted to adjust for oversampling of women and nonresponse bias. Results revealed substantial variation in the nature of OEF/OIF veterans' mental health beliefs, with greater anticipated stigma in the workplace ($M = 23.74$) than from loved ones ($M = 19.30$), and stronger endorsement of negative beliefs related to mental health treatment-seeking ($M = 21.78$) than either mental illness ($M = 18.56$) or mental health treatment ($M = 20.34$). As expected, individuals with probable mental health problems reported more negative mental health-related beliefs than those without these conditions. Scales addressing negative personal beliefs were related to lower likelihood of seeking care (*OR*s = 0.80–0.93), whereas scales addressing anticipated stigma were not associated with service use. Findings can be applied to address factors that impede treatment seeking.

Recent research suggests that many veterans who might benefit from mental health treatment do not seek care. For example, in a large national survey of Operation Enduring Freedom/Operation Iraqi Freedom (OEF/OIF) veterans, nearly half of those who screened positive for probable posttraumatic stress disorder (PTSD) or major depression reported that they had not received any mental health care in the previous year (Schell & Marshall, 2008). Both beliefs about the extent to which one will be stigmatized by others for experiencing a mental health problem and personal beliefs about mental illness and mental health treatment have been posited as key barriers to care for this population (Vogt, Di Leone, Wang, Sayer, Pineles, & Litz, 2014). The former category builds on Corrigan and colleagues' extensive body of work on public stigma related to mental illness (e.g., Corrigan, 2004; Corrigan & Rüsch, 2002), and is conceptualized as encompassing concerns about stigma from loved ones, as well as concerns about stigma in the workplace. Personal beliefs about mental illness and mental health treatment, on the other hand, reflect the extent to which individuals have incorporated negative beliefs about mental illness, the nature of mental health treatment, and the appropriateness of seeking treatment for mental health problems into their own personal belief systems (Vogt, 2011).

The emphasis on competence, confidence, and stoicism in the military may make negative mental health beliefs an especially salient barrier to care for both current and former military personnel (Nash, Silva, & Litz, 2009; Sayer et al., 2009). Indeed, studies indicate that anticipated stigma is a commonly reported barrier to care in military and veteran samples. For example, in one study approximately one in three OEF/OIF veterans in one study reported that they would be stigmatized by others for seeking mental health treatment (Hoge et al., 2004), and fear of being labeled with a mental health disorder was identified as a concern for nearly three quarters of OIF veterans in another study (Stecker, Fortney, Hamilton, & Ajzen, 2010).

Less is known about the extent to which negative personal beliefs about mental illness and mental health treatment serve as a barrier to treatment for military and veteran populations, although accumulating evidence suggests that they are also a concern. For example, among OEF/OIF veterans with mental health problems, 44% indicated that seeking mental health treatment would make them feel down on themselves (Elbogen et al., 2013), and nearly one in five reported that mental health

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treatment should only be sought as a last resort (Kim, Britt, Klocko, Riviere, & Adler, 2011). Negative beliefs about mental health treatment also appear to be common; one in four soldiers in the latter study also reported that they do not trust mental health professionals.

Although these mental health beliefs may serve as barriers to care, most military and veteran studies to date have been restricted to clinical samples with demonstrated mental health problems, limiting the conclusions that can be drawn about the extent to which these concerns are relevant for the larger population. A primary aim of the present study was to document concerns about stigma and personal beliefs about mental illness and mental health treatment within a national sample of OEF/OIF veterans. This population represents an ideal target for such a study given that their potential exposure to stressful and traumatic events in the warzone put them at risk for a variety of mental health problems (Tanielian & Jaycox, 2008). In contrast with prior research, which has primarily relied on convenience samples and failed to consider the impact of nonresponse bias on study findings, both sampling weights and nonresponse bias weights were applied to produce results that would be optimally representative of the larger OEF/OIF population.

A second aim of this study was to examine how mental health beliefs differ for veterans with and without mental health problems. Prior studies indicate that OEF/OIF veterans with mental health problems report more negative mental health beliefs than those without mental health problems (e.g., Hoge et al., 2004). We are not aware, however, of any research that has examined the extent to which this finding holds across different mental health belief domains and mental health conditions. Thus, in the present study we examined how mental health beliefs varied for OEF/OIF veterans with and without three common mental health conditions, namely, PTSD, depression, and alcohol abuse.

Our final aim was to examine how mental health beliefs are related to the use of mental health care among OEF/OIF veterans with probable PTSD, depression, and alcohol abuse. Findings from the military and veteran literature on the impact of concerns about stigma on treatment seeking have been mixed, with several recent studies suggesting that anticipated stigma from others may be positively, rather than negatively, associated with mental health service use (Olmsted et al., 2011; Rosen et al., 2011; Stecker, Fortney, Hamilton, Sherbourne, & Ajzen, 2010). In contrast, several recent studies suggest a key role for personal beliefs about mental illness and mental health treatment as a barrier to care (Brown, Creel, Engel, Herrell, & Hoge, 2011; Kehle et al., 2010; Kim et al., 2011; Pietrzak et al., 2009; Stecker et al., 2007; Sudom, Zamorski, & Garber, 2012). No studies to our knowledge, however, have provided an in-depth examination of separate domains of personal beliefs about mental illness and mental health treatment as predictors of mental health service use.

We had several expectations for the study. We hypothesized that participants would be more likely to report concerns about stigma from others than to endorse negative mental health beliefs themselves. We also hypothesized that individuals with probable PTSD, depression, and alcohol abuse would be more likely to report both concerns about stigma from others and negative personal beliefs about mental illness and mental health treatment than individuals without these problems, but that only personal mental health beliefs would be related to lower likelihood of seeking mental health services. We had no specific hypotheses regarding differential associations for mental health belief domains or mental health condition given the lack of prior research on these topics. Because some individuals may not endorse negative beliefs about mental illness and mental health treatment due to social desirability concerns, social desirability was included in all analyses of associations among study variables. We also accounted for mental health condition symptom severity in analyses examining predictors of service use, given that individuals with more severe symptoms may be more likely to both report negative mental health beliefs and to seek treatment.

Method

Participants and Procedure

We surveyed a national sample of U.S. veterans who had experienced a recent deployment to either Afghanistan (OEF) or Iraq (OIF), and were separated from military service at the time of the study. Names were randomly selected from a Defense Manpower Data Center (DMDC) roster of all OEF/OIF veterans who had returned from deployment between 2 and 4 years prior to data collection (2007–2009). Women were oversampled to allow for gender-stratified analyses (50% women; 50% men). A modification of the Dillman, Smyth, and Christian (2009) mail survey procedure was used for data collection. Specifically, we first mailed potential participants the survey, an opt-out form, and a $20 gift card. A reminder postcard was mailed 1 week later, followed by a second mailing of the assessment package to nonresponders 4 weeks after the reminder, another reminder postcard 1 week after that, a final survey package 4 weeks later, and a final reminder 1 week after that for a total of 11 weeks from our initial approach. Of 2,950 potential participants, 460 could not be located and 17 responded to indicate that they were ineligible for the study (i.e., not OEF/OIF veterans). Among the remaining 2,473 individuals believed to have received the survey, 707 returned completed surveys for a response rate of 28.6%. We compared survey responders to nonresponders on demographic and military characteristics drawn from DMDC administrative records data to explore the potential for nonresponse bias. Although all differences except the comparison based on Active Duty versus National Guard/Reservist status were statistically significant for these large sample-size comparisons, effects were generally small, suggesting that they were of little clinical significance. Specifically, differences between responders and nonresponders were small with regard to gender (Cramér's $\varphi = -.11$), age ($r = .19$) race (Cramér's $\varphi = -.041$), military rank (Cramér's $V = 0.14$), education (Cramér's

$\varphi = .19$), marital status (Cramér's $\varphi = -.07$), military branch (Cramér's $V = 0.08$), and duty status (Cramér's $\varphi = .01$).

For the present study, we limited the sample to only those individuals who completed all stigma and personal belief measures ($N = 640$). The sample was composed of 56.7% women and was primarily Caucasian (66.8%). The sample included veterans from all service branches: Army (50.7%), Air Force (23.2%), Navy (17.3%), and Marines (8.8%), and the majority was deployed from Active Duty (78.5%). The mean age of participants was 37.23 years ($SD = 10.03$).

Measures

Mental health beliefs were assessed with the Endorsed and Anticipated Stigma Inventory (EASI; Vogt et al., 2014). Concerns about stigma from others were addressed with the following scales: (a) Concerns about Stigma from Loved Ones, and (b) Concerns about Stigma in the Workplace. Negative personal beliefs about mental illness and mental health treatment were addressed with the following scales: (a) Beliefs about Mental Illness, (b) Beliefs about Mental Health Treatment, and (c) Beliefs about Treatment Seeking. Each scale includes eight items that are framed as statements and rated using a 5-point Likert-type response format from 1 = *strongly disagree* to 5 = *strongly agree*, with a total possible range from 8 to 40. All scales were scored so that higher scores reflected more negative beliefs. Coefficient α for these scales ranged from .84 to .93 in the current sample. Evidence is available for the internal consistency reliability, content validity, convergent and discriminant validity, and discriminative validity of EASI scales (Vogt et al., 2014). In addition, confirmatory factor analysis results support the proposed 5-factor structure of this inventory of scales (Vogt et al., 2014).

To assess posttraumatic stress disorder (PTSD) symptom severity related to stressful deployment experiences, we used the 17-item PTSD Checklist-Military Version (PCL-M; Weathers, Litz, Herman, Huska, & Keane, 1993). Coefficient α was .97 in the current sample. All participants who had a score of at least 50 ($n = 125$, 19.5% of total sample) were identified as having probable PTSD (Tanielian & Jaycox, 2008).

Depression symptom severity was assessed with an adapted version of the 7-item Beck Depression Inventory-Primary Care (Beck, Steer, Ball, Ciervo, & Kabat, 1997). Each item was rated on a 5-point scale, with anchors ranging from 1 = *strongly disagree* to 5 = *strongly agree*. The α for the sample was .92. Using a commensurate cutoff to the BDI-PC's score of 4 (Beck et al., 1997; Steer, Cavalieri, Leonard, & Beck, 1999), those who endorsed a 4 or greater on at least four of the seven items ($n = 234$, 36.6% of total sample) were identified as having probable depression.

Alcohol abuse severity was assessed with the CAGE (Ewing, 1984), a 4-item questionnaire that assesses the presence of clinically significant alcohol use. Coefficient α was .80 in the current sample. Based on commonly-used criteria for classifying probable alcohol abuse (Buchsbaum, Buchanan, Centor, Schnoll, & Lawton, 1991), those who had a minimum score of 2 ($n = 100$, 15.6% of total sample) were identified as having probable alcohol abuse.

Drawing from items in the 2001 Veterans Health Study (Kaplan, 2004), participants were asked about use of nine categories of mental health and substance abuse care in the past 6 months: (a) outpatient mental health care, (b) inpatient mental health care, (c) emergency room visit for mental health care, (d) inpatient care for alcohol abuse, (e) inpatient care for drug abuse, (f) outpatient care for alcohol abuse, (g) outpatient care for drug abuse, (h) methadone clinic visits, and (i) medications or prescriptions for mental health conditions. For the purposes of the present research, mental health and substance abuse treatment use was defined dichotomously (yes/no) and represented use of any of these types of care.

A modified version of the 13-item Marlowe-Crowne Social Desirability Scale (Crowne & Marlow, 1960; Reynolds, 1982) was used to measure the tendency to describe oneself in a socially desirable manner. Scores on this variable were computed as the number of item responses in the keyed direction based on a 5-point response format in which 1 = *very false* and 5 = *very true*. The coefficient α was .79 in the current sample.

Data Analysis

To adjust for the oversampling of women, we first computed sampling design weights that were based on population values provided by the DMDC and set equal to the reciprocal of the stratum sampling probability. We next computed nonresponse bias weights by performing a logistic regression on the full sample of potential participants with returned survey (0/1) as the dependent variable and DMDC variables representing age, gender, race, marital status, service component, military rank, and branch of service as independent variables. The reciprocal of the resulting estimate of the probability of returning the survey represented the nonresponse bias weight. A product of these two weights was applied in all analyses using the STATA 10.0 software program along with recognition of gender stratification in the survey design, to enhance the representativeness of study findings to the larger population.

To document overall mental health beliefs, we calculated weighted mean scores for each of the five scales. We also calculated the weighted proportions of individuals who somewhat or strongly agreed, somewhat or strongly disagreed, or neither agreed nor disagreed with individual items and overall scales. Next, we ran a series of weighted linear regressions to examine differences between individuals who did and did not meet criteria for probable PTSD, depression, and alcohol abuse on mental health beliefs, accounting for social desirability. A final set of separate weighted logistic regressions examined associations between mental health belief measures and mental health service use among individuals who met probable criteria for these three conditions, accounting for social desirability and symptom severity.

Results

We first addressed the question of what mental health beliefs are most commonly reported by OEF/OIF veterans. Of the five mental health belief scales, Concerns about Stigma in the Workplace had the highest overall average mean ($M = 23.74$, $SE = 0.42$), followed by Negative Beliefs about Treatment Seeking ($M = 21.78$, $SE = 0.41$), Negative Beliefs about Mental Health Treatment ($M = 20.34$, $SE = 0.34$), Concerns about Stigma from Loved Ones ($M = 19.30$, $SE = 0.44$), and Negative Beliefs about Mental Illness ($M = 18.56$, $SE = 0.34$). Mean scores for all scales were significantly different from one another ($ps < .05$).

Table 1 presents the results of both the scale- and item-level examination of responses on the five mental health belief scales. Overall, only 15.0% of participants were classified as generally agreeing that stigma from loved ones is a concern. Slightly more than half of the sample generally disagreed with these items, and about a third fell in the neither agree nor disagree category. At the item level, more than half of all participants indicated that they disagreed with seven of the eight items. Between a quarter and a third of participants, however, agreed that friends and family would feel uncomfortable around them, would think less of them, and would view them as weak if they had a mental health problem.

Participants appeared to be more concerned about stigma in the workplace. Overall, one third of all participants were classified as generally agreeing that stigma in the workplace is a concern. An additional 41.2% fell within the neither agree nor disagree category, and about one quarter generally disagreed with these items. Item-level results revealed that more than half of participants agreed that their career options would be limited if others in the workplace knew they had a mental health problem and almost half agreed that their coworkers would think they were not capable of doing their jobs. Additional items in this scale were endorsed by about one third of the sample, with remaining participants about evenly split between rejecting items and indicating that they neither agreed nor disagreed with them.

In general, participants did not strongly endorse negative stereotypes of mental illness. At the scale level, more than half of participants were classified as generally disagreeing with items on the scale. At the item level, however, more than a quarter of participants agreed that it would be difficult to maintain a normal relationship with someone with mental health problems and that people with mental health problems often use their problems as an excuse. In addition, between about a quarter and a third of participants indicated that their beliefs on these issues were either neutral or undecided.

Although more than one third of the sample generally disagreed with items reflecting negative beliefs about mental health treatment, 50.0% of the sample was classified in the neither agree nor disagree category, suggesting that they may be neutral or undecided in their beliefs about mental health treatment. Item-level responses generally mirrored the scale level results, with the one exception of beliefs about the side effects of medications. More than one third of the sample indicated that medications for mental health problems have too many negative side effects.

Finally, for beliefs about treatment seeking, 40.0% was classified as generally disagreeing with these items and more than a third of participants responded in a manner that suggested that they were neutral or undecided in their beliefs. When looking at the individual items, the majority of participants disagreed with all but two of the items. More than half of the sample agreed that a problem would have to be very bad before they would seek treatment, and more than a third of the sample agreed that they would prefer to deal with a mental health problem on their own rather than seek mental health treatment.

We next addressed how mental health beliefs differed based on mental health status. As indicated in Table 2, individuals with probable diagnoses of depression and PTSD, but not alcohol abuse, reported being more concerned about stigma from loved ones and in the workplace than those without these conditions. There were no significant differences between those with and without these probable mental health diagnoses on personal beliefs about mental illness and mental health treatment, with one exception. Specifically, individuals with probable depression endorsed more negative beliefs about mental health treatment than those without this probable diagnosis.

Our final analyses examined how mental health beliefs were associated with use of mental health and substance abuse treatment. For veterans with probable PTSD, only negative beliefs about treatment seeking was associated with lower likelihood of seeking care, $F(3, 113) = 2.92$, $p = .037$; $OR = 0.88$, $SE = 0.04$, $p = .009$. For veterans with probable depression, negative beliefs about mental illness, $F(3, 219) = 7.30$, $p < .001$; $OR = 0.88$, $SE = 0.03$, $p < .001$, negative beliefs about mental health treatment, $F(3, 219) = 5.41$, $p = .001$; $OR = 0.90$, $SE = 0.04$, $p = .014$, and negative beliefs about treatment seeking, $F(3, 219) = 5.92$, $p < .001$; $OR = 0.88$, $SE = 0.03$, $p < .001$ were all associated with lower likelihood of service use. For those with probable alcohol abuse, only negative beliefs about treatment seeking was associated with lower likelihood of service use, $F(3, 98) = 4.21$, $p = .008$; $OR = 0.83$, $SE = 0.04$, $p = .001$. No other significant results emerged.

Discussion

The current study produced a number of interesting findings that offer a more nuanced perspective on the role of mental health beliefs as a barrier to care for OEF/OIF veterans than has been available in prior research. Consistent with prior research, results revealed that OEF/OIF veterans endorse a variety of mental health beliefs that have the potential to serve as barriers to care. At the same time, findings revealed substantial variation in the nature of these beliefs, with concerns about stigma in the workplace and negative beliefs about treatment seeking most commonly reported. Although it is encouraging that negative beliefs about mental illness and mental health treatment were less commonly reported than concerns about anticipated stigma from others, it is important to note that many participants who did not endorse negative beliefs did not explicitly reject these

Table 1
Weighted Scale and Item Percentage Endorsements for Mental Health Belief Measures

Scale/item	Disagree	Neither	Agree
Concerns about Stigma from Loved Ones	53.5	31.4	15.0
If had a MH problem and family/friends knew about it, they would . . .			
think less of me	55.5	19.5	25.0
see me as weak	55.3	19.2	25.5
feel uncomfortable around me	45.2	21.8	33.0
not want to be around me	59.8	21.9	18.3
think I was faking	62.3	20.0	17.7
be afraid I might be violent or dangerous	49.3	22.5	28.2
think I couldn't be trusted	60.1	22.8	17.1
avoid talking to me	67.4	17.3	15.3
Concerns about Stigma in the Workplace	25.5	41.2	33.3
If had a MH problem and people at work knew . . .			
they would think I was incapable of doing my job	28.7	25.1	46.2
they would not want to be around me	36.4	28.1	35.5
my career/job options would be limited	23.0	21.7	55.3
they would feel uncomfortable around me	29.4	28.3	42.3
a supervisor might give me less desirable work	31.3	34.2	34.5
a supervisor might treat me unfairly	37.1	31.9	31.0
they would think I was faking	43.7	34.8	21.5
they would avoid talking to me	39.6	31.9	28.5
Negative Beliefs about Mental Illness	53.8	41.1	05.1
People with MH problems cannot be counted on.	57.4	28.3	14.3
People with MH problems use them as an excuse.	39.2	37.2	23.6
Most people with MH problems are just faking their symptoms.	68.8	26.6	04.6
I don't feel comfortable around people with MH problems.	59.7	29.4	11.0
It is difficult to have a normal relationship with a person with MH Problems.	43.9	27.4	28.7
Most people with MH problems are violent or dangerous.	67.5	28.1	04.4
People with MH problems require too much attention.	52.7	35.4	11.9
People with MH problems can't take care of themselves.	65.9	25.4	08.7
Negative Beliefs about MH Treatment	42.5	50.0	07.5
Medications for MH problems are ineffective.	44.4	37.6	18.0
MH treatment just makes things worse.	57.9	31.6	10.5
MH providers don't really care about their patients.	63.5	25.5	11.0
MH treatment generally does not work.	52.6	39.0	07.4
Therapy/counseling does not really help for MH problems.	58.1	35.8	06.1
MH treatment often requires treatments people don't want.	36.9	42.5	20.6
Meds for MH problems have too many negative side effects.	18.7	45.3	36.0
MH providers stereotype patients based on race, sex, etc.	42.7	41.0	16.3
Negative Beliefs about Treatment-Seeking	40.0	35.7	24.3
I would think less of myself if I sought MH treatment.	56.8	21.3	21.9
A problem would have to be really bad to seek MH care.	25.5	15.9	58.6
Seeing a MH provider would make me feel weak.	53.3	21.1	25.6
I would feel uneasy talking with a MH provider.	48.9	17.8	33.3
I would prefer to deal with MH problems myself.	41.9	16.9	41.2
Most MH problems can be handled without professional help.	41.3	36.5	22.2
If I sought MH treatment, I would feel stupid for not handling the problem myself.	51.6	21.6	26.8
I wouldn't want to share personal information with a MH provider.	48.4	26.6	25.0

Note. $N = 640$. Percentages reported are weighted. Disagree = strongly disagree and agree; Agree = strongly agree and agree. Items are truncated. MH = mental health.

Table 2
Weighted Regressions Examining Differences in Mental Health Beliefs based on Probable PTSD, Depression, and Alcohol Abuse

	PTSD				Depression				Alcohol abuse			
	$n = 595$				$n = 601$				$n = 600$			
Scale	*B*	*SE*	*t*	*r*	*B*	*SE*	*t*	*r*	*B*	*SE*	*t*	*r*
Concern about Stigma from Loved Ones	3.54	1.30	2.72*	.11	3.53	0.98	3.62*	.15	1.96	1.27	1.54	.06
Concern about Stigma in the Workplace	2.59	1.10	2.35*	.10	2.97	0.92	3.21*	.13	1.85	1.16	1.600	.07
Negative Beliefs about Mental Illness	−1.68	0.89	−1.89	.08	0.61	0.71	0.85	.03	0.09	0.87	0.11	.00
Negative Beliefs about MH Treatment	1.76	0.92	1.92	.08	1.70	0.69	2.44*	.10	0.74	0.84	0.89	.04
Negative Beliefs about Treatment Seeking	−0.82	1.06	−0.77	.03	1.64	0.86	1.91	.08	0.44	1.04	0.42	.02

Note. All regressions included social desirability in the model. PTSD = posttraumatic stress disorder; MH = mental health.
*$p < .05$.

beliefs either (i.e., they indicated that they neither agreed nor disagreed with items). To the extent that these neutral responses suggest that individuals are ambivalent regarding their beliefs, this group may be an ideal target for interventions aimed at correcting misperceptions about mental illness and mental health treatment. It is also possible, however, that neutral responses may mask more negative underlying beliefs for individuals who are sensitive to the fact that endorsing negative beliefs about mental illness and treatment is not socially desirable. Future research is needed to better understand the factors that contribute to this more neutral response style.

Item-level analyses produced a number of results that suggest promising targets for intervention. For example, although beliefs about mental health treatment were generally positive, a substantial portion of respondents reported concerns about the side effects of psychotropic medications, which may serve as a key barrier to treatment. This finding is consistent with the broader literature suggesting that many veterans have misgivings about psychotropic medications (Zinzow, Britt, McFadden, Burnette, & Gillispie, 2012), and underscores the importance of providing attractive alternative treatment options. Another important direction for future research will be the investigation of condition-specific beliefs, as veterans may be more concerned about treatments for some disorders than others. Current findings also point to the need for greater education regarding when symptoms warrant treatment, as a majority of the OEF/OIF veterans reported that they would only seek treatment if problems were very bad. Without sufficient recognition of the benefit of early treatment seeking, many veterans who would benefit from treatment may only seek care when symptoms are so debilitating that they are more difficult to treat.

As expected, findings revealed that individuals with probable mental health problems, at least those with PTSD and depression, were more likely to report negative mental health beliefs than those without these mental health problems. One explanation for this finding is that stigma may become more salient for individuals who experience mental health problems (Green-Shortridge, Britt, & Castro, 2007), which may lead to greater concerns about stigma from others, as well as more negative appraisals of mental illness and mental health treatment. Longitudinal studies are needed to better understand the nature of this relationship.

Findings also demonstrated that personal beliefs about mental illness and mental health treatment, but not concerns about stigma from others, were related to mental health and substance abuse service use. Particularly noteworthy was the finding that negative beliefs about treatment seeking were related to lower likelihood of seeking care for all three mental health conditions, with one of the highest effect sizes observed in the study. Thus, not only are negative beliefs related to mental health treatment-seeking common, but they also appear to serve as a potential barrier to care for this population. In contrast, though concern about stigma in the workplace was most commonly reported by OEF/OIF veterans, they were not related to service use. It remains to be seen, however, whether this potential barrier to care would be associated with service use in a sample of current service members, for which mental health records are readily available to commanding officers and can be used to make career-related decisions.

Overall, these results are consistent with our hypothesis that an individual's own mental health beliefs are a more important barrier to care than concerns about stigma from others. This finding has important implications for intervention, as it suggests that efforts to target veterans' own beliefs related to mental health issues may be more beneficial than interventions focused on addressing stigma from outside sources. Of course, this finding requires replication in a longitudinal study before it can be confirmed with greater certainty, as a key limitation of the current study was the cross-sectional design. Moreover, additional research is needed with even more representative samples, as it is possible that even with the application of nonresponse bias weights in this study, respondents may have differed from nonrespondents on other unmeasured variables.

Given that the focus of the current study was limited to correlates of use of any mental health care, another direction for future research is to examine differential predictors of initiation of treatment and treatment retention. It is also important to recognize that many factors beyond mental health beliefs are likely

to influence service use, and future research should examine the contribution of mental health beliefs relative to other potential barriers to care. Ultimately, research that can pinpoint and address factors that impede service use is essential to ensure that all veterans who would benefit from treatment receive the care they both need and deserve.

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