

Are Iraq and Afghanistan Veterans Using Mental Health Services? New Data From a National Random-Sample Survey

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Objective: This study analyzed data from a national survey of Iraq and Afghanistan veterans to improve understanding of mental health services use and perceived barriers. **Methods:** The National Post-Deployment Adjustment Survey randomly sampled post-9/11 veterans separated from active duty or in the Reserves or National Guard. The corrected response rate was 56% (N=1,388). **Results:** Forty-three percent screened positive for posttraumatic stress disorder (PTSD), major depression, or alcohol misuse. Past-year psychiatric treatment was reported by 69% of the PTSD group, 67% of the depression group, and 45% of those with alcohol misuse. Most received care at Veterans Affairs (VA) facilities, although women were more likely than men to seek non-VA services. Veterans with more severe symptoms reported greater treatment utilization. Eighteen percent saw a pastoral counselor (chaplain) in the past year. Veterans with mental health needs who did not access treatment were more likely to believe that they had to solve problems themselves and that medications would not help. Those who had accessed treatment were more likely to express concern about being seen as weak by others. **Conclusions:** Veterans in greatest need were more likely to access services. More than two-thirds with probable PTSD obtained past-year treatment, mostly at VA facilities. Treatment for veterans may be improved by increasing awareness of gender differences, integrating mental health and pastoral services, and recognizing that alcohol misuse may reduce utilization. Veterans who had and had not used services endorsed different perceptions about treatment, indicating that barriers to accessing care may be distinct from barriers to engaging in care. (*Psychiatric Services* 64:134–141, 2013; doi: 10.1176/appi.ps.004792011)

Many veterans of the Iraq and Afghanistan conflicts are now coping with post-traumatic stress disorder (PTSD) (1–6), major depression (1,2,4), and alcohol abuse and dependence (7,8). Veterans and military service members who might benefit from mental health care often do not seek or receive it (8–10). Studies have found that only 23%–40% of veterans who screen positive for a mental disorder seek mental health care in the first year after returning from a deployment (1), less than 1% of active military personnel are referred to alcohol treatment even though 12% screen positive for alcohol misuse (11), about 50% of veterans with PTSD or depression seek care (4), and less than one-quarter of active military personnel with mental disorders receive professional help (5). Perceived barriers to using mental health care have been identified (12–16), including stigma associated with having a mental health problem or receiving treatment (13,14,17,18), beliefs that “I should handle it myself” and that treatment will not be effective (19), and practical issues, such as not knowing where to get help or not being able to get time off from work (1,10,20,21).

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(VA), and non-VA agencies and facilities continue to grapple with how to increase the likelihood that veterans will seek and engage in treatment (4). Much of the research on treatment utilization and barriers has focused on the first year after deployment; however, there is a need for more information about treatment of PTSD, major depression, and alcohol misuse beyond the immediate postdeployment period (11,22). Studies have examined treatment for mental health problems in the VA system (10), but many veterans do not seek care from VA providers (4). Data from a random sample of Iraq and Afghanistan veterans would thus be useful for projecting needs of veterans seeking mental health services at VA and non-VA sites. Finally, national data could help determine whether diagnosis or treatment utilization varies by gender, which is especially important given the increasing numbers of women veterans (23–26). To our knowledge, this is the first survey to employ a random, post-9/11 sample of separated military service members and veterans to examine use of treatment provided by VA and non-VA providers.

Methods

Participants

The National Post-Deployment Adjustment Survey (NPDAS) is part of a larger study funded by the National Institute of Mental Health to examine community readjustment among veterans. The NPDAS sample was drawn by the VA Environmental Epidemiological Service (EES) in May 2009 from a roster developed by Defense Manpower Data Center, involving a random selection of over one million U.S. military service members who had served after September 11, 2001, and who were either separated from active duty or in the Reserves or National Guard. The sample was stratified by gender, with oversampling of women veterans to ensure adequate representation. Addresses were updated by credit report at the start of the study (27). Of 3,000 names randomly selected by the EES, 63 had incomplete addresses or were deceased. Of the remaining 2,937 names, 438 had incorrect addresses, yielding a total of

2,499. Of these, 1,388 completed the survey, for a 56% corrected response rate. This rate is among the highest achieved in recent national surveys (3,28) and comparable to studies in the United Kingdom (5).

Procedures

The survey was conducted from July 2009 to April 2010. After the survey received approval from the institutional review boards of the University of North Carolina–Chapel Hill and the Durham VA Medical Center, we utilized the method of Dillman and colleagues (29), which involves multiple contacts to maximize the response rate. Potential participants were sent an introductory letter about the upcoming survey. Four days later, a letter was sent to potential participants containing a password, instructions for a 35-minute confidential Web-based survey, and \$4.40 in commemorative postage stamps. Twelve days afterward, postcards were sent thanking veterans for completing the survey or reminding them to do so. Two weeks later, those who had not taken the survey received a paper version of the survey with a postage-paid return envelope. Two months later, a final letter was sent encouraging participation and alerting recipients that the survey would close the following week.

A pilot survey of 500 mailings was conducted to identify any technical problems. Respondents received a \$40 remuneration; fifteen percent of the sample completed the survey during the pilot phase. Eighty-five percent completed the survey during the remainder of the study period and received a \$50 remuneration for completion. Other than the \$10 difference in remuneration rates between the pilot survey and the actual survey, procedures were identical. Participants in the pilot survey were given a choice to take the same survey online or by mail; 80% completed the survey online, and 20% completed the print version.

To examine possible differences in respondent characteristics by survey medium or remuneration rate, groups were compared on demographic characteristics and diagnoses. Bonferroni adjustment for multiple comparisons

found no significant differences by survey medium or remuneration rate.

Analyses compared responders who completed the survey at the initial invitation (wave 1 survey) with those who completed the survey after receiving later mailings. No differences were found between these groups, providing evidence that the survey process did not affect who was included in the final sample.

Measures

Data were gathered on age, gender, race-ethnicity, marital status, employment, education, military branch, deployments (number, length, and dates), and military rank. Mental health utilization data were gathered on lifetime inpatient or outpatient psychiatric service use and on past-year use, including visits to a psychiatrist, psychologist, counselor, or other mental health professional or prescriptions for psychotropic medications. Participants were given the following instructions: “Veterans may face obstacles getting or using mental health services for a number of reasons. Please rate how much you agree or disagree with each statement as it applies to you.” The 17 statements listed were adapted from findings of empirical research among active military personnel (1) and veterans (30). The statements were related to treatment effectiveness (example, “I don’t think treatment will help me”), to stigma (“I would be seen as weak by others”), and to external barriers (“It’s hard getting time off work for treatment”). They were ranked on a 4-point Likert scale: 1, strongly disagree; 2, somewhat disagree; 3, somewhat agree; and 4, strongly agree.

Probable PTSD was measured with the Davidson Trauma Scale (DTS) (31), which involves rating past-week frequency and severity of *DSM-IV* PTSD symptoms of reexperiencing, avoidance-numbing, and hyperarousal related to a specific trauma. We used a DTS cutoff score of 48, which has demonstrated .82 sensitivity, .94 specificity, and .87 diagnostic efficiency with a Structured Clinical Interview diagnosis of PTSD among Iraq and Afghanistan veterans (32). Probable major depression was assessed with the Patient Health Questionnaire (PHQ-9); a score greater than 9 shows

Table 1

Characteristics of 2,937 veterans who were sent the survey, by response group

Characteristic	Nonresponders							
	Did not receive (N=438)		Did not complete (N=1,111)		Responders (N=1,388)		Total (N=2,937)	
	N	%	N	%	N	%	N	%
Age (M±SD)	32.7±8.9		34±8.9		36.2±10.1		34.8±9.6	
Gender								
Female	163	37	358	32	458	33	979	33
Male	275	63	753	68	930	67	1,958	67
Census region								
Northeast	36	8	162	15	160	12	358	12
Midwest	59	14	184	17	303	22	546	19
South	208	48	513	46	607	44	1,328	45
West	125	29	234	21	306	22	665	23
Territories	10	2	18	2	12	1	40	1
Largest states								
California	38	9	109	10	119	9	266	9
Texas	47	11	106	10	112	8	265	9
Florida	20	5	69	6	69	5	158	5
Virginia	26	6	52	5	62	5	140	5
North Carolina	21	5	42	4	70	5	133	5
Pennsylvania	12	3	41	4	62	5	115	4
Georgia	24	6	43	4	42	3	109	4

sensitivity and specificity of 88% (33). An Alcohol Use Disorder Identification Test (AUDIT) score greater than 7 was used to detect probable alcohol misuse (34).

Statistical analysis

Women constituted 33% of our sample, whereas their proportion in the active military was 15.6% at the time of data collection, according to 2009 data from the Defense Manpower Data Center (35). Data were weighted to reflect the latter proportion, which involved adjusting the sample of 1,388 to a weight-adjusted 1,102. Chi square analyses were used to evaluate categorical data for differences in diagnosis, treatment use, and perceptions about treatment, which for purposes of the bivariate analyses were dichotomized into 0, disagree, and 1, agree. To examine associations between treatment access, psychiatric symptoms, and perceived problems with treatment, we conducted multiple logistic regression analyses in which variables were included if they were statistically significant ($p \leq .05$). Symptoms (DTS, PHQ-9, and AUDIT scores) and perceptions about treatment were

entered as continuous measures in which odds ratios (ORs) were interpreted as the relative odds of a veteran having accessed treatment in the past year. For example, the magnitude of effect for $OR=1.01$ would mean that a veteran is 1% more likely to access treatment with a 1-point increase on a given measure. Analyses regarding perceptions of treatment were restricted to the subset of veterans who screened positive for PTSD, major depression, or alcohol misuse in order to focus on examining access and engagement among veterans specifically in need of treatment.

Results

As shown in Table 1, no significant bias was identified between survey responders and nonresponders. No significant between-group difference in gender was found. Although the differences in age and geographic location were statistically significant, they were of small magnitude. States with large military populations showed similar patterns in all response groupings, and the patterns corresponded to known military demographic characteristics.

The proportion of survey responders in each military branch closely approximated the proportion in the U.S. military: Army, 54% and 48%, respectively; Air Force, 19% and 22%; Navy, 16% and 17%; Marines, 11% and 11%; and Coast Guard, <1% and 2% (35). Time since deployment ranged from one to eight years, with a median of four years. Racial-ethnic groups were representative of those in the military: 71% Caucasian and 29% African American, Hispanic, or other. The final sample was representative of 50 states, Washington D.C., and four territories.

Data on sample characteristics are presented in Table 2. Most veterans (83%) had been deployed to Iraq or Afghanistan; the remainder included veterans who were deployed in support of Operation Iraqi Freedom (OIF) or Operation Enduring Freedom (OEF) but not stationed in the theater of combat. Twenty percent of the sample screened positive for PTSD, 24% for major depression, and 27% for alcohol misuse. A greater proportion of women met criteria for major depression, but a smaller proportion of women screened positive for alcohol misuse. PTSD rates did not differ by gender. Women were significantly more likely than men to meet criteria for major depression (30% and 23%, respectively; $\chi^2=4.5$, $df=1$, $p=.03$). Conversely, women were less likely than men to screen positive for alcohol misuse (17% and 29%; $\chi^2=9.75$, $df=1$, $p<.01$).

Table 3 presents data on mental health treatment use. Seven percent of veterans had a lifetime psychiatric hospitalization; of these, 40% had been hospitalized in a VA facility, 44% at a non-VA facility, and 16% at both. Twenty-five percent had ever sought outpatient mental health care; of these, 46% received care at a VA facility, 37% at a non-VA facility, and 16% at both. A larger proportion of women than men reported using only non-VA facilities for inpatient and outpatient mental health care (17% of women and 10% of men; $\chi^2=8.16$, $df=1$, $p=.004$). Most veterans with PTSD, major depression, or alcohol misuse who sought treatment did so at VA facilities. Among veterans meeting criteria for these mental

health problems, a larger proportion of women than men reported using only non-VA facilities for inpatient and outpatient mental health care (24% of women and 13% of men; $\chi^2=4.91$, $df=1$, $p=.03$).

Past-year mental health treatment or counseling was reported by 69% of veterans with probable PTSD, 67% of those with probable major depression, and 45% of those with probable alcohol misuse. Among those who obtained treatment, the median number of sessions with a mental health professional in the past year was seven for PTSD, six for major depression, and four for alcohol misuse. Compared with men, women were more likely to report having current mental health problems (28% of women and 20% of men; $\chi^2=11.26$, $df=1$, $p<.001$) and were more likely to obtain treatment (45% of women and 36% of men; $\chi^2=8.66$, $df=1$, $p<.01$).

Table 4 summarizes responses to the item about perceived problems with treatment. Across diagnostic groups, the most commonly endorsed problem was not wanting to take psychiatric medications and believing that “it’s up to me” to solve mental health problems. The beliefs that “it’s up to me” and that “treatment would make me feel down on myself” were more frequently endorsed by veterans with co-occurring disorders. Women were more likely than men to report child care as a problem (26% of women and 18% of men; $\chi^2=5.26$, $df=1$, $p=.02$). Men were more likely than women to endorse wanting to solve mental health problems on their own (60% of men and 52% of women; $\chi^2=3.86$, $df=1$, $p=.05$). For a few items, the likelihood of endorsement was lower as a function of years since last deployment, including not knowing where to go for help ($\chi^2=26.23$, $df=7$, $p<.001$) and not having adequate transportation ($\chi^2=14.9$, $df=7$, $p=.03$).

As shown in Table 5, some perceptions were more common among veterans who had not accessed care (“I don’t want to be prescribed medications, “It’s up to me to work out my own problems”) whereas others were more common among veterans who had accessed care (“I would be seen as weak by others,” “I don’t want to talk about my war experience”). When the

Table 2

Characteristics of veterans who responded to a survey about mental health treatment use^a

Characteristic	Sample (N=1,102)		Male (N=930)		Female (N=172)	
	N	%	N	%	N	%
Race-ethnicity						
White	775	70.5	670	72.2	105	61.3
Nonwhite	324	29.5	258	27.8	66	38.7
Married	672	61.1	588	63.3	84	49.1
Ever divorced	308	34.5	251	27.0	57	33.4
Number of children						
0	387	35.4	315	34.2	72	42.2
1	213	19.5	171	18.6	42	24.7
≥2	491	45.0	435	47.2	57	33.1
Education, more than high school	893	81.1	735	79.0	158	92.1
Employed full- or part-time	862	78.2	739	79.5	123	71.6
Parent served in the military	537	48.8	457	49.2	80	46.7
Highest rank						
E1–E9	899	81.6	759	81.6	140	81.2
W1–O10	203	18.5	171	18.4	32	18.8
Branch of service						
Army	584	53.6	493	53.7	91	53.3
Air Force	210	19.3	168	18.3	42	24.8
Navy	171	15.7	138	15.0	33	19.1
Marines	122	11.2	117	12.7	5	2.9
Coast Guard	3	.3	3	.3	0	—
Reserve and National Guard	525	47.7	440	47.3	85	49.6
Service-connected disability	386	35.4	324	35.3	62	36.4
Deployments in Iraq and/or Afghanistan						
0	185	17.2	143	15.8	42	24.8
1	606	56.4	509	56.2	97	57.1
≥2	284	26.4	253	28.0	31	18.1
Months deployed (M±SD)	9.8±8.9		10.2±10.4		7.6±4.4	
Type of service						
Direct combat	370	33.7	355	38.2	16	9.2
Combat or service support	731	66.3	575	61.8	156	90.8
Probable PTSD ^b	221	20.1	185	19.9	36	21.2
Probable major depression ^c	263	23.9	211	22.7	52	30.3
Probable alcohol misuse ^d	294	26.7	265	28.5	29	17.0
PTSD, major depression, or alcohol misuse	476	43.2	402	43.2	74	42.8

^a Women constituted 33% of the sample, whereas their proportion in the active military at the time of data collection was 15.6%. Data were weighted to reflect the latter proportion, which involved adjusting the sample of 1,388 to a weight-adjusted 1,102.

^b PTSD, posttraumatic stress disorder. Score of >48 on the Davidson Trauma Scale

^c Score of >9 on the Patient Health Questionnaire–9

^d Score of >7 on the Alcohol Use Disorder Identification Test

analysis controlled for these beliefs, symptoms of PTSD and major depression were significantly associated with treatment use. Alcohol misuse severity and the other perceptions measured were unrelated to treatment access in the final regression model.

Discussion

To our knowledge, this study is the first to evaluate mental health treatment utilization of VA and non-VA

users in a national random sample of Iraq- and Afghanistan-era veterans. The NPDAS represents all returned OEF/OIF veterans through April 2009. We found that 43% screened positive for PTSD, major depression, or alcohol misuse. Two-thirds of veterans with probable PTSD or major depression reported accessing treatment in the past year, mostly at VA facilities. One in six veterans (18%) reported seeing a pastoral counselor (chaplain) during the past

Table 3

Mental health treatment utilization by veterans who screened positive for posttraumatic stress disorder (PTSD), major depression, or alcohol misuse^a

Treatment	Sample (N=1,102)		Probable PTSD (N=221)		Probable major depression (N=263)		Probable alcohol misuse (N=294)	
	N	%	N	%	N	%	N	%
Ever been hospitalized for treatment of an emotional or substance use problem, including war stress (PTSD)	74	6.8	47	21.1	51	19.6	33	11.3
If yes, treatment facility ^b								
Veterans Affairs (VA) only	30	40.5	20	42.6	23	45.1	13	39.4
Non-VA only	33	44.5	18	38.3	19	37.3	14	42.4
Both	12	16.2	9	19.1	9	17.6	6	18.2
Ever received outpatient treatment (such as seeing a counselor, psychologist, or psychiatrist) for an emotional or substance use problem, including war stress (PTSD)	277	25.3	135	61.3	146	56.1	97	33.4
If yes, treatment facility ^c								
VA only	127	45.8	68	50.4	76	52.1	54	55.7
Non-VA only	108	39.0	38	28.1	38	26.0	30	32.0
Both	43	15.5	29	21.5	33	22.6	13	13.4
Had any mental health (behavioral health) problems or been treated for mental health, alcohol, or drug problems in the past year.	232	21.2	122	55.7	138	53.3	95	32.6
Seen a psychiatrist (mental health person who can prescribe medicine) in the past year	192	18.4	110	52.7	119	47.6	76	26.6
Talked with a psychologist, counselor, or any other mental health professional in the past year	269	25.8	126	60.0	143	57.4	103	36.5
Been given medications or prescriptions, either oral (pills or liquids) or shots for mental health, alcohol, or drug problems in the past year	161	14.8	89	41.0	103	39.9	61	20.9
Talked with a pastoral counselor (chaplain) in the past year	190	17.8	46	21.6	58	22.7	49	17.1
Also received mental health treatment	78	7.0	32	14.6	39	14.8	30	10.2
Did not receive mental health treatment	113	10.2	14	6.3	19	7.1	19	6.6
In the past year, obtained any of the above mental health treatments or counseling ^d	415	37.6	153	69.0	176	66.9	132	44.8

^a Women constituted 33% of the sample, whereas their proportion in the active military at the time of data collection was 15.6%. Data were weighted to reflect the latter proportion, which involved adjusting the sample of 1,388 to a weight-adjusted 1,102.

^b Percentages calculated as a function of the total number of veterans in the column who endorsed lifetime inpatient hospitalization (for example, 30/74=40.5% who reported use of inpatient care at VA facilities only)

^c Percentages calculated as a function of the total number of veterans in the column who endorsed lifetime outpatient treatment (for example, 127/277=45.8% who reported use of outpatient services at VA facilities only)

^d Median number of sessions in the past year with a mental health professional (psychiatrist, psychologist, or counselor): probable PTSD, 7 sessions; probable major depression, 6; probable alcohol misuse, 4. Visits with non-mental health professionals (pastoral counselors, family doctors, or nurses) were not measured.

year, consistent with reports from the United Kingdom (22). Nearly 70% of those who screened positive for PTSD reported obtaining treatment for emotional or psychiatric problems in the past year. This finding is a valuable message to communicate to veterans. Those who are ambivalent about accessing care may be more willing to do so if made aware that a substantial number of veterans are getting the help they need.

Nevertheless, although the findings suggest that many veterans are accessing treatment, engaging veterans in treatment is a separate challenge. The median number of sessions attended in the past year indicates that some veterans are probably discontinuing mental health services. Also, some problems with treatment were more likely to be reported by veterans who had already accessed services. Beliefs

about the stigma of receiving psychiatric services (for example, that one would be seen as weak) were more likely to be endorsed by veterans who used treatment than by their counterparts who did not. Once in treatment, it is no longer abstract to talk about one's war experiences. The simple act of waiting in a room with other veterans seeking care makes it difficult to minimize the existence of one's own

Table 4

Perceived problems with mental health treatment among veterans who screened positive for posttraumatic stress disorder (PTSD), major depression, or alcohol misuse^a

Problem ^b	Probable alcohol misuse (N=162)		Probable PTSD or major depression (N=181)		Alcohol misuse and PTSD or major depression (N=132)		p
	N	%	N	%	N	%	
I don't want to be prescribed medications ^c	105	65.6	125	68.8	94	71.1	
It's up to me to work out my own problems ^c	105	65.2	121	66.5	108	81.7	<.01
It might harm my career ^d	69	43.3	116	63.9	84	63.7	<.001
I don't want to talk about my war experience ^c	62	38.5	116	63.7	103	77.8	<.001
I am concerned about the cost of treatment ^c	73	45.7	99	54.4	74	56.3	
My unit leadership/employer might treat me differently ^d	69	43.1	114	63.0	84	63.4	<.001
I would be seen as weak by others ^d	66	41.2	108	59.8	95	72.2	<.001
My unit/coworkers might have less confidence in me ^d	63	39.0	113	62.1	83	63.1	<.001
I don't think treatment will help me ^c	74	46.3	81	44.9	78	59.1	
Treatment would make me feel down on myself ^c	64	40.0	80	44.1	86	64.9	<.001
I just don't have the time ^c	72	45.1	85	47.1	78	59.1	<.05
It's hard getting time off work for treatment ^c	53	33.3	98	54.3	76	57.4	<.001
I don't trust mental health professionals ^c	46	28.8	79	43.4	64	48.3	<.01
Visits would not remain confidential ^c	51	31.4	76	41.8	62	47.0	<.05
I don't know where to go for help ^c	53	33.4	57	31.2	54	41.1	
It is difficult getting childcare ^c	18	10.9	49	27.4	38	29.1	<.001
I don't have adequate transportation ^c	18	11.4	22	12.2	28	21.2	<.05

^a Women constituted 33% of the sample, whereas their proportion in the active military at the time of data collection was 15.6%. Data were weighted to reflect the latter proportion, which involved adjusting the sample of 1,388 to a weight-adjusted 1,102.

^b Item instructions: "Veterans may face obstacles getting or using mental health services for a number of reasons. Please rate how much you agree or disagree with each statement as it applies to you." The values indicate the number and percentage who strongly or somewhat agreed.

^c Perception of treatment effectiveness

^d Perception related to stigma

^e Perception related to external barriers

mental health problems. Stigma issues may need to be addressed during the first clinical encounter to increase the likelihood that the veteran will return for future appointments.

Multivariable analyses found that veterans who did not access care but who screened positive for PTSD, major depression, or alcohol misuse were more likely to endorse the beliefs that individuals need to solve mental health problems on their own and that taking medications will not help. Efforts to convince veterans to access needed care might be more effective if they focus on addressing these specific perceptions. Similarly, because perceptions about mental health treatment differed between those who had accessed services and those who had not, barriers to accessing care may be distinct from barriers to engaging in care.

At the same time, it is noteworthy that veterans with more severe PTSD or depressive symptoms were significantly more likely to access treatment,

even when the analysis controlled for perceived problems with treatment. This finding suggests that above a certain threshold of symptoms, veterans were significantly more likely to seek mental health services, even if they viewed such services negatively. To our knowledge, this is the first data to indicate that veterans most in need of psychiatric care (that is, the group that we would want to be using health care resources) appear to be accessing it.

This study also highlights the role of alcohol misuse in treatment utilization (8). Most veterans misusing alcohol did not avail themselves of traditional mental health treatment, and those who did reported fewer mental health visits than veterans with PTSD or major depression. Veterans who had comorbid disorders—either PTSD or major depression with comorbid alcohol misuse—were more likely to report negative perceptions of mental health services, which likely compounded the difficulty in engaging this population in

care. We found that although more than half the veterans with PTSD or major depression had favorable opinions about mental health treatment, veterans with co-occurring disorders had mostly unfavorable opinions. This finding is of concern because alcohol misuse is commonly comorbid with symptoms of mental illness, and this cohort may be especially vulnerable to chronic illness trajectories if they do not obtain treatment. This information is potentially useful for mounting an antistigma campaign within clinical settings to improve treatment retention.

Findings from this national sample highlight the importance of gender issues in the veteran population. Mental health utilization did not differ between men and women with probable PTSD or major depression; however, female veterans were more likely than male veterans to seek mental health care. Female veterans more often sought out mental health care at non-VA facilities. Perceived problems

Table 5

Predictors of past year use of mental health treatment by veterans who screened positive for posttraumatic stress disorder (PTSD), major depression, or alcohol misuse^a

Predictor	OR ^b	95% CI	p
PTSD symptom severity ^c	1.01	1.00–1.02	.004
Depressive symptom severity ^d	1.08	1.04–1.12	<.001
I don't want to be prescribed medications ^e	.74	.59–.93	.01
It's up to me to work out my own problems ^e	.77	.60–1.00	.046
I don't know where to go for help ^f	.78	.63–.96	.021
I would be seen as weak by others ^g	1.37	1.10–1.71	.006
I don't want to talk about my war experience ^e	1.34	1.05–1.70	.017

^a $R^2=.25$, $\chi^2=106.71$, $df=7$, $p<.001$

^b Values >1 indicate that veterans were more likely to have accessed treatment in the past year, whereas values <1 indicate a lower likelihood.

^c Total score on the Davidson Trauma Scale

^d Total score on the Patient Health Questionnaire–9

^e Perception of treatment effectiveness

^f Perception related to external barriers

^g Perception related to stigma

with treatment were virtually identical for male and female veterans, although a greater proportion of women acknowledged having mental health problems. The findings suggest the need for outreach to bring women into transformed VA facilities (26,36,37), and they add to the literature examining barriers to care for women veterans (23–25).

Men and women in this sample screened positive for PTSD at similar rates, as found in some previous studies (38,39); however, in other studies the rates have varied (40,41). Although male veterans had a higher rate of alcohol misuse, the rate among female veterans was higher than that in female civilian populations (42). This finding is consistent with other studies that have shown increasing rates of alcohol use among female veterans (43). The findings reported here underscore the need to assess female veterans for alcohol misuse and carefully evaluate the provision and effectiveness of treatment.

As with many surveys, reliance on self-report may be a limitation of this study and may have led to underestimation of mental health problems. Moreover, we asked veterans to report use of mental health services in the past year; however, studies using longitudinal data are needed to discern whether perceived problems with treatment are associated with treatment initiation or with discontinuation and whether the

problems vary by phase of treatment. Finally, at the time of the survey, the extant literature led us to believe that we would be assessing barriers to care among veterans who had not sought treatment. But once we recognized that a large cohort of veterans had in fact accessed care, we decided to use the items on perceived barriers to care to also examine perceived problems with treatment. Future research is therefore needed to replicate the application of these items for the latter purpose and to supplement other items (for example, “waiting times too long”) to gather more targeted information about barriers perceived by veterans when they are in treatment.

Although survey responders and nonresponders did not meaningfully differ in age, gender, or geographic region, many other important unobserved variables (such as presence or severity of mental health problems and number of deployments) that may have differed between the two groups could have influenced generalizability. Nevertheless, the proportions of veterans in the NPDAS sample from the various branches of the military and from racial-ethnic groups closely mirrored proportions in the U.S. military, and comparisons based on waves of data collection, survey mediums, and remuneration rates did not find differences in respondents' demographic and clinical variables.

Conclusions

Findings of this study support the likelihood that treatment may be further optimized by mental health policies that aim to increase attention to the impact of alcohol misuse, better recognize the role gender may play in diagnosis and treatment use, further explore the role of pastoral counseling in provision of mental health care, and recognize that veterans may perceive certain problems with treatment even after they access it. It is hoped that the findings will help policy makers acknowledge the success already achieved in helping veterans obtain mental health services and better identify challenges that remain in ensuring that veterans can both access and utilize the mental health care they need and deserve.

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