

Reintegration Problems and Treatment Interests Among Iraq and Afghanistan Combat Veterans Receiving VA Medical Care

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Objective: The objectives of this study were to describe the prevalence and types of community reintegration problems among Iraq and Afghanistan combat veterans who receive U.S. Department of Veterans Affairs (VA) medical care, identify interests in interventions or information to promote readjustment to community life, and explore associations between probable posttraumatic stress disorder (PTSD) and reintegration problems and treatment interests. **Methods:** A national, stratified sample of Iraq-Afghanistan combat veterans receiving VA medical care responded to a mailed survey focused on community reintegration. Of 1,226 veterans surveyed, 754 (62%) responded. Prevalence and proportions were adjusted for potential nonresponse bias. **Results:** An estimated 25% to 56% of combat veterans who use VA services reported “some” to “extreme” difficulty in social functioning, productivity, community involvement, and self-care domains. At least one-third reported divorce, dangerous driving, increased substance use, and increased anger control problems since deployment. Almost all (96%) expressed interest in services to help readjust to civilian life (95% confidence interval [CI]=93%–99%). The most commonly preferred ways to receive reintegration services or information were at a VA facility, through the mail, and over the Internet. An estimated 41% (95% CI=36%–46%) screened positive for PTSD, and probable PTSD was associated with reporting more readjustment difficulties and expressing interest in more types of services, including traditional mental health services. **Conclusions:** Iraq-Afghanistan combat veterans who already receive VA medical care reported multiple current reintegration problems and wanted services and information to help them readjust to community life. These concerns were particularly prevalent among those with probable PTSD. Research is needed to explore nontraditional modes of service delivery, including the Internet. (*Psychiatric Services* 61:589–597, 2010)

Over two million U.S. service members have been deployed to Iraq or Afghanistan since America’s engagement in the post-September 11 “war on terrorism,” approximately 27% of whom have been deployed more than once. Research suggests that the burden of mental disorders and symptoms, including posttraumatic stress disorder (PTSD), substance use disorders, and depression, is high among service members within the first year of returning from these deployments (1–5). Furthermore, with some notable exceptions (6), research suggests a rise with time since deployment in the rate of psychiatric problems among U.S. service members and veterans (3,7–10), which may indicate better problem detection and more psychiatric morbidity over time. Reports of increases in marital and occupational difficulties after military service in either Iraq or Afghanistan (Iraq-Afghanistan) (1,4,11,12) provide further evidence of postdeployment reintegration problems.

Research on postdeployment health problems among Iraq-Afghanistan war veterans is needed to inform the development and resourcing of health services. However, the existing research base has several limitations for health services planning. First, many prevalence studies are based primarily or exclusively on samples of active-duty Army personnel and therefore do not provide information

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about other types of service members (9), including activated National Guard and reserve troops, who may face unique circumstances during and after their deployment (3,13). Second, most studies describing rates of psychiatric symptomatology have assessed service members within the year after returning from their deployment (1,3,5,8,14,15), leaving unexamined their long-term adjustment problems. Third, because most prior studies have focused on psychiatric disorders, we know relatively little about the functional problems that Iraq-Afghanistan veterans face as they attempt to reintegrate into their home communities. Veterans may perceive problems functioning at home, school, or work to be as important as or more important than symptom resolution (16,17). Last, the treatment preferences of this new generation of veterans, which differs from earlier cohorts of veterans in terms of age, education, and comfort with technology, is understudied (18).

This study was designed to address some of the above gaps in the literature. Our primary objectives were to describe the prevalence and types of community reintegration problems among Iraq-Afghanistan combat veterans who receive U.S. Department of Veterans Affairs (VA) medical care and to identify their interest in interventions or information to facilitate readjustment within the community. The VA plays a pivotal role in addressing Iraq-Afghanistan veterans' postdeployment health care needs. It provides Iraq-Afghanistan combat veterans who were discharged under other-than-dishonorable conditions with cost-free health care and medications for conditions possibly related to military service, regardless of their income level, for five years postdischarge (19). The VA is also the single largest provider of medical care to returning combatants.

The secondary objective of this study was to explore associations between probable PTSD, reintegration problems, and treatment interests. PTSD is of particular concern because it is the most prevalent psychiatric disorder among returning combat troops and veterans (1,3–5,14,20–22). PTSD has also been associated with functional problems among veterans of

previous wars (23) and with aggressive and suicidal thoughts and behavior among Iraq-Afghanistan veterans (3,7,13,24). Furthermore, PTSD has a greater impact on quality-of-life outcomes than do mood and other anxiety disorders (25,26).

Methods

The Minneapolis VA Medical Center Subcommittee on Human Studies reviewed and approved all aspects of this research.

Sampling strategy

Our sampling frame included the 181,611 Iraq-Afghanistan combat veterans who made at least one visit to a VA facility within the continental United States between October 2003 and July 2007. This represents 60% of Iraq-Afghanistan veterans who used VA services within this time frame. The remaining 40% were not classified as combat veterans.

We used stratified random sampling without replacement. We selected this sampling strategy to increase the precision of our estimates and models. Because sampling from demographically more homogeneous groups produces estimates with smaller error variance than a simple random sample (27), we sampled from strata that included veterans of the same race-ethnicity and gender who were living in geographically similar areas. To this end, we divided the United States into six regions (Northeast, Southeast, Upper Midwest, Southern Midwest, Northwest, and Pacific Coast). Each regional stratum was divided into four gender (male or female) and race (white or nonwhite) combinations. From each of the resulting 24 strata we randomly selected 55 Iraq-Afghanistan combat veterans for recruitment (N=1,320). Because one-fifth of Iraq-Afghanistan veterans had missing race-ethnicity data, we randomly selected an additional 15 men and 15 women with missing race-ethnicity information from each of the six regions (N=180). Later, we used veterans' self-report to reclassify race and ethnicity and to verify deployment. We then constructed estimates using Horvitz-Thompson type estimators, with weights equal to the inverse of sample inclusion probabilities.

Of the 1,500 veterans originally identified for survey, 274 were excluded for the following reasons: deceased (N=8), veteran of other war eras (N=89), could not be located through U.S. Postal Service after three attempts (N=167), or currently redeployed to Iraq or Afghanistan (N=10). Of the 1,226 Iraq-Afghanistan combat veterans who remained eligible, 754 (62%) returned surveys by July 14, 2008.

Recruitment

Veterans received a prenotification letter describing the study, followed two weeks later by a cover letter, 12-page questionnaire, and \$5 incentive. The cover letter reiterated the study's goals and described the risks, benefits, and voluntary nature of participation. Return of the survey signified veterans' consent to participate in the study. Nonresponders received a reminder letter and two more mailings of the questionnaire. Data were collected between April and July 2008.

VA administrative data

We used VA administrative databases to obtain the following sociodemographic information for both responders and nonresponders: age, gender, race-ethnicity, military component (active duty versus National Guard or reserve), receipt of service-related disability benefits (any benefits and benefits specifically for PTSD), use of VA mental health services within the past year (any versus none), and distance in miles to nearest VA and community-based outpatient clinics. We also extracted the past two years of the *ICD-9-CM* codes for PTSD, anxiety disorders other than PTSD, depression, substance use disorders (excluding nicotine dependence), psychoses, and traumatic brain injury.

Study questionnaire

The study questionnaire assessed veteran characteristics, physical and mental health, perceived community reintegration problems, and treatment interests and preferences regarding intervention service delivery (in person or over the Internet). The research team, which included clinicians with expertise in deployment-related readjustment problems and in measure de-

velopment, developed the initial version of the questionnaire based on literature reviews, early findings from ongoing studies, and clinical experience. A focus group of one veteran and three active-duty service members provided the investigators with anonymous feedback on the content and format of the initial version of the survey. After incorporating this feedback, we pilot-tested the survey with a sample of 87 Iraq-Afghanistan combat veterans. We finalized the survey after analyzing response patterns and reviewing participant comments in the comment section.

Community reintegration and treatment preferences

One item assessed overall difficulty in readjusting to civilian life over the past 30 days on a 5-point scale ranging from 1, no difficulty, to 5, extreme difficulty. Sixteen items assessed specific problems over the past 30 days in the following functional domains: social relations, eight items; productivity, three items; community participation, two items; perceived meaning in life, one item; and self-care and leisure activities, two items. Responses ranged from 1, no difficulty, to 5, extreme difficulty. Items were modified for relevance to this population from the social relations, life activities, and self-care domains of the World Health Organization Disability Assessment Schedule II (28), supplemented with content from the Community Integration Questionnaire and Community Integration Measure, which were developed for traumatic brain injury research (29,30). Internal consistency of these 16 items, as measured by Cronbach's coefficient alpha, was .95. Nine yes-no items were used to assess problem experiences since returning home from Iraq or Afghanistan, including four items on potentially harmful behaviors and one item each on divorce or separation, legal problems, job loss, problems accessing health care, and loss of spirituality or religious life.

To assess interest in services for readjustment problems, participants checked individual items on a list of 12 possible services. They also indicated how they would want to receive information and services for community reintegration problems. In addition,

Table 1

Sociodemographic and estimated population characteristics of Iraq-Afghanistan combat veterans who use Department of Veterans Affairs (VA) medical services

Variable	Surveyed veterans (N=754)		Weighted proportion	
	N	%	% ^a	95% CI ^b
Female	411	55	13	na ^c
Age group				
22-29	316	42	37	34-40
30-39	225	30	29	24-33
40-62	213	28	34	30-38
Marital status				
Single or never married	177	24	18	15-22
Married or living with partner	453	61	71	66-75
Separated or divorced	112	15	11	8-14
Widowed	4	1	3	0-1
Education				
Less than high school	3	0	1	0-1
High school or equivalent	131	17	22	17-26
Some college or technical school	395	52	50	45-56
College graduate	167	22	21	17-25
Graduate school	50	7	6	4-9
Race or ethnicity				
White, non-Hispanic	388	51	63	61-65
African American or black	183	24	18	16-20
Hispanic or Latino	97	13	11	9-14
Asian	22	3	3	1-4
American Indian or Pacific Islander	25	3	2	1-3
Mixed race or ethnicity	39	5	3	2-4
Employment ^d				
Part- or full-time	545	72	78	74-82
Homemaker	34	5	1	1-2
Student	238	32	24	20-29
Unemployed	88	12	10	7-13
Retired	8	1	1	0-3
Military component				
Active duty	357	47	42	37-47
Reserves or National Guard	397	53	58	53-63
Grade at discharge				
Junior enlisted (E1-E4)	274	36	32	27-36
Noncommissioned officer (E5-E9)	394	52	57	53-63
Officer (commissioned or warrant)	77	10	10	7-14
Branch of service				
Army	556	74	76	71-80
Navy	82	11	9	6-12
Air Force	50	7	6	4-9
Marines	54	7	8	5-11

^a Weighted to be representative of Iraq-Afghanistan combat veterans who use VA medical services. Values have been adjusted with propensity scores for potential nonresponse bias.

^b In percentages

^c Not applicable because gender was a stratifying factor

^d Employment categories are not mutually exclusive.

because use of the Internet has become increasingly common for health care service delivery (31,32), we assessed access to the Internet and frequency of Internet use.

Physical and mental health

Overall physical and mental health status was assessed with the 12-item Short-Form Health Survey (SF-12v2),

with mental and physical health component summary scores normalized such that they could be compared with values obtained in the U.S. population, which has a mean score of 50 and a standard deviation of 10 (33). To assess probable PTSD, we used the Primary Care PTSD Screen (34), which is used by the VA and Department of Defense (DoD). A cutoff score of 3 yielded .76

Table 2

Indicators of physical and mental health among Iraq-Afghanistan combat veterans who use Department of Veterans Affairs (VA) medical services

Variable	Surveyed veterans (N=754)		Weighted proportion	
	N	%	% ^a	95% CI ^b
Diagnosis in VA records ^c				
Posttraumatic stress disorder	195	26	27	23–32
Other anxiety disorder	73	10	7	5–10
Depression	208	28	24	19–28
Substance use disorder	40	5	7	4–10
Psychotic disorder	5	1	1	0–2
Traumatic brain injury	31	4	4	2–6
VA disability benefits				
Any	433	57	58	53–63
For posttraumatic stress disorder	130	17	19	15–23
Survey screening results				
Probable posttraumatic stress disorder ^d	291	39	41	36–46
Probable drug or alcohol problem ^e	262	35	38	33–43
Probable posttraumatic stress disorder and drug or alcohol problem	146	19	21	17–26
12-item Short-Form (SF-12v2) score				
Mental component summary score	39.82±13.67 ^f		40.78 ^g	39.45–42.12
Physical component summary score	46.03±11.09 ^f		45.77 ^g	44.59–46.94

^a Weighted to be representative of Iraq-Afghanistan combat veterans who use VA medical services. Values have been adjusted with propensity scores for potential nonresponse bias.

^b In percentages for all but Short-Form values

^c Based on VA administrative data for previous two years

^d Defined as at least three positive items on the Primary Care PTSD Screen (34,35)

^e Defined as at least one positive response to the Two-Item Conjoint Screen (37)

^f Possible scores range from 0 to 100. Values are M±SD. Scores were normalized such that the U.S. population has a mean score of 50 and a standard deviation of 10 (33).

^g Weighted mean

sensitivity and .92 specificity for clinical PTSD in a sample of active-duty soldiers who returned from combat in Iraq (35). We screened for alcohol and drug problems using the Two-Item Conjoint Screen (36,37). This screen is also included in the DoD Postdeployment Health Reassessments (3). A cutoff score of 1 had .80 sensitivity and specificity among 18- to 59-year-old primary care patients (37).

Statistical analysis

Prevalence and proportions were weighted to represent the population of Iraq-Afghanistan combat veterans who used VA medical services. We used stratified estimates weighted by the inverse of sample inclusion probabilities to calculate population parameter estimates and their standard errors (27). Less than 3% of community reintegration items had missing values. Assuming that this degree of missing data depended only on the observed covariates, we imputed missing values

using logistic regression methods for multiple imputations (38). We used stratified logistic regression models to construct odds ratios and 95% confidence intervals (39) for community reintegration problems by probable PTSD status. Odds ratios were adjusted for demographic characteristics that preceded deployment, including age, gender, race-ethnicity, and military component. When comparing community reintegration problems among those with and without probable PTSD, we used a p value of <.002 as the threshold for statistical significance. Stratified Poisson regression was used to determine whether probable PTSD was associated with the number of community reintegration problems and the number of services of interest for community reintegration problems. All analyses were performed for responders and then adjusted for potential nonresponse bias based on administrative data available for both responders and nonrespon-

ders; adjustment was achieved by constructing response propensities and producing a weighted combination of within-propensity class estimates (40). SAS, version 9.2, and R coding were used to perform the calculations.

Responders did not differ from nonresponders in diagnoses extracted from VA medical records, receipt of mental health services, distance to a VA or community-based outpatient clinic, service connection for any condition, service connection for PTSD, or race-ethnicity. Compared with nonresponders, responders were older, were more likely to be female, and were more likely to have been activated to Iraq or Afghanistan from the National Guard or reserves than from active duty. The decision to adjust for demographic characteristics that preceded deployment was made a priori to increase the precision of our estimates.

Results

Participants

The median time between participants' return from their most recent Iraq or Afghanistan deployment and completion of the survey was 42 months (interquartile range 31–54 months). Roughly 22% reported more than one deployment to Iraq or Afghanistan war theaters. One-fifth of the sample had fought in prior U.S. wars. Participant and estimated population sociodemographic characteristics are listed in Table 1. As expected, given our stratification scheme, survey respondents were roughly balanced in terms of gender and race (white or nonwhite). However, when weighted back to the overall population of Iraq-Afghanistan combat veterans who receive VA medical care, we estimated that 87% of the population was male and 63% was white.

As shown in Table 2, approximately a quarter of the population of Iraq-Afghanistan combat veterans who had received VA medical care had a diagnosis of PTSD and 7% had a substance use disorder diagnosis documented in VA administrative records. However, on the basis of the screening measures included in our survey, we estimated that 41% and 38% of the population may have had PTSD or a drug or alcohol use problem, respectively. A total of 149 (51%) of the 291 study partici-

pants who screened positive and 46 (10%) of the 463 who screened negative for PTSD carried a PTSD diagnosis in VA medical records; 33 (13%) of the 262 who screened positive and seven (1%) of the 492 who screened negative for probable drug or alcohol use problems carried a substance use disorder diagnosis in VA medical records. The SF-12v2 scores indicated that Iraq-Afghanistan combat veterans had substantially poorer overall general medical and mental health than the U.S. general population. The population majority (58%) was receiving disability benefits for a service-related condition, with PTSD being most common.

Reintegration problems

An estimated 40% (95% confidence interval [CI]=35%–45%) of Iraq-Afghanistan combat veterans who used VA medical services perceived some to extreme overall difficulty in readjusting to civilian life within the past 30 days. The estimated average number of specific areas of some to extreme difficulty was $6.33 \pm .27$ out of 16. As shown in Table 3, we estimated that at least 25% of these veterans were having some to extreme difficulty in each of the domains assessed. Difficulty in social relations (such as confiding in others and getting along with their spouses, children, and friends) were particularly common. Some to extreme productivity problems (including problems keeping a job and completing the tasks needed for home, work, or school) were reported by 25%–41% of Iraq-Afghanistan veterans. The estimated mean number of dichotomously scored problem experiences since coming home from Iraq or Afghanistan was $3.03 \pm .12$ out of nine. Potentially harmful behaviors since coming home from Iraq or Afghanistan were common, with 31% reporting more alcohol and drug use and 57% reporting more anger control problems (Table 3).

Treatment interests

An estimated 96% (CI=93%–99%) of Iraq-Afghanistan combat veterans who used VA medical care reported interest in services for community reintegration problems. The estimated average number of services that

Table 3

Community reintegration problems among Iraq-Afghanistan combat veterans who use Department of Veterans Affairs (VA) medical services

Variable	N ^a	Weighted proportion	
		% ^b	95% CI ^c
Areas of some to extreme difficulty over past 30 days			
Confiding or sharing personal thoughts and feelings	423	56	51–62
Dealing with strangers	314	43	38–48
Making new friends	324	44	39–49
Keeping up nonmilitary friendships	351	45	40–50
Keeping up military friendships	215	28	23–32
Getting along with relatives	267	34	29–38
Getting along with spouse or partner ^d	280	42	36–47
Getting along with children ^d	146	29	23–34
Finding or keeping a job ^d	178	25	20–29
Doing what is needed for work or school ^d	262	35	30–40
Taking care of chores at home	325	41	36–46
Taking part in community activities	372	49	44–54
Belonging in “civilian” society	351	49	44–54
Taking care of health	342	45	40–50
Enjoying or making good use of free time	378	47	42–52
Finding meaning or purpose in life	309	42	37–47
Problems experienced since homecoming			
More problems controlling anger	414	57	52–62
Thoughts or concerns about hurting someone	242	35	30–40
Drinking or using drugs more	211	31	27–36
Dangerous driving noticed by others	229	35	30–40
Divorce or separation	289	35	30–39
Legal problems	142	20	16–25
Job loss	172	24	19–28
Problems accessing adequate health care	218	27	23–32
Lost touch with spirituality or religious life	313	42	37–47

^a Unweighted

^b Weighted to be representative of Iraq-Afghanistan combat veterans who use VA medical services. Missing values were imputed, and values have been adjusted with propensity scores for potential nonresponse bias.

^c In percentages

^d Sample is smaller for items concerning marriage, employment, education, and children because participants could indicate “does not apply.”

veterans would consider using for community reintegration problems was $6.84 \pm .17$ out of the 12 options presented. As Table 4 shows, veterans most frequently reported interest in obtaining information about VA benefits and about schooling, employment, or job training. The three most popular ways of receiving community reintegration services or information were at a VA medical center, over the Internet, and through the postal mail. Almost all Iraq-Afghanistan combat veterans had access to the Internet and used it regularly.

Readjustment and treatment interests

Probable PTSD was associated with problem drinking or drug use and with worse SF-12v2 mental and physical

component summary scores ($p < .001$). The odds of reporting some to extreme difficulty was significantly higher among those with probable PTSD in each functional area assessed, with odds ratios ranging from 3.10 to 13.78 (Table 5). Similarly, the odds of reporting problems experienced since homecoming were higher among those with probable PTSD, with odds ratios ranging from 2.21 to 8.89 (Table 5). However, functional problems and postdeployment problems were also present among those without probable PTSD. Among those with and without probable PTSD, the most commonly reported problem since homecoming was controlling anger. Finally, veterans with probable PTSD expressed interest in more types of services for community reintegration problems than

Table 4

Treatment interests among Iraq-Afghanistan combat veterans who use Department of Veterans Affairs (VA) medical services

Variable	N ^a	Weighted proportion	
		% ^b	95% CI ^c
Services veteran would consider using for reintegration problems			
Information on veterans benefits	650	83	79–87
Information on schooling, employment, or job training	619	80	75–84
Educational material to help self	569	75	70–79
Techniques or exercises to help self	516	64	59–69
Educational classes	496	62	57–67
Face-to-face individual therapy	487	61	56–66
Educational material to give to others	438	58	53–63
Medication	425	54	49–59
Marital, couples, or family therapy	390	50	45–55
Group therapy	302	37	33–42
Spiritual counseling	280	32	28–37
Yoga or meditation	315	28	24–32
How veteran prefers to receive readjustment services or information			
At a VA medical center	435	57	52–62
Over the Internet or Web	423	53	48–58
Through the mail	393	53	47–58
Through e-mail	341	43	37–48
Over the telephone	133	19	15–23
At a non-Veterans Affairs medical center	254	33	29–38
At or through military unit	235	32	27–36
In a community center	221	27	23–32
Through videoconferencing ^d	149	20	16–23
Internet use			
Has Internet access	722	97	95–99
Frequency of Internet use			
Daily	521	70	66–75
Weekly	146	18	14–22
Monthly	33	4	2–6
Seldom or never	43	7	5–10

^a Unweighted^b Weighted to be representative of Iraq-Afghanistan combat veterans who use VA medical services. Values have been adjusted with propensity scores for potential nonresponse bias.^c In percentages^d Videoconferencing was defined in the questionnaire as “allowing people in different locations to communicate much the same as if they were in the same room.”

those without probable PTSD ($p < .001$). A majority of those with probable PTSD were interested in traditional mental health services for their reintegration problems, such as face-to-face individual therapy (83%; CI=77%–89%) and medications (71%; CI=64%–79%) (data not shown).

Discussion

This is the first systematic study of community reintegration problems and associated treatment interests among Iraq-Afghanistan combat veterans who use VA medical care. More than one-half of this select population

was struggling with anger control problems, and nearly one-third had engaged in behaviors that put themselves or others at risk since homecoming, such as dangerous driving and greater alcohol or drug use.

Not surprisingly, veterans with probable PTSD reported more reintegration problems and expressed interest in more kinds of services for reintegration problems than did veterans without probable PTSD. Thus this subgroup may need to be targeted more aggressively for community reintegration interventions. Regardless of PTSD status, however, Iraq-Afghan-

istan combat veterans faced challenges in multiple domains of functioning and community involvement after deployment. Left untreated, these problems could have deleterious effects not only on the individual but also on his or her family, community, and society as a whole. We thought it hopeful that almost all of these veterans would like information or services that could help them with these problems. Because so many used the Internet frequently, Web-based applications may prove useful for delivering services and information to this newest cohort of war veterans. However, it is unknown whether treatment interest translates into treatment seeking. This is of concern because a significant proportion of individuals with common mental disorders do not seek professional help, even after they recognize the need (41). Barriers to treatment initiation include attitudes and beliefs, financial and logistical problems, system-level factors that limit access to services, and, among combat veterans, posttrauma experiences perceived as invalidating of their service (1,41–43).

Whether veterans have access to effective services to help with community reintegration problems is also uncertain. Although federal and state governments have implemented programs to promote community reintegration postdeployment, evidence of the effectiveness of these programs is lacking. Furthermore, although more than half of Iraq-Afghanistan combat veterans had an interest in receiving readjustment services through a VA medical facility, not all VA health care providers have the training, skills, or time to assist veterans with the broad range of problems they reported. Many of the problems that veterans endorsed, including social functioning, employment issues, anger control, and spiritual struggles, fall outside the traditional scope of medical practice. VA mental health providers, who usually have the requisite skills to address these issues, may struggle to keep up with demand. Furthermore, it remains unknown whether evidence-based treatments for PTSD would lead to satisfactory improvements in functional and readjustment outcomes. Functional outcomes are not always included in PTSD trials, and results from

Table 5

Reintegration problems among Iraq-Afghanistan combat veterans who use Department of Veterans Affairs (VA) medical services, by PTSD screening results^a

Variable	Positive PTSD screen (N=291)			Negative PTSD screen (N=463)			Negative versus positive screening results ^b	
	N ^c	% ^d	SE	N ^c	% ^d	SE	OR ^e	95% CI
Area of some to extreme difficulty over the past 30 days								
Confiding or sharing personal thoughts and feelings	251	87	.03	172	35	.03	13.78	7.68–24.71
Dealing with strangers	206	70	.04	108	25	.03	7.42	4.48–12.27
Making new friends	208	70	.03	116	26	.03	6.77	4.22–10.86
Keeping up nonmilitary friendships	213	69	.04	138	28	.03	5.55	3.45–8.93
Keeping up military friendships	120	41	.04	95	18	.02	3.10	1.92–4.99
Getting along with relatives	177	59	.04	90	16	.02	7.48	4.53–12.35
Getting along with spouse or partner ^f	166	63	.04	114	27	.03	4.46	2.72–7.31
Getting along with children ^f	99	50	.04	47	14	.02	6.22	3.38–11.47
Finding or keeping a job ^f	121	43	.04	57	13	.02	5.45	3.05–9.75
Doing what is needed for work or school ^f	171	60	.05	91	17	.03	7.34	4.31–12.50
Taking care of chores at home	197	66	.04	128	23	.03	6.91	4.23–11.28
Taking part in community activities	224	78	.03	148	29	.03	9.36	5.64–15.52
Belonging in “civilian” society	219	76	.03	132	29	.03	8.42	4.97–14.29
Taking care of health	207	72	.03	135	25	.03	7.96	4.94–12.82
Enjoying or making use of free time	230	76	.03	148	27	.03	8.85	5.44–14.41
Finding meaning or purpose in life	198	68	.04	111	23	.03	7.83	4.86–12.63
Problem experienced since homecoming								
More problems controlling anger	233	84	.03	181	38	.03	8.89	5.11–15.49
Thoughts or concerns about hurting someone	163	61	.04	79	17	.02	7.88	4.75–13.06
Drinking or using drugs more	136	48	.04	75	20	.03	3.76	2.31–6.14
Dangerous driving noticed by others	144	54	.04	85	22	.03	4.54	2.80–7.35
Divorce or separation	149	46	.04	140	27	.03	2.21	1.37–3.56
Legal problems	82	30	.04	60	14	.02	2.84	1.69–4.77
Job loss	105	35	.03	67	16	.02	2.84	1.70–4.77
Problems accessing adequate health care	121	38	.04	97	20	.03	2.53	1.55–4.11
Lost touch with spirituality or religious life	182	67	.04	131	25	.03	6.46	4.00–10.43

^a PTSD, posttraumatic stress disorder

^b Stratified logistic regression models were used to compute odds ratios, with adjustment for potential nonresponse bias and the following covariates: age, gender, race-ethnicity, and military component.

^c Unweighted

^d Weighted to be representative of Iraq-Afghanistan combat veterans who use VA medical services. Missing values were imputed, and values have been adjusted with propensity scores for potential nonresponse bias.

^e Significant at $p < .001$

^f Sample size is smaller for items concerning marriage, employment, schooling and children because participants could indicate “does not apply.”

some trials suggest that functional improvement does not always accompany symptom reduction (44).

In contrast to the rate of PTSD diagnosis indicated in VA medical records, we identified a substantially higher rate based on responses to the Primary Care PTSD Screen (27% versus 41%, respectively). We do not know whether the medical record rate is more or less accurate than our survey screening rate. Before the post-September 11 “war on terror,” PTSD was underdiagnosed in VA medical records, with provider detection of PTSD having 46.5% sensitivity and 96.6% specificity (45). Research is warranted to determine whether PTSD is underrecognized among Iraq-Afghanistan veterans, despite use

of a health care system that specializes in PTSD diagnosis and treatment.

The prevalence of probable PTSD identified through our survey exceeds that obtained in surveys of active-duty Army and Marines conducted within one year postdeployment (1,14) and a population-based telephone survey of military personnel conducted up to five years postdeployment (6). However, prevalence of probable PTSD was lower than the rate reported in a study of veterans screened for PTSD at one VA facility using the same assessment instrument and cutoff score we used in our study (46). One would expect PTSD to be more prevalent among treatment-seeking combat veterans, many of whom have service-related disabilities, than among veterans who

are not seeking treatment. Also, our study differed from prior survey studies in terms of sampling strategy, measures, measurement context (research versus clinical), and time of assessment relative to deployment, which limits comparability. A recent study that used a dynamic mathematical model combined with data from the Iraq war estimated that the rate of PTSD among Iraq war veterans will approximate 35% (47). This estimate takes into account the lag time between trauma exposure and symptom onset as well as the fact that many troops included in prevalence studies will have subsequent deployments.

There may have been important differences between survey responders and nonresponders that we were un-

able to identify using the VA administrative data. These unaccounted-for differences could have biased our population estimates. In addition, the study population included Iraq-Afghanistan veterans who use VA services and who were classified as combat veterans. At the time of this report, about 56% of Iraq-Afghanistan veterans were not enrolled in the VA, and of those enrolled, 40% were not classified as combat veterans. We speculate that the Iraq-Afghanistan veterans included in our sampling frame may carry a greater burden of illness than non-combatants and those who do not use the VA for health care. Because the VA is the largest single provider for returning combatants, it was important to focus our initial attention on this large and important group. However, it is unclear whether Iraq-Afghanistan veterans who receive care in the community have the same issues as those seeking VA care. Nonetheless, our findings provide a starting point for the types of issues that community providers should be alert for when treating Iraq-Afghanistan veterans.

Limitations associated with our questionnaire include use of a screening measure to identify probable PTSD rather than gold-standard diagnostic interviews. A study of Dutch Army troops found that self-report symptom measures overestimated the rate of PTSD relative to clinical interview (48). Even in cases where our screening measure identified true cases of PTSD, we do not know whether the PTSD was related to combat in Iraq or Afghanistan or to other traumatic experiences. Evidence suggests that 9%–10% of service members screen positive for PTSD before deployment to Afghanistan or Iraq (1,49), underscoring the need to consider predeployment mental health when drawing conclusions based on these findings. Unfortunately, information on VA disability status was of limited use for verifying deployment-related PTSD in our sample because veterans may wait years to decades before filing a claim for PTSD, if they file at all (50,51), and we cannot assume that all veterans in our sample had filed PTSD claims. Also, there were important areas that we did not assess in this brief mail survey, including sui-

cidal ideation and depression. Last, it was beyond the scope of this study to address questions concerning differences in community reintegration problems according to psychiatric diagnoses other than probable PTSD, any versus no psychiatric disorder, or by number and type of medical comorbidities. Future studies should address these limitations.

On the other hand, strengths of this study include our ability to provide population-based estimates for Iraq-Afghanistan combat veterans who receive VA medical care and use of a rich sampling frame to adjust for potential nonresponse bias. In addition, soldiers activated from the reserves and the National Guard, who are often underrepresented in research (9), were well represented here.

Conclusions

Functional problems were common among Iraq-Afghanistan combat veterans who use the VA for medical care. Further, the vast majority were interested in interventions or information to help them adjust to community life. We also found that probable PTSD was closely linked to readjustment problems and to interest in treatment for these reintegration difficulties. It is unknown whether interest in treatment translates to treatment seeking for postdeployment functional problems. Veterans with community reintegration problems may face barriers to help seeking beyond the cost of medical care. For example, the stigma of mental illness has been found to be a barrier to treatment seeking among soldiers and veterans returning from combat in Iraq or Afghanistan (1,42). Whether people returning from these wars with PTSD symptoms and related mental health problems would be more receptive to interventions labeled as “community reintegration services” than to mental health treatments for conditions such as PTSD is an important area for future research. Our findings also underscore the need for research on innovative strategies to deliver readjustment services, including those that make use of the Internet. Overall, results from this survey point to the need for more in-depth study of the problems that Iraq-Afghanistan veterans face when adjusting to civilian life and

their preferences for interventions or services to facilitate their community reintegration.

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