

# Family Problems Among Recently Returned Military Veterans Referred for a Mental Health Evaluation

Steven L. Sayers, Ph.D.; Victoria A. Farrow, B.S.;  
Jennifer Ross, M.S.; and David W. Oslin, M.D.

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**Context:** Existing evidence suggests that military veterans with mental health disorders have poorer family functioning, although little research has focused on this topic.

**Objective:** To test whether psychiatric symptoms are associated with family reintegration problems in recently returned military veterans.

**Design:** Cross-sectional survey of a clinical population. Respondents who were referred to behavioral health evaluation from April 2006 through August 2007 were considered for the survey.

**Setting:** Philadelphia Veterans Affairs Medical Center, Pa.

**Participants:** 199 military veterans who served in Iraq or Afghanistan after 2001 and were referred for behavioral health evaluation from primary care (mean age = 32.7 years, SD = 9.1).

**Main Outcome Measures:** Measures included the Mini-International Neuropsychiatric Interview for psychiatric diagnoses, the 9-item Patient Health Questionnaire for depression diagnosis and severity, and screening measures of alcohol abuse and illicit substance use. A measure of military family readjustment problems and a screening measure of domestic abuse were developed for this study.

**Results:** Three fourths of the married/cohabiting veterans reported some type of family problem in the past week, such as feeling like a guest in their household (40.7%), reporting their children acting afraid or not being warm toward them (25.0%), or being unsure about their family role (37.2%). Among veterans with current or recently separated partners, 53.7% reported conflicts involving "shouting, pushing, or shoving," and 27.6% reported that this partner was "afraid of them." Depression and posttraumatic stress disorder symptoms were both associated with higher rates of family reintegration problems.

**Conclusions:** Mental health problems may complicate veterans' readjustment and reintegration into family life. The findings suggest an opportunity to improve the treatment of psychiatric disorders by addressing family problems.

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Corresponding author and reprints: Steven L. Sayers, Ph.D., VISN 4 MIRECC 116, Philadelphia VA Medical Center, 3900 Woodland Ave., Philadelphia, PA 19104 (e-mail: Steven.sayers@va.gov).

**M**embers of the military returning from recent conflicts in Afghanistan and Iraq face increased risk of postdeployment psychiatric disturbance. The prevalence of mental health problems among service members returning from Iraq has been reported as 19.1%, with a somewhat lower rate among those returning from Afghanistan (11.3%), compared to 8.5% for those returning from other locations during the same time period.<sup>1</sup> There is evidence that combat trauma leads to substantial long-term impact on family functioning.<sup>2</sup> There has been a great deal of interest in preparing families whose service member is being deployed and preparing veterans for returning to their family.<sup>3-7</sup> Unfortunately, there has been relatively little systematic research on the near-term effects of military-related trauma on family members or the processes of readjustment and family reintegration in the context of such problems.

The National Vietnam Veterans Readjustment Study (NVVRS)<sup>2</sup> was the most comprehensive examination of long-term adjustment of Vietnam era veterans and included the assessment of their family difficulties. An

## FOR CLINICAL USE

- ◆ Both posttraumatic stress disorder (PTSD) and depression are highly prevalent among Iraq and Afghanistan veterans who are referred for psychiatric evaluation.
- ◆ Recently returned military veterans with depression or PTSD are about 5 times more likely to have a problem with family readjustment than veterans without these diagnoses.
- ◆ Avoidant, withdrawn, or anxious symptom domains appear to be most highly associated with family problems among recently returned military veterans.

important conclusion of the study was that veterans with higher levels of war-related trauma and posttraumatic symptomatology had poorer family functioning and greater domestic violence than those without trauma. There is also evidence from the NVVRS<sup>8</sup> and other samples<sup>9,10</sup> that marital problems and predeployment psychopathology serve as risk factors for family violence among those with posttraumatic stress disorder (PTSD). The NVVRS was a landmark study, but it is important to note that it examined postdeployment readjustment more than a decade after the U.S. withdrawal from Vietnam and thus was not able to address questions of readjustment in the first year or 2 following return from deployment. Furthermore, the report had a particular emphasis on the long-term effects of PTSD, which reflected the priorities of the federal law that enabled and funded the study. There have been very few studies that systematically examined family readjustment or domestic violence among veterans from recent military conflicts.

The existing literature suggests that although military deployments are stressful for service members and their families, the most negative impact of deployment is associated with war trauma and associated psychiatric symptoms. A RAND study conducted a systematic examination of the effects of deployments to Iraq and Afghanistan on marriage among the broad population of these service members, finding little evidence that increased service demands of the recent military conflicts were associated with increased risk of marital dissolution.<sup>11</sup> Service members cite both positive and negative effects on their spousal relationships.<sup>12</sup> Only 1 published study has examined the effects of trauma on subsequent marital satisfaction of recently returned veterans. Goff and colleagues<sup>13</sup> found that trauma symptoms in Iraq and Afghanistan war veterans significantly predicted lower marital satisfaction in the veteran and partner within the first year postdeployment.

Little research has focused on the specific problems cited by anecdotal sources and clinical literature that may inform interventions to help veterans reintegrate into the family context. Children sometimes may be fearful or lack warmth toward the returning veteran, which may exacerbate the difficulty veterans face in redeveloping family relationships.<sup>7</sup> Similarly, veterans have been reported

to experience difficulty rediscovering their role in the family or difficulty renegotiating this role with the spouse who has managed the family in the service member's absence.<sup>7</sup> Military separation programs identify a common experience of feeling like a "guest in your own home" as a challenge, which may be more difficult if the veteran is experiencing psychiatric distress. Drawing from the literature documenting the impact of war trauma on subsequent psychosocial adjustment,<sup>2,8-10</sup> it is likely that some of these experiences may be more highly associated with the specific symptoms of PTSD or major depression. For example, emotional numbing and anhedonia may be associated with feeling like a guest, and irritability and startle associated with PTSD hyperarousal may be associated with the greater spousal conflict.

The current study focuses on the rates of family readjustment problems of recent veterans of the Iraq or Afghanistan conflicts screened in primary care and referred for psychiatric evaluation. We examined whether the prevalence of these problems was greater for those with psychiatric diagnoses and substance abuse problems, compared to those without these conditions. We hypothesized that the severity of psychiatric distress would be positively associated with the degree or number of family readjustment or domestic abuse problems. We also tested whether those with psychiatric distress were more likely to report role-related difficulties, that is, problems relating to their children or with one's roles and responsibilities in the family. In exploratory analyses, we tested whether specific symptoms of depression and PTSD were associated with specific family readjustment and domestic abuse problems. We anticipated that emotional numbing and anhedonia would be more highly associated with role-related difficulties and that hyperarousal symptoms would be more highly associated with spousal conflict.

## METHOD

### Participants

Potential respondents to this survey were veterans referred by primary care clinicians of the Philadelphia Veterans Affairs Medical Center to the Behavioral Health Laboratory (BHL) for a behavioral health evaluation.<sup>14</sup> The vast majority of patients are referred to the BHL after

having screened positive on the Patient Health Questionnaire (PHQ)-2<sup>15,16</sup> for depression, the PTSD-Patient Checklist (PCL) screen,<sup>17</sup> or the Alcohol Use Disorders Identification Test<sup>18</sup> for alcohol misuse, rather than solely based on clinical judgment. The BHL is a psychiatric evaluation service that conducts structured telephone-based assessments for initial behavioral health triage and treatment planning, using a broad range of semi-structured core assessment measures (see Behavioral Health Evaluation section, below). Respondents who were reached for BHL evaluation from April 2006 through August 2007 were considered for the survey if they had reported military service in Afghanistan (Operation Enduring Freedom [OEF]) or Iraq (Operation Iraqi Freedom [OIF]) since 2001, or in the air or sea near these theaters of war. We made no distinctions for the current study between those retiring from active duty and those accessing services while returning to National Guard duty or reserve units.

### Behavioral Health Evaluation

The BHL evaluation began with basic demographics, including age, race, and ethnicity. Patients over the age of 54 were also assessed for cognitive impairment using the Blessed Orientation-Memory-Concentration Test (BOMC)<sup>19,20</sup>; the full evaluation was not completed for patients with more than 16 errors on the BOMC, due to potential unreliability. The Patient Health Questionnaire (PHQ-9)<sup>21</sup> was used to assess severity of depressive symptoms and to obtain provisional diagnoses of major depression or minor depression.<sup>21,22</sup> The BHL utilized screening questions regarding illicit substance use during the past year. The interview also assessed alcohol use with a 7-day timeline follow-back method supplemented with the average number of binge drinking episodes in the prior 3 months.<sup>23</sup> Patients who were positive for at-risk alcohol were evaluated further using the alcohol module on the Mini-International Neuropsychiatric Interview (MINI).<sup>24</sup> The MINI is a well-validated, brief structured interview for DSM-IV and ICD-10 syndromes. For all respondents, in addition to substance use, the BHL utilized the MINI modules for mania, psychosis, panic disorder, generalized anxiety disorder, and PTSD. Seven percent (N = 14) were evaluated for PTSD using the PTSD-PCL-C,<sup>17</sup> due to an administrative decision to change PTSD evaluation in the BHL assessment battery. All diagnoses were considered provisional given that the assessments were conducted by telephone. The Medical Outcomes Study Short Form (SF-12) (version 2.0),<sup>25,26</sup> which closely mirrors the full SF-36, yielded a mental component summary (MCS) score and a physical component summary (PCS) score.

We created component scores using the PTSD measures to examine hypotheses about the type of psychiatric symptoms most highly associated with specific family

problems. We relied on several factor analytic studies<sup>27-29</sup> and expert clinical analyses<sup>30</sup> of the syndrome to create an index of presence/absence for each of 4 components, based on the presence of any symptom within that cluster: *re-experiencing* (dreams, disturbing recollections, or flashbacks), *avoidance* (avoid thinking about the trauma or reminders of the trauma), *numbing* (emotional numbing, difficulty remembering aspects of the trauma, emotional detachment, loss of interest, sense of foreshortened life), and *hyperarousal* (difficulty sleeping, irritability, difficulty concentrating, nervous/on guard, enhanced startle). We did not use component scores to test hypotheses about specific depressive symptoms in association with specific family problems; current empirical evidence supports only the unidimensionality of the PHQ-9 measure of depression.<sup>31</sup>

### Family Readjustment and Domestic Abuse

We developed a screening tool to examine the extent of family difficulties in returning veterans. Four questions assessed the number of children and relationship status (i.e., married or living as married, recently separated or divorced, or not married). Each question regarding family problems had a response value of 1 ("yes"), 0 ("no" or "I don't know/refused"), consistent with the majority of questions in the BHL evaluation. Several items assessed family role-related reintegration concerns, only for veterans who were married or living with an intimate partner. The items included the following: (1) being "unsure of the division of responsibilities in your family," (2) "disagreements about the division of responsibilities in the family," (3) children "not acting warmly toward you" or acting "afraid of you" (skipped for those without children), and (4) feeling like a "guest or outsider in your own home." Respondents also were asked to estimate the frequency of each problem or concern that they endorsed. An additional question that assessed relationship quality was used that discriminates between maritally nondistressed and maritally distressed spouses<sup>32</sup>: 0 ("successful overall") or 1 ("troubled"). We constructed an index of family readjustment, which consisted of the sum of the items above (range, 0-5).

Several items were used to screen for domestic abuse and violence during arguments or conflicts in the past 6 months with a current or former partner. Item content and wording were drawn from commonly used assessment tools such as the Conflict Tactics Scale.<sup>33</sup> The content reflected lower intensity behaviors potentially associated with psychological intimidation and risk of injury and extending to items that reflect physical injury of the respondent, spouse, or children. The items included the following behaviors/feelings: (1) "shouting, pushing or shoving," (2) anyone getting "hurt (during disagreements/arguments)," (3) feeling "afraid of your partner (or former partner)," (4) children being "hurt or threatened during an

**Table 1. Demographic Characteristics of Military Veterans Who Served in Iraq or Afghanistan After 2001 and Were Referred for Behavioral Health Evaluation From Primary Care<sup>a</sup>**

Characteristic	Men (N = 178)	Women (N = 21)	All (N = 199)
Age, mean (SD), y	32.5 (9.0)	34.2 (10.6)	32.7 (9.1)
Gender, %	89.5	10.5	...
Married/live-in, N (%)	83 (46.6)	3 (14.3)	86 (43.2)
Separated/divorced, N (%)	40 (22.5)	8 (38.1)	48 (24.1)
No partner, N (%)	55 (30.9)	10 (47.6)	65 (32.7)
Race, N (%)			
Black/African American	...	...	64 (32.2)
White	...	...	106 (53.3)
Asian	...	...	4 (2.0)
Mixed or other	...	...	22 (11.1)
Refused	...	...	3 (1.5)
Veterans with children, N (%)	...	...	108 (54.3)
No. of children, mean (SD) <sup>b</sup>	...	...	2.0 (1.3)
Days from return from deployment, mean (SD) <sup>c</sup>	...	...	585.6 (403.4)
Days from discharge from active duty, mean (SD) <sup>c</sup>	...	...	415.8 (374.4)
Branch of service, N (%) <sup>d</sup>			
Army	...	...	70 (50.0)
Navy	...	...	16 (11.4)
Air Force	...	...	3 (2.1)
Marine Corps	...	...	24 (17.1)
Army or Air Force Reserves	...	...	6 (4.3)
National Guard	...	...	21 (15.0)
SF-12 physical component summary, mean (SD)	...	...	48.8 (12.6)
SF-12 mental component summary, mean (SD)	...	...	35.8 (13.5)

<sup>a</sup>Percentages may not sum to 1.0 due to rounding error.

<sup>b</sup>Data based only on the veterans who have children.

<sup>c</sup>Data regarding days since return and discharge were available only for about half of the sample (N = 98 and N = 97, respectively).

<sup>d</sup>Branch data were missing for 29.7% of the respondents; results were based on nonmissing data.

Abbreviation: SF-12 = Medical Outcomes Study Short Form.

Symbol: ... = not applicable.

argument,” (5) partner or former partner feeling “afraid of you,” and (6) a partner from a previous relationship “who is making you feel unsafe now.” We formed an index of domestic abuse using the sum of the positive response to the items above, with possible values ranging from 0 to 6. An additional item asked the respondent to report whether they owned a weapon as an index of the safety risk present in the context of domestic abuse and to screen for safety concerns. Exact wording of the items described above can be obtained from the first author.

Appropriate clinical contact was made to assess possible safety issues regarding domestic violence. All procedures involving research with the BHL evaluations were reviewed and approved by the Institutional Review Board of the Philadelphia VA Medical Center.

### Data Analyses

To describe the sample of referred veterans, we examined means and standard deviations of demographic and clinical variables. Rates of positive responses to the fam-

ily readjustment and domestic abuse items, as well as the MINI diagnoses, were examined using 95% confidence intervals. Using  $\chi^2$  tests, we compared the study sample on age and rates of psychiatric problems to the broader sample of non-OEF-OIF patients who were referred for evaluation from the medical center’s primary care providers during that same time period. Similarly, we examined whether those serving in the OEF or OIF conflicts from Reserve or National Guard units had different rates of family problems or different rates of psychiatric distress compared to those who were deployed from regular Army, Navy, Air Force, or Marine units.

We used Spearman correlations to test whether the number of family readjustment or domestic abuse problems was associated with severity of depressive symptoms on the PHQ-9, and we evaluated general psychiatric functioning using the SF-12 MCS. We used  $\chi^2$  and odds ratios to test whether the prevalence of having family readjustment or domestic abuse problems was higher for those who had specific psychiatric diagnoses compared to those without these diagnoses.

Exploratory analyses examined whether specific depressive and PTSD symptoms were associated with specific role-related family adjustment problems. We used logistic regression to examine the association of specific depression symptoms to individual family problems, including domestic abuse items. For each model, PHQ items were entered as a block with the presence/absence of each family problem as the dependent variables. We also used odds ratios to examine whether specific types of PTSD symptoms were associated with the presence/absence of specific family problems and domestic abuse.

## RESULTS

### Patient Characteristics

Two hundred two veterans who were evaluated by the BHL reported participating in the recent conflicts in Afghanistan and/or Iraq. All of those requested to answer additional questions regarding their family and their readjustment to civilian life consented, and 199 had complete data. As shown in Table 1, most of the respondents were male, and less than half were currently married or living as married. There was substantial minority representation among the respondents. The mean ages of men and women were in the low 30s and were not significantly different ( $t = 0.76$ ,  $p > .05$ ,  $df = 198$ ). Men and women did not report having children in significantly different proportions ( $\chi^2 = 2.63$ ,  $df = 1$ ,  $p > .05$ ). Among those with children, men and women did not report significantly different numbers of children ( $t = -0.55$ ,  $p > .05$ ,  $df = 102$ ). Available data indicated that on average the respondents had returned from deployment and separated from military service less than 2 years prior to assessment. The mean SF-12 MCS score indicated that on average the

**Table 2. Prevalence of Provisional Diagnoses and Clinical Conditions of All Respondents (N = 199)<sup>a</sup>**

Diagnosis/Condition	%	95% CI
Any depression	72.0	65.8 to 78.2
Major depression	39.5	32.7 to 46.3
Generalized anxiety disorder	45.7	38.3 to 52.7
Mania	12.1	7.5 to 16.7
Posttraumatic stress disorder	47.2	43.0 to 54.2
Panic disorder	7.5	3.9 to 11.2
Psychosis	3.5	1.0 to 6.1
At-risk alcohol use	35.2	28.5 to 41.8
Illicit drug use	3.5	1.0 to 6.1

<sup>a</sup>Symptom categories are not mutually exclusive.

respondents had mental health functioning lower than 84% of the general population,<sup>26</sup> with physical health functioning similar to community (or nonclinical) population average. We were able to obtain information on the branch of service of 70.4% of the participants. Among the participants with this information, about half had served in the Army (i.e., not deployed through Army Reserve units). A minority of the participants served in Iraq or Afghanistan from National Guard or Reserve units (see Table 1).

The rates of current provisional diagnoses and clinical conditions among all OEF-OIF respondents with complete data appear in Table 2. The rates were consistent with a referred clinical population, ranging from 72% with major or minor depression to 3.5% with illicit drug use and psychotic symptoms. One of the  $\chi^2$  tests indicated a greater prevalence of mania symptoms among those from National Guard or Reserve units compared to those deployed from regular units ( $\chi^2 = 6.43$ ,  $df = 1$ ,  $p < .05$ ; 26.9% vs. 8.9%). None of the other tests of diagnosis by major type of service branch were significant (all  $p$  values  $> .05$ ).

The participants in the current study tended to be younger than the 4619 non-OEF-OIF patients who were referred for evaluation from the medical center's primary care providers during that same time period ( $t = -38.0$ ,  $df = 243$ ,  $p < .0001$ ; OEF-OIF, mean = 32.7,  $SD = 9.1$ ; non-OEF-OIF, mean = 58.6,  $SD = 14.1$ ). Significantly more OEF-OIF participants were classified as "complex," because of either suicidal ideation or presence of complex symptoms ( $\chi^2 = 14.2$ ,  $df = 1$ ,  $p < .001$ ; 59.6% vs. 45.8%). Analyzing complex patients only in each group indicated that complex OEF-OIF participants had higher rates of PTSD symptomatology ( $\chi^2 = 25.0$ ,  $df = 1$ ,  $p < .0001$ ; 79.7% vs. 56.1%) and lower rates of illicit drug use ( $\chi^2 = 7.21$ ,  $df = 1$ ,  $p < .01$ ; 5.9% vs. 14.9%) compared to complex non-OEF-OIF patients.

### Rates of Family Adjustment and Domestic Abuse

As shown in Table 3, more than 75% of the patients with partners reported some family readjustment issue. Among those reporting some family issue, 66.6% or

greater reported that one of these concerns occurred on a weekly basis. Substantial percentages of veterans reported problems related to their role as a partner or parent. The test of overall rates of family problems by major type of service branch was not significant ( $p > .05$ ).

Also shown in Table 3, a substantial proportion of the veterans with current or recent past partners reported some type of domestic abuse ranging from mild to moderate severity. The importance of potential violence was underscored by the fact that almost one quarter reported the presence of guns in the home. The test of overall rates of domestic abuse by major type of service branch was not significant ( $p > .05$ ).

### Prevalence of Family Problems and Psychiatric Disorder

Correlational analyses indicated that depressive symptom severity (PHQ-9 total score) was associated with the index of family problems among those with partners ( $r = .39$ ,  $p < .0001$ ,  $N = 86$ ) and the index of domestic abuse among those with partners or former partners ( $r = .23$ ,  $p < .01$ ,  $N = 134$ ). Similarly, the SF-12 MCS variable was associated with the index of family problems ( $r = -.42$ ,  $p < .001$ ,  $N = 86$ ) and the index of domestic abuse ( $r = -.28$ ,  $p < .01$ ,  $N = 134$ ). The SF-12 PCS was not correlated with either index of family problems.

Table 4 presents the results that show that the prevalence of family problems was higher among those with provisional psychiatric diagnoses. The depressive and anxiety symptom domains were most consistently associated with family problems. Because of the previous literature suggesting higher prevalence of domestic abuse among those with PTSD, we used exploratory analyses to examine the individual domestic abuse items among those with this diagnosis. None of these analyses were significant, indicating no evidence of higher prevalence of specific forms of domestic abuse based on the diagnosis of PTSD.

### Psychiatric Symptoms and Specific Role-Related Family Problems

Exploratory analyses with the individual role-related reintegration items (i.e., "guest in own home," "unsure" or "conflict about" household responsibilities, or reported "lack of warmth from child/child afraid") suggested that a major depression diagnosis was associated with increased likelihood of being unsure about one's responsibilities in the home (OR = 2.6, 95% CI = 1.0 to 6.3). Diagnoses of major depression (OR = 3.6, 95% CI = 1.5 to 8.9) and PTSD (OR = 3.2, 95% CI = 1.3 to 7.9) were associated with increased likelihood of feeling like a guest in one's own home. Among partnered veterans with children, PTSD was associated with children acting afraid or not acting warm toward the veteran (RR = 5.5, 95% CI = 1.5 to 18.9).

**Table 3. Prevalence of Family Readjustment Problems and Domestic Abuse**

Issue	Married/Partnered (N = 86)		Married/Partnered + Separated/Divorced (N = 134)	
	%	95% CI	%	95% CI
Feel like guest	40.7	30.3 to 51.1	...	...
Children not warm/afraid	25.0 <sup>a</sup>	14.4 to 35.6	...	...
Unsure of responsibilities	37.2	27.7 to 47.4	...	...
Disagree about responsibilities	57.0	46.5 to 67.4	...	...
Troubled relationship	57.8	47.2 to 67.5	...	...
Any family issue	77.9	67.9 to 88.7	...	...
Shout/push/shove	...	...	53.7	45.3 to 62.2
You afraid	...	...	9.7	4.7 to 14.7
Partner afraid of you	...	...	27.6	20.0 to 37.6
Afraid of previous partner	...	...	2.6	0.0 to 5.4
Anyone hurt	...	...	4.4	1.0 to 7.9
Any domestic abuse	...	...	60.0	51.4 to 68.0
Guns in home	...	...	24.6	17.3 to 31.9

<sup>a</sup>N = 64 for veterans with partners who reported having children. None of the respondents acknowledged hurting or threatening to hurt their children during a disagreement or conflict, so the data were not tabled. Symbol: ... = not applicable.

**Table 4. Odds Ratios of Family Readjustment and Domestic Abuse Problems in Veterans With Specific Provisional Diagnoses<sup>a</sup>**

Diagnosis/Condition	Any Readjustment Problem <sup>b</sup> (N = 86)		Any Domestic Abuse Problem <sup>c</sup> (N = 134)	
	OR	95% CI	OR	95% CI
Any depression	8.7	2.8 to 27.1***	2.5	1.2 to 5.6*
Major depression	5.2	1.4 to 19.4**	1.8	0.8 to 3.7
Generalized anxiety disorder	2.5	0.9 to 7.4	2.4	1.2 to 4.8*
Mania	...	...	1.7	0.6 to 5.2
Posttraumatic stress disorder	4.9	1.5 to 16.4**	1.7	0.9 to 3.5
Panic disorder	2.1	0.2 to 18.2	1.0	0.3 to 3.8
At-risk alcohol use	1.7	0.5 to 5.8	1.7	0.8 to 3.7

<sup>a</sup>The analyses involving psychosis and illicit drug use (and for mania in the case of readjustment problems) resulted in zero observed or low (N < 5) expected cell count and were deemed invalid; thus, these results are not tabled.

<sup>b</sup>Married/partnered.

<sup>c</sup>Married/partnered + separated/divorced.

\*p < .05.

\*\*p < .01.

\*\*\*p < .001.

Symbol: ... = not applicable.

Logistic regression analyses of individual depressive symptoms entered as a block indicated that depressed mood was significantly associated with feeling like a guest ( $\chi^2 = 18.7$ ,  $df = 9$ ,  $p < .05$ , OR = 2.2, 95% CI = 1.0 to 4.5). None of the tests of individual depressive symptoms were significant in the context of this regression model (all p values > .05). Other models predicting specific family problems from depressive symptoms indicated a significant role for psychomotor symptoms (i.e., motor retardation or being fidgety/restless) in greater likelihood of children reportedly being not warm or afraid of the veteran ( $\chi^2 = 19.5$ ,  $df = 9$ ,  $p < .05$ , OR = 2.1, 95% CI = 1.1 to 4.1) and the veteran reporting dis-

agreements with his/her partner regarding household responsibilities ( $\chi^2 = 17.9$ ,  $df = 9$ ,  $p < .05$ , OR = 1.9, 95% CI = 1.2 to 3.2).

Among the PTSD symptom component scores (i.e., re-experiencing, avoidance, numbing, and hyperarousal), the presence of avoidance was associated with having at least 1 role-related family problem ( $\chi^2 = 4.1$ ,  $df = 1$ ,  $p < .05$ , OR = 2.5, 95% CI = 1.0 to 5.9). Similarly, emotional numbing was associated with having at least 1 role-related family problem ( $\chi^2 = 6.8$ ,  $df = 1$ ,  $p < .01$ , OR = 3.3, 95% CI = 1.3 to 8.1). None of the tests involving PTSD symptom component scores were significant for the role-related symptoms, analyzed individually (all p values > .05).

There were no significant associations among the omnibus tests between depressive symptoms and specific domestic abuse items (all p values > .05). Similarly, none of the  $\chi^2$  tests indicated any significant association between the PTSD symptom component scores (i.e., re-experiencing, avoidance, numbing, and hyperarousal) and any of the specific domestic abuse items (all p values > .05).

## DISCUSSION

Relatively little empirical research has focused on the family problems of veterans in the first year or 2 following their return from a major military conflict. The current findings highlight the robust associations of a range of family problems with psychiatric distress in a cohort of relatively healthy, recent military veterans referred for mental health evaluation. As expected, family problems among those with current partners were common, and over half of partnered veterans reported marital discord. Although marital and family problems are known to be common among those with mental health problems such

as depression,<sup>34,35</sup> the contribution of this study is the examination of specific problems confronted by returning war veterans.

In our sample, specific role-related readjustment problems were related to both depression and PTSD. Role issues refer specifically to the veteran's difficulties in renegotiating his or her place in the family, in terms of one's relationship with their children, parental or spousal responsibilities, and being comfortable in one's family and household. These data may reveal ways in which psychiatric distress may disrupt normal family functioning in the current sample of veterans. Over 40% of the veterans with partners indicated they have felt like a "guest" in their home, and we found that those with depression were more likely to have these feelings on a weekly basis. Whereas about 25% of veterans overall reported that their children were acting afraid of them or did not act warmly toward them, those with PTSD were more likely to have this experience. Analysis of the specific avoidant, withdrawn, or anxious symptom domains suggest that these symptoms may lead to problems in regaining their spousal and parental roles. It may also reflect the difficulty veterans with PTSD may have in feeling close to their family members. The type of service branch (regular units vs. National Guard or Reserve) from which these participants were deployed was not a significant factor in our results.

The rates of domestic abuse are striking given that the only source of information was the veterans themselves; self-report of domestic violence has been demonstrated to produce rates that are 10% lower than rates drawn from both relationship partners.<sup>36</sup> Over 50% reported a mild to moderate level of domestic abuse, close to a third reported that their partner is afraid of them, and 4.4% acknowledged injury to either the service member or the partner during recent interpersonal conflicts. Thus, various forms of abuse or violence are clearly a prominent feature of relationship difficulties faced by veterans in this clinical sample. Although the rates drawn from our brief screening instrument cannot be directly compared to standard measures of interpersonal violence, epidemiologic studies report that among military samples, 10.8% of men reported moderate violence (i.e., pushing/shoving or some form of hitting), and 2.5% reported severe violence (i.e., severe assault, or violence or threats of violence involving a weapon).<sup>37</sup>

These findings also point toward opportunities in the Veterans Health Administration to help family readjustment of a particularly vulnerable subpopulation of veterans: those referred for behavioral health evaluation. Co-occurring family problems have the potential of limiting the social support available to the veteran, thus reducing a positive response to treatment for any psychiatric disorder that is present. In addition, some family problems, including domestic abuse and marital discord, have the potential to exacerbate conditions such as depression. Marital and

family based treatments of psychiatric disorders exist that may be helpful in treating veterans with both marital and psychiatric problems.<sup>38</sup> The relevance of these interventions to the current population is not immediately clear, however. There is very little empirically based information known about the normal processes of family reintegration after combat experiences, except that higher levels of war trauma increase adjustment problems both within the family as well as in other parts of veterans' lives. Future research should focus on prototypical stages of family reintegration as well as ways psychiatric problems may complicate this process.

A limitation of the findings concerning psychiatric symptom categories and family problems is that there is no consensus on PTSD symptom clusters in the literature. However, when we used an alternative clustering strategy based on Palmieri and colleagues,<sup>29</sup> there was little impact on the findings. Additionally, our assessment of family reintegration problems was limited by the lack of existing measures of these types of problems. Similarly, our measure of domestic abuse was adapted for this study from existing measures in order to limit respondent burden; this hampered our ability, however, to compare overall rates to other studies using standard measures.

Because this study utilized a clinically referred sample, one should not generalize beyond similar clinical populations to the general population of veterans returning from current military conflicts. The cross-sectional nature of the assessment limits us from drawing any conclusions about the causal nature of military deployment on either psychiatric distress or family problems. Predeployment domestic abuse<sup>9,10</sup> and other vulnerabilities of the marital relationships could certainly impact postdeployment reintegration problems that we were not able to assess. Furthermore, we were not able to assess the partners or former partners of the veterans, so supportive evidence from other sources was not available. However, given the self-report nature of the assessments, it is noteworthy that these veterans with mental health problems acknowledged high rates of family problems, and specific types of reintegration problems were associated with their level of psychiatric distress on well-validated measures. These findings support the effort to understand more about how to help veterans experiencing both psychiatric problems and family difficulties.

**Disclosure of off-label usage:** The authors have determined that, to the best of their knowledge, no investigational information about pharmaceutical agents that is outside U.S. Food and Drug Administration–approved labeling has been presented in this article.

## REFERENCES

1. Hoge CW, Auchterlonie JL, Milliken CS. Mental health problems, use of mental health services, and attrition from military service after returning from deployment to Iraq or Afghanistan. *JAMA* 2006;295(9):1023–1032
2. Kulka RA, Schlenger WE, Fairbank JA, et al. Contractual Report of

- Findings from the National Vietnam Veterans Readjustment Study. Research Triangle Park, NC: Research Triangle Institute; 1988
3. Doyle ME, Peterson KA. Re-entry and reintegration: returning home after combat. *Psychiatr Q* 2005;76(4):361–370
  4. I (US) Corps. OPLAN 04–10 (Return to Readiness) (Unclassified). Fort Lewis, Wash: Apr 2004
  5. 1st Infantry Division Mental Health Service. Reunion Pamphlet. Grafenwoehr, Germany: US Army; 1997
  6. U.S. Army. My Hooah 4 Health: Deployment: Family Matters. 2007. Available at: <http://hooah4health.com/deployment/familymatters/default.htm>. Accessed Oct 24, 2007
  7. Bowling UB, Sherman MD. Welcoming them home: supporting soldiers and their families with the tasks of reintegration. *Prof Psychol Res Prac*. In press
  8. Taft CT, Pless AP, Stalans LJ, et al. Risk factors for partner violence among a national sample of combat veterans. *J Consult Clin Psychol* 2005;73(1):151–159
  9. McCarroll JE, Ursano RJ, Newby JH, et al. Domestic violence and deployment in US Army soldiers. *J Nerv Ment Dis* 2003 Jan;191(1):3–9
  10. Newby JH, Ursano RJ, McCarroll JE, et al. Postdeployment domestic violence by US Army soldiers. *Mil Med* 2005;170(8):643–647
  11. Karney BR, Crown JS. Families Under Stress: An Assessment of Data, Theory, and Research on Marriage and Divorce in the Military. Santa Monica, Calif: National Defense Research Institute, RAND Corporation; 2007
  12. Newby JH, McCarroll JE, Ursano RJ, et al. Positive and negative consequences of a military deployment. *Mil Med* 2005;170(10):815–819
  13. Goff BS, Crow JR, Reisbig AM, et al. The impact of individual trauma symptoms of deployed soldiers on relationship satisfaction. *J Fam Psychol* 2007;21(3):344–353
  14. Oslin DW, Ross J, Sayers S, et al. Screening, assessment, and management of depression in VA primary care clinics: the Behavioral Health Laboratory. *J Gen Intern Med* 2006;21(1):46–50
  15. Löwe B, Kroenke K, Gräfe K. Detecting and monitoring depression with a two-item questionnaire (PHQ-2). *J Psychosom Res* 2005;58(2):163–171
  16. Whooley MA, Avins AL, Miranda J, et al. Case-finding instruments for depression: two questions are as good as many. *J Gen Intern Med* 1997;12(7):439–445
  17. Weathers FW, Ford J. Psychometric properties of the PTSD Checklist (PCL-C, PCL-S, PCL-M, PCL-PR). In: Stamm BH, ed. *Measurement of Stress, Trauma, and Adaptation*. Lutherville, Md: Sidran Foundation & Press; 1996:250–252
  18. Bush K, Kivlahan DK, McDonnell MB, et al. The AUDIT alcohol consumption questions (AUDIT-C): an effective brief screening test for problem drinking. *Arch Intern Med* 1998;158:1789–1795
  19. Katzman RB, Brown T, Fuld P, et al. Validation of a short Orientation-Memory-Concentration Test of cognitive impairment. *Am J Psychiatry* 1983;140(6):734–739
  20. Kawas C, Karagiozis H, Resau L, et al. Reliability of the Blessed Telephone Information-Memory-Concentration Test. *J Geriatr Psychiatry Neurol* 1995;8(4):238–242
  21. Kroenke K, Spitzer RL, Williams JB. The PHQ-9: validity of a brief depression severity measure. *J Gen Intern Med* 2001;16(9):606–613
  22. Pinto-Meza A, Serrano-Blanco A, Penarrubia MT, et al. Assessing depression in primary care with the PHQ-9: can it be carried out over the telephone? *J Gen Intern Med* 2005;20(8):738–742
  23. Sobell L, Sobell M, Gloria L, et al. Reliability of a timeline method: assessing normal drinkers' reports of recent drinking and a comparative evaluation across several populations. *Br J Addict* 1988;83:393–402
  24. Sheehan DV, Lecrubier Y, Sheehan KH, et al. The Mini-International Neuropsychiatric Interview (M.I.N.I.): the development and validation of a structured diagnostic psychiatric interview for DSM-IV and ICD-10. *J Clin Psychiatry* 1998;59(suppl 20):22–33
  25. Ware J Jr, Kosinski M, Keller SD. A 12-Item Short-Form Health Survey: construction of scales and preliminary tests of reliability and validity. *Med Care* 1996;34(3):220–233
  26. Ware J Jr, Kosinski M, Turner-Bowker D, et al. SF-12v2: How to Score Version 2 of the SF-12 Health Survey. Lincoln, RI: QualityMetric Incorporated; 2002
  27. Asmundson GJG, Frombach I, McQuaid J, et al. Dimensionality of post-traumatic stress symptoms: a confirmatory factor analysis of DSM-IV symptom clusters and other symptom models. *Behav Res Ther* 2000;38(2):203–214
  28. McWilliams LA, Cox BJ, Asmundson GJG. Symptom structure of post-traumatic stress disorder in a nationally representative sample. *J Anxiety Disord* 2005;19(6):626–641
  29. Palmieri PA, Weathers FW, Difede J, et al. Confirmatory factor analysis of the PTSD Checklist and the Clinician-Administered PTSD Scale in disaster workers exposed to the World Trade Center Ground Zero. *J Abnorm Psychol* 2007;116(2):329–341
  30. Foa EB, Riggs DS, Gershuny BS. Arousal, numbing, and intrusion: symptom structure of PTSD following assault. *Am J Psychiatry* 1995;152(1):116–120
  31. Huang FY, Chung H, Kroenke K, et al. Using the Patient Health Questionnaire-9 to measure depression among racially and ethnically diverse primary care patients. *J Gen Intern Med* 2006;21(6):547–552
  32. Heyman RE, Sayers SL, Bellack AS. Global marital satisfaction versus marital adjustment: an empirical comparison of three measures. *J Fam Psych* 1994;8(4):432–446
  33. Straus MA. Measuring intrafamily conflict and violence: the Conflict Tactics (CT) Scales. *J Marriage Fam* 1979;41(1):75–88
  34. Coyne JC, Thompson R, Palmer SC. Marital quality, coping with conflict, marital complaints, and affection in couples with a depressed wife. *J Fam Psychol* 2002;16(1):26–37
  35. Whisman MA, Bruce ML. Marital dissatisfaction and incidence of major depressive episode in a community sample. *J Abnorm Psychol* 1999;108(4):674–678
  36. O'Leary KD, Barling J, Arias I, et al. Prevalence and stability of physical aggression between spouses: a longitudinal analysis. *J Consult Clin Psychol* 1989;57:263–268
  37. Heyman RE, Neidig PH. A comparison of spousal aggression prevalence rates in US Army and civilian representative samples. *J Consult Clin Psychol* 1999;67(2):239–242
  38. Baucom DH, Shoham V, Mueser KT, et al. Empirically supported couple and family interventions for marital distress and adult mental health problems. *J Consult Clin Psychol* 1998;66(1):53–88